

Application Guidelines



*Michigan Voluntary Protection Program;
Management, Labor and MIOSHA
Working Together*



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**The Michigan Voluntary Protection Programs
(MVPP)
Application Guidelines**

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The Michigan Voluntary Protection Programs (MVPP)

What is the MVPP?

MVPP is a recognition and partnership program designed for worksites that implement outstanding systems to manage worker safety and health. The managers, employees, and any authorized representatives at these sites voluntarily implement comprehensive safety and health management systems that go beyond basic compliance with MIOSHA standards.

There are two levels of recognition in the MVPP. Applicants can apply for either the **Michigan Star** program or the **Rising Star** program. The highest level of recognition that can be achieved through the MVPP is the Star award. Establishments that do not yet meet the rigorous requirements of the Star program may qualify for the Rising Star program. Rising Star sites have the desire and potential to achieve Star status within one to three years. Exemptions from programmed inspections are granted for both Star and Rising Star sites.

Background

The philosophy of the Michigan Occupational Safety and Health Administration (MIOSHA) has been to incorporate strong voluntary compliance programs along with fair enforcement efforts. The MVPP continues emphasis on the importance of worksite safety and health worker protection systems in meeting the goals of MIOSHA, Public Act 154 of 1974, as amended, to provide safe and healthful work environments that are free from recognized hazards. The administering agency is the Michigan Occupational Safety and Health Administration in the Michigan Department of Licensing and Regulatory Affairs.

The MVPP is implemented under Section 54 of the Act which directs the agency to develop and maintain education, training and outreach programs which encourage employers and employees and their organizations to reduce hazards, institute new programs, and improve existing programs in providing safe and healthy working conditions.

Participation in the MVPP is not intended to increase the liability of any party in an approved MVPP site. Employees or any representatives of employees participating in a MVPP safety and health management system are not assuming the employer's statutory or common law responsibilities for providing a safe and healthy workplace or, undertaking in any way to guarantee a safe and healthful work environment.

General Information

The MVPP is based upon a philosophy of trust and cooperation exhibited by all parties. Working together, all involved parties strive for accomplishments beyond the basic requirements of Act 154. However, participation in the program does not diminish employer or employee rights or responsibilities under the Act.

MIOSHA will continue to investigate valid, formal employee safety and health complaints, all fatalities and catastrophes, and significant accidents and chemical spills or leaks.

Compliance with the Act and the standards set under the Act is mandatory. However, MIOSHA realizes that even the best of workplaces may occasionally be out of compliance with the standards. It is expected that applicants will take steps to identify these non-conformities and correct them as soon as possible. It is further expected that Star participants be on the leading edge of hazard prevention and make continual improvements in the safety and health management systems in their workplace.

Companies that successfully meet the requirements of the MVPP will be expected to be a mentor for others who want to improve their health and safety management system. Their programs and systems may also be used as models or examples for others. The MIOSHA staff and MVPP participants work together to develop innovative solutions to safety and health concerns.

Overview of the MVPP Process

- A. An applicant must demonstrate that their site is operating an effective occupational safety and health management system characterized by the following basic elements listed below.
 - *Management Leadership*
 - *Employee Involvement*
 - *Worksite Analysis*
 - *Hazard Prevention and Control*
 - *Safety and Health Training*

- B. Employees must be actively engaged in the site's safety and health management system, work with management to ensure a safe and healthful workplace and agree to provide support for the site's MVPP application. Collective bargaining representatives must provide written support for the MVPP application. Applicants whose employees are represented by more than one bargaining unit must obtain commitment from each individual union. **Fixed base construction applicants will also be responsible for obtaining commitment from each individual union for all sub-contractor employees who are represented by a union.** If not represented by a collective bargaining unit, a document of support signed by employees should be provided.

- C. The site must have injury and illness incidence rates at or below the industry average.

- D. Potential sites meeting the initial eligibility requirements must submit an application for the Michigan Star or Rising Star program describing their system

of worker protection.

- E. MIOSHA evaluates the application. If the application is accepted, the MVPP Team conducts onsite review(s) to verify that the system meets MVPP requirements. With approval comes MIOSHA's public recognition of the applicant's outstanding safety and health management system.
- F. MIOSHA periodically conducts follow-up onsite visits when needed. Current **General Industry** MVPP Star participants undergo a reevaluation to confirm the site's continuing qualification for MVPP every 30-42 months after approval, and subsequently every three years. One or more reevaluation visits of a **Construction** MVPP Star participant worksite(s) will be conducted every 12 to 18 months for the duration of the approval or length of the project. Additionally the construction participant's headquarters will be reviewed every three years to reevaluate SHMS policies and procedures.

Rising Star participants are reevaluated within 18-24 months following approval to assure their progress toward established goals in reaching Star level recognition.

Terms of Participation

- A. All Michigan employers who successfully meet the initial MVPP requirements can apply. All elements of the applicant's safety and health management system must have been implemented for a period of not less than 12 months prior to application for the MVPP.
- B. Applicants can apply for either the Michigan Star program or the Rising Star program.
 - 1. The *Michigan Star* program is the highest level of acknowledgment that can be achieved through the MVPP. The Michigan Star recognition is awarded to those companies whose health and safety management systems are outstanding, comprehensive, and successful in reducing workplace hazards.
 - 2. The *Rising Star* program is for companies that do not yet meet all of the rigorous requirements of the Star program. This program provides the "stepping stone" for those companies that have the desire, potential and commitment to achieve Michigan Star.
- C. The MVPP has separate data requirements for the Star program and the Rising Star Program.
 - 1. *Michigan Star Data Requirements*
One of the criteria for the MVPP star award requires an applicant to be at or below the industry average for the Total Case Incidence Rate (TCIR) for *each* of the last three complete years. The TCIR is the frequency rate for all

recordable injuries and illnesses. The applicant must also be at or below the industry average for the total case rate related to Days Away from work/Restricted work/or job Transfer (DART), for *each* of the last three complete calendar years. This rate is referred to as the DART rate. Construction applicants should refer to Appendix C - MVPPC document for injury and illness data requirements.

The applicant's NAICS injury and illness rates will be compared to industry average rates published through the Management Information Systems Section (MISS). If Michigan data is unavailable, the comparison will be made to the Bureau of Labor Statistics (BLS) data. Whichever data has more digits of the NAICS code available (MISS or BLS) that data will be used for comparison purposes. The last three complete years of data will be compared to each corresponding year for which data is available. The latest data from MISS and BLS may be one year behind the actual year completed. In this case the most recent data available will be used to compare the last two years.

2. *Rising Star Data Requirements*

Applicants must have injury and illness data *at or below* the specific industry average for two out of the last three complete calendar years. Use Michigan data as described above and if unavailable use BLS data. An alternative for Rising Star is that an applicant may average their last three year injury and illness data and compare that data to the lowest industry average of the past three years.

3. *Sources for Data Comparisons*

The following sources for data comparison will be obtained from:

- a. Occupational Injury and Illness Incidence Rates by Industry, published for Michigan by the Management Information Systems Section (MISS). This information is available on the MIOSHA web page at www.michigan.gov/miosha.
- b. Occupational Injuries and Illness in the United States by Industry, Published by the Bureau of Labor Statistics (BLS) for federal OSHA. This information is available on the OSHA.gov web page. This information can be obtained from www.michigan.gov/miosha which provides a link to the OSHA and BLS statistical information.

D. Some applicants, usually smaller worksites with limited number of employees and/or employee hours worked, may be eligible for an alternative method for calculating incidence rates. The alternative method allows the employer to use the best three out of the most recent four complete years' injury and illness experience. Contact the Consultation Education and Training Division at (517) 284-7720 for further details.

- E. General Industry worksites operating less than three years may be considered for The Rising Star program if the following conditions are met:
1. The applicant's TCIR and the DART rates for at least the first two years of operations, must be at or below the most recent injury and illness incidence rates for Michigan industry averages. If Michigan data is unavailable, use BLS data.
 2. The applicant must be able to demonstrate an overall commitment to an effective workplace safety and health management system. In addition, the elements of a safety and health management system must have been in place for at least one year.
 3. The applicant must be able to demonstrate their potential and commitment to achieve Star status within the following two to three years.
- F. The Agency Director determines final approval for participation in the MVPP. To recognize participation in the MVPP, flags (for Star participants only) and plaques of approval will be awarded. Participants may also choose to use program logs on such items as letterhead or awards for employees.
- G. Participation in the MVPP is contingent upon continued excellence in administering safety and health management systems and favorable reevaluation(s).

Application Submission

Prior to submitting an application, it is suggested applicants utilize the self-assessment tool (Appendix A - MVPP Self Evaluation Checklist) found in this instruction to determine your readiness to apply.

Review the application instructions and complete the application template (Appendix B), including all requested documents and attachments. Construction applicants will also be required to submit information regarding the unique aspects of construction found in Appendix C - MVPPC Document.

All applications submitted must contain a written statement of support for the MVPP process from all collective bargaining representatives at the site. In non-represented worksites a statement of support will also be required. Where the site is part of a corporation, individual applications must be submitted for each site.

An initial review of the application is made to determine whether the site meets the eligibility requirements documented in the submitted application. The applicant will be given the opportunity to amend the application with additional or substitute materials for the purpose of improving or clarifying information in the application. A preliminary onsite visit may be conducted by MIOSHA staff to ensure initial eligibility requirements have been met. Any site subject to Part 591 – Process Safety Management of Highly

Hazardous Chemicals (29 CFR 1910.119) will have its PSM program evaluated and approved prior to any other onsite activities.

When the application is accepted as complete by the MVPP manager, the onsite review will be scheduled.

Applications for MVPP must be submitted to the MVPP Manager at the Michigan Department of Licensing and Regulatory Affairs, Michigan Occupational Safety and Health Administration, Consultation Education and Training Division.

Application Withdrawal

Any applicant may withdraw a submitted application at any time during the process. Once an application has been withdrawn, a new submission of an application is required to be reconsidered for participation in the MVPP.

If the application is substantially incomplete, and if after notification the applicant has not responded within 30 working days to the request for more information, the application will be considered unacceptable and returned to the site. The site may resubmit the application when it is complete.

Onsite Review

The onsite review is an evaluation of the site-specific safety and health management system. A team of MVPP staff conducts this review at the applicant's site. The review is conducted to:

- A. Verify the information supplied in the application concerning qualification for MVPP.
- B. Identify the strengths and weaknesses of the applicant's safety and health management system.
- C. Determine the adequacy of the safety and health management system to address the potential hazards of the site.
- D. Obtain information to assist the Agency Director in making the final decision for MVPP participation.

The onsite review will be arranged at the mutual convenience of the applicant and the onsite review team. The onsite review team will consist of occupational safety consultants and industrial hygiene consultants. The size of the site and complexity of the safety and health management system will determine the size of the team. The amount of time needed to conduct the onsite review will also depend upon the size of the site. The average onsite review will last approximately three to five days. Construction reviews will follow the guidelines of the MVPPC document.

The onsite review will include an analysis of injury and illness records and recalculation of the rates submitted with the application. The review will verify that the safety and health management system described in the application has been implemented and in place for at least one year. A general assessment of safety and health conditions will determine if the safety and health management system adequately protects workers from the potential hazards at the site.

Construction applicants will additionally be covered by the requirements of Appendix C - MVPPC Document which provides further detail for onsite review(s). The review will also include interviews with members of joint labor and management committees, other safety and health committees, management personnel, and randomly selected non-supervisory personnel, including contract workers.

The onsite review team will look at the following documentation:

- A. Written safety and health management system/accident prevention program (Construction).
- B. Management's statement of commitment to safety and health.
- C. Safety and health policy, goals, and objectives.
- D. MIOSHA Injury and Illness Log, first aid logs, workers' compensation first report of injury, and employee medical records (if available at the site) for the last three complete calendar years and the year-to-date (for the site and applicable contractors).
- E. Report(s) identifying potential health hazards and industrial hygiene sampling records, including medical surveillance records.
- F. Types of training conducted for: safety and health committees, MIOSHA recordkeepers, and employees involved in self-inspection techniques. Other required safety and health training or tool box talks for specific jobs will be reviewed as well as training attendance records.
- G. Routine self-inspections, frequency of inspections, who conducts the inspections and the tracking system to assure corrections are completed.
- H. Forms for accident reports and near-miss incidents. A tracking system for assuring corrections are made and follow up performed to prevent reoccurrence.
- I. Forms for employee reports of hazard and employee suggestions that include a system for tracking and follow up.
- J. Preventive maintenance records.
- K. Written safety and health rules.

- L. Written emergency procedures.
- M. Personal protective equipment assessment and implemented program.
- N. Required written programs such as hazard communication, control of hazardous energy, process safety management (PSM), and respirator program.
- O. Safety and health committee minutes (where applicable).
- P. Evidence of line accountability (management performance evaluations, reward and disciplinary systems, budget accountability, etc.).
- Q. Contractor safety program, including injury and illness data for all contractors' working at the applicant's site.
- R. Internal audits or evaluations of the entire safety and health management system, including analysis of progress toward statistical and structural/programmatic goals.
- S. Hazard review and analysis documentation such as process reviews and/or job safety analyses.
- T. A list of all hazardous chemicals at the site.
- U. Copies of all information required under the PSM standard, including process reviews and analyses that examine possible failure points.
- V. Any other documentation relating to the site's safety and health management system.

Hazard Correction Plan

At the conclusion of the onsite review, if the applicant needs to take actions or correct hazards to meet requirements for the MVPP, a hazard correction plan will be developed with the applicant. A reasonable time, generally 30 working days, will be allowed for those actions to be taken before a recommendation for approval is made to the Agency Director. Where necessary, a second onsite visit will be made to verify hazards have been controlled or eliminated.

Application Approval

If the review team recommends that the applicant has met the qualifications and requirements of the MVPP, the team's recommendation will be submitted to the MVPP Manager and MVPP Coordinator.

The MVPP Coordinator will then submit the team's recommendation to the Agency Director for final determination. Approval becomes effective on the day that the Agency Director signs the letter of approval.

Application Denial

If it is determined that the applicant cannot meet the requirements for participation in the MVPP, or for any reason does not wish to continue the application process, reasonable time (approximately 15 working days) will be allowed for application withdrawal before a denial recommendation is made.

Should an applicant disagree with the onsite review team's recommendation that qualification has not been met, the applicant can file an appeal to the Agency Director.

If the Agency Director accepts the recommendation to deny approval, the denial will occur on the date the MVPP Coordinator signs a letter informing the applicant of the decision.

Enforcement Referrals

The cooperative spirit embellished in the MVPP creates an expectation that safety and health hazards discovered during the MVPP onsite review get resolved. Nevertheless, MIOSHA must reserve the right, where employees' safety and health are seriously endangered and site management refuses to correct the situation, to refer the situation to the Agency Director for review and enforcement action.

The employer will be informed in advance that a referral will be made to the Agency Director, and that enforcement action may result. It is important, however, for interested employers and employees to be aware of and understand MIOSHA's obligation in the event that such a situation should occur.

If an applicant in this situation does not choose to withdraw from consideration or participation, the Agency Director may deny or terminate participation effective on the date the Agency Director declares the cooperative spirit not to exist.

Star Site Reevaluation

Annually, by February 15, each participating MVPP site must submit to the MVPP Manager, the previous years' injury and illness incidence data, a written evaluation of the site's safety and health management system, a summary of mentoring activities and any MVPP success stories.

MVPP Star participants will undergo a site reevaluation every three years (except when the identification of potential serious problems creates the need for an earlier reevaluation). The reevaluation of MVPP participants will consist mainly of an onsite visit similar in duration and scope to the initial onsite review conducted during the application process. Documentation and verification of continuous improvement of the participant's safety and health management system will be reviewed. Construction participants will, in many instances, have a reevaluation sooner in accordance with the unique aspects and short-term nature of construction projects.

The purpose of the reevaluation is:

- A. To determine continued qualification for the MVPP.
- B. To document outcomes of MVPP participation and success stories.
- C. To identify any problems that have the potential to adversely affect continued MVPP qualification and to determine if those problems require additional evaluations.

The following factors will be used in the reevaluation of MVPP participants:

- A. Continued compliance with the MVPP program requirements.
- B. Level of satisfaction with participation in MVPP.
- C. Nature and validity of any complaints received by MIOSHA.
- D. Nature and resolution of problems that may have come to MIOSHA's attention since approval or the last evaluation.
- E. The effectiveness of employee participation programs.

Three possible recommendations may follow an MVPP evaluation visit:

- A. A recommendation for continued participation in the MVPP.
- B. A recommendation for a conditional Star approval, lasting no more than one year, to maintain participation in the MVPP. The MVPP onsite review team may recommend this status if it finds that the site has allowed one or more system elements to slip below Star quality. The site must return its safety and health management system to Star quality within 90 days (30 days for construction) of the evaluation visit and must demonstrate a commitment to maintain that level of quality for one year. If injury and illness data has increased to above the industry average, a one-year-rate reduction plan must be established. Within one year from the date the goals are implemented, the site must undergo another reevaluation for approval to begin a new cycle as a Michigan Star participant.

Construction only: If two reevaluations do not meet the MVPPC requirements in one year, the company will be asked to withdraw.

- C. A recommendation for termination. The MVPP onsite review team will recommend this action if it finds the site has failed to maintain its safety and health management system at Star quality. A request to the site to withdraw from the MVPP will precede a recommendation for termination to the Agency Director.

Termination

MVPP status may be revoked for the following reasons:

- A. Sale of the MVPP site to another owner or any management change that eradicates or significantly weakens the safety and health management system.
- B. The participating site management, or the duly authorized collective bargaining agent where applicable, may terminate participation for any reason.
- C. The MVPP may terminate participation for cause. Termination from the MVPP will occur when a significant failure to maintain the safety and health management system in accordance with the program requirements has been identified.

The MVPP participant will be provided a 15 working-days notice of intent to terminate participation unless:

- A. Other terms for termination were agreed upon before approval.
- B. The deadline for approval has expired.
- C. Evidence is presented that the trust and cooperation among labor, management, and MIOSHA, upon which the approval was based, no longer exists.

Reapplication from terminated sites will not be considered for a period of three years from the date of termination.

Reinstatement

Reinstatement requires reapplication.

MVPP Application Instructions

Establishments that wish to apply for either the Michigan Star or Rising Star program must submit a formal application. The following are instructions to assist with the completion of the MVPP Application Template – Appendix B.

Please review the Application Template thoroughly before responding to the questions. Where existing policies, guidelines, forms, and procedures describe your programs and systems, they should be attached as appendices rather than writing new materials for this application. These documents should include the date they were originated because of the MVPP requirement to have a system in place one year prior to submitting an application.

The safety and health management system is the major focus of the application. It contains the key elements and sub-elements of a comprehensive safety and health management system:

- A. Management Leadership
- B. Employee Involvement
- C. Worksite Analysis
- D. Hazard Prevention and Control
- E. Safety and Health Training

In the application you are asked to describe your safety and health management system. Utilizing a team approach may be helpful in preparing your application. Team members who are the most knowledgeable about your systems and programs can provide the detailed responses needed to adequately answer the questions.

As you prepare your application, you will be providing an overview of your site's safety and health activities. This overview will give you a better understanding of your safety and health management system's existing strengths and weaknesses and encourages continuous improvements in your program.

Additionally, Construction applicants should refer to and respond to the unique aspects detailed in the Appendix C - MVPPC Document.

Injury and Illness Data

For regular site employees, provide the data requested in charts in the Application Template for each of the last three complete calendar years. Employee hours worked for regular site employees shall reflect all full and part-time regular site employees including seasonal and temporary contract employees directly under the applicant's supervision, including administrative, supervisory, clerical and overtime. Small employers may use the best three out of the previous four years. Rising Star applicants use the best two out of the last three complete years.

Provide the data requested in the charts for applicable contractors, (those contractors whose employees worked 1,000 or more hours on your site in any calendar quarter during the last three years) in the Application Template. Combine data for contractors that have the same NAICS code. Prepare a separate chart for each contractor NAICS code.

Construction fixed base applicants must provide three years of data for their regular workforce (which includes temporary employees) and its subcontractor employees. If the applicant does not maintain rate information for their subcontractors they may still apply using the phase-in policy described in the Appendix C-MVPPC document.

The Total Case Incidence Rate (TCIR) is the frequency rate for all recordable injuries and illnesses. To calculate your TCIR:

$$\text{TCIR} = \frac{\text{Total Number of Recordable Injuries and Illness} \times 200,000}{\text{Actual Total Hours Worked by all Employees during the Calendar Year}}$$

The DART rate is the total case rate related to (Days Away from work/Restricted work/or job Transfer). To calculate your DART rate:

DART Rate=

$$\frac{\text{Total Number of Cases Involving (Days Away from Work/Restricted Work/or job Transfer)} \times 200,000}{\text{Actual Total Hours Worked by all Employees during the Calendar Year}}$$

200,000 = Equivalent of 100 full-time employees working 40-hour weeks 50 weeks per year.

Compare your injury and illness incidence rates (for your NAICS code) to the Management Information Systems Section (MISS) industry average rate. If Michigan NAICS code data is unavailable, use the Bureau of Labor Statistics (BLS) data. Whichever source has the most digits available, use that data (first check MISS data and if unavailable or less digits, use BLS data).

Elements of a Safety and Health Management System

This section outlines an effective safety and health management system that provides for employee involvement in recognizing the potential hazards of the workplace. It also includes the prevention and/or control of hazards, and the training to ensure that employees at all levels understand these potential hazards and how to help protect themselves and others.

When completing the Application Template please respond to the elements and sub-elements listed below describing your site's safety and health management system.

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A. **Management Leadership**

This element describes the leadership that management provides to encourage all employees in the workplace to be involved in safety and health. Many of the actions listed under this element are measures that apply to all phases of business management.

Those employers that do not routinely control the worksite (e.g.: mobile or specialty contractors) will need to provide details on how they ensure the safety of their employees.

1. ***Commitment to Safety and Health Protection***

Describe how top management is visibly involved in the safety and health management system and how management sets an example of safe and healthful behavior. Describe how the site has created an environment that allows employees reasonable access to top management.

- a. The safety and health policy should be a clear statement so employees understand the priority of safety and health protection in relation to other organizational values. Who developed your management safety and health policy? How is your policy communicated to employees? Attach a copy of your top-level safety and health policy specific to your operations.
- b. Management must clearly demonstrate commitment to meeting and maintaining the requirements of the MVPP. **Attach** a statement of commitment to MVPP participation. If the site is unionized, the authorized collective bargaining agent(s) for each unit must either sign the application or submit a signed statement indicating that the collective bargaining agent(s) support MVPP participation. Such concurrence from all authorized agents is required as part of the application. See Appendix D, for a sample statement regarding management commitment to safety and health and to participation in the MVPP. To review a summary of assurances MVPP sites must agree to, see Appendix E.

2. ***Organization***

Describe how your site's safety and health function fits into your overall management organization. **Attach** an organizational chart explaining the relationship of your site's safety and health personnel to your overall organization.

3. ***Responsibility***

Everyone in the workplace should have some responsibility for safety and health. Describe how your site assigns and communicates safety and health responsibility to line supervisors and staff. Include examples of specific responsibilities.

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4. ***Accountability***

How are individuals who have been assigned responsibility for safety and health, held personally accountable for achieving what is expected? Describe your accountability system used to hold managers, line supervisors, and employees responsible for safety and health. Examples may include job performance evaluations, warning notices, job descriptions that include safety and health criteria, and contract language. **Attach** samples of this documentation.

5. ***Resources***

Describe how adequate resources are provided (time, training, personnel, equipment, budget, and access to information and experts) to the safety and health management system. Describe the safety and health professional staff available, including use of certified safety professionals (CSP), certified industrial hygienists (CIH), other licensed health care professionals, and other experts as needed, based on the risks at your site. Identify any external resources (including corporate office and private consultants) used to help with your safety and health management system.

6. ***Goals and Planning***

- a. Describe the current goal(s) for your safety and health management system with results-oriented objectives for meeting that goal. Describe how management establishes and communicates the goals and objectives so that all members understand the desired results?
- b. Describe how safety and health are part of your overall management planning, (overall management planning relates to such activities as setting production goals, increasing or decreasing the workforce and introducing a new product line, etc.).

7. ***Contractor Safety and Health Program***

- a. Briefly describe the contractor selection process and the contractor oversight and management systems in place at the site. Does this method include consideration of contractor safety and health programs and injury performance as well as the ability to remove a contractor and/or their employees from the site for safety and health violations?
- b. Describe the means used to ensure prompt correction and control of hazards, however detected, under a contractor's control.
- c. Describe methods used to ensure all injuries and illnesses occurring during work performed under a contract are recorded and submitted to you.

8. ***Safety and Health Program Evaluation – Self-Evaluation***

- a. Provide a copy of the most recent annual self-evaluation of your safety and health management system. **Include** assessments of the effectiveness of the

MVPP elements listed in these application guidelines, recommendations for improvement, and assignment of responsibility.

- b. Describe how you perform the evaluation. For example, who evaluates the program, at what time of year, how is the evaluation report distributed and how are people held accountable to ensure the recommendations from the evaluation are accomplished?
- c. Describe how the recommendations from the annual program evaluation are integrated into the safety and health objectives for the next year.

9. ***Site Map***

Please **attach** a site map or general facility layout.

B. Employee Involvement

1. ***How are employees involved in your safety and health management system?***

- a. List at least three meaningful ways employees are involved in your safety and health management system. Provide specific information about decision processes that employees have the potential to impact, such as hazard assessment, inspections, accident investigations, safety and health training, and/or evaluation of the safety and health management system. **Provide** a statement of employee support.
- b. Provide information about your safety and health committee (if applicable). Give the date the committee was formed, describe the methods(s) for selecting employee members, and length of service requirements. Describe committee meeting requirements, such as frequency, quorum rules and whether minutes are kept. Describe the committee's role in the site's safety and health management system, such as frequency and scope of committee inspections, role in accident investigations, and role in hazard notifications.
- c. Describe hazard recognition training or other specific training for committee members or any non-managerial employees with duties involving hazard recognition and self-inspections.

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2. *Employee Notification*

Describe how you notify employees about site participation in the MVPP, their right to register a complaint with MIOSHA, and their right to obtain reports of inspections and accident investigations upon request. (Various methods may include new employee orientation; Intranet or e-mail, (if all employees have access); bulletin boards; toolbox talks; or group meetings.)

C. **Worksite Analysis**

1. *Pre-Use Analysis*

Explain how new or significantly modified equipment, materials, processes and facilities are analyzed for potential hazards prior to purchase and use. **Attach** documentation such as preliminary hazard analyses, process hazard analyses, or management of change forms.

2. *Baseline Hazard Analysis - Comprehensive Surveys*

Describe the methods used for baseline hazard analysis to identify hazards associated with your specific work environment, for example, air contaminants, noise, or lead.

3. *Self-Inspections*

Describe your routine safety and health general inspection procedures. Indicate who performs inspections and how you track any hazards until they are eliminated or controlled. For routine health inspections, summarize the testing and analysis procedures used and qualifications of personnel who conduct them. **Include** forms used for self-inspections.

4. *Hazard Analysis for Routine Jobs, Tasks, and Processes*

Describe the system utilized for examination and analysis of safety and health hazards associated with routine tasks, job, processes, and/or phases. How are the results incorporated into your training and hazard prevention and control programs? **Include** procedures or guidance techniques used in conducting these hazard analyses. You should base priorities for hazard analysis on historical evidence, perceived risks, complexity, and frequency of jobs/tasks completed at your worksite. For those working with complex processes and/or highly hazardous chemicals, describe your process safety management program.

5. *Employee Reports of Hazards*

Describe how employees notify management of potential safety and health hazards. The reporting system must include protection from reprisal, timely and adequate response, and correction of identified hazards. An opportunity to use a written form to notify management about safety and health hazards must be part of your program. **Attach** a copy of your form.

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6. ***Accident and Incident Investigations***

Describe your written procedures for investigation of accidents, near misses, first-aid cases, and other incidents. What training do investigators receive? How do you determine which accidents or incidents warrant investigations? Are near-miss incidents investigated? Describe the “lessons learned” process being used at the site and demonstrate root cause analyses.

7. ***Pattern Analysis***

Describe the system you use for analyzing trends in your injury and illness experience and hazards identified at your worksite. Indicate how you collect and analyze data from all sources, including injuries, illnesses, near-misses, first-aid cases, work order forms, incident investigations, inspections, and self-audits. Describe how results are disseminated and used.

D. Hazard Prevention and Control

1. ***Engineering Controls***

Describe and provide examples of engineering controls you have implemented that helped eliminate or minimize hazards by reducing their severity, their likelihood of occurrence, or both. Engineering controls include, for example, reduction in pressure or amount of hazardous material, substitution of less hazardous material, noise controls, fail-safe design, leak before burst, fault tolerance/redundancy, local exhaust ventilation, and ergonomic design changes.

2. ***Administrative Controls***

Describe ways you limit daily exposure to hazards by adjusting work schedules or work tasks, for example job rotation.

3. ***Personal Protective Equipment***

Describe and **provide** examples of your site’s personal protective equipment requirements. Describe your process for selecting, using, maintaining and distributing personal protective equipment. If respirators are used, **attach** or list components of your written respirator program. The entire program will be reviewed during the onsite visit.

4. ***Safety and Health Rules***

Describe your general safety and health rules. Demonstrate that there is a system for equitably enforcing the disciplinary system for managers, supervisors, and employees. How are employees informed about the safety and health rules?

5. ***Preventive/Predictive Maintenance***

Summarize and briefly describe your system for monitoring and maintaining workplace equipment to predict and prevent equipment breakdowns that may cause hazards. Include information about the types of equipment covered, scheduling and how the maintenance timetable is followed.

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6. ***Emergency Preparedness***

Describe your site's emergency planning and preparedness system. Provide information on the frequency of emergency drills, training provided, and evacuations. Describe how credible scenarios are chosen for emergency drills and their relationship to site-specific hazards.

7. ***Occupational Health/Medical Care Program***

Describe your onsite and offsite medical service and physician availability. Explain how you utilize the services of licensed occupational health care professionals in routine hazard analyses, in recognizing and treating injuries and illnesses, in limiting severity of harm and in managing injury and illness cases. Indicate the coverage provided by employees trained in first aid, CPR, and other paramedical skills, their training, and available equipment. Describe how you address specific medical care programs required in your hearing conservation program, respirator program, bloodborne infectious diseases, lead, asbestos, etc.

E. ***Safety and Health Training***

Describe the formal and informal safety and health training provided to supervisors, and employees. Identify training protocols, schedules and information provided to supervisors and employees on programs such as hazard communication, personal protective equipment and handling of emergency situations. Describe testing you use to ensure employees understand and retain course information. Describe how you verify the effectiveness of the training given. Describe how and where training records are kept. **Provide** examples of documented attendance and tracking methods for assuring all required training is conducted. Describe how top-level managers are trained for safety and health responsibilities.

F. **Application Supplement for Sites Subject to the Process Safety Management (PSM) Standard (Appendix F)**

Applicants whose operations are covered by the Process Safety Management (PSM) Standard must provide responses to each questions that is applicable to their operations.

G. **Other Information**

Include any other information considered relevant in describing your safety and health management system.

Appendix A

MVPP SELF-EVALUATION CHECKLIST

GENERAL REQUIREMENTS	YES	NO	N/A
MIOSHA inspection/interaction record indicates good faith and no outstanding citations or willful citations within the last three years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written and signed employer Statement of Commitment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A signed written statement of support or signed MVPP application received from the authorized collective bargaining agent(s) or authorized employee representative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One year of quality experience with all elements of a safety and health management system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Star applicants: injury and illness data for each of the last three complete years is at or below the industry average. (Use Michigan data for comparison. If unavailable use BLS data.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rising Star applicant: injury and illness data for two out of the last three complete years must be at or below the industry average.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MANAGEMENT LEADERSHIP AND COMMITMENT			
Safety and health planning integrated with overall management planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Established policies and objectives communicated to all employees, including contract employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authority and responsibility clearly defined and implemented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top management policy establishes clear priority for safety and health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line managers and supervisors are held accountable for safety and health through an effective evaluation process. Good performance rewarded. Poor performance corrected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequate resources of people and equipment are available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Individuals with assigned safety and health responsibilities have the authority and resources to perform their duties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top management visible, accessible, models safe behavior.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers follow safety and health rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contract workers are covered by the same or an equally effective safety and health management system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Safety and health policy or requirements written into contracts to require sub-contractors to meet your safety requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A pre-qualification safety and health screening method is utilized to select sub-contractors, suppliers or vendors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	No	N/A
Safety and health rules provided that exceed MIOSHA standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An action plan designed to accomplish the organization's safety and health objectives are in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annual program evaluation conducted, including: --A written report, written recommendations, and documented follow-ups to recommendations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EMPLOYEE INVOLVEMENT			
Employees are involved in all elements of the safety and health management system in a manner that has a demonstrable impact on decision-making.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an effective process to involve employees in safety and health issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are involved in organizational decision making in regard to safety and health policy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are involved in organizational decision making in regard to the allocation of safety and health resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are involved in organizational decision making in regard to safety and health training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees participate in safety committees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees participate in hazard surveys to identify potential hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees participate in hazard prevention and control activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees participate in the safety and health training of co-workers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are involved in conducting Job Safety Analysis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WORKSITE ANALYSIS (HAZARD ASSESSMENT PROGRAM)			
Baseline industrial hygiene survey with written report or system of process review.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial hygiene monitoring and sampling, laboratory analysis planned and implemented as necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring and sampling done in accordance with nationally recognized procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Laboratory analysis of samples done in accordance with nationally recognized procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Routine self-inspections with written reports and hazard correction tracking: (1) Procedures are in place (2) Monthly inspections with quarterly coverage of whole site (general Industry) in place for one year (3) Weekly for construction sites.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	No	N/A
Routine hazard review such as process review or job safety analysis, results in improved safe work procedures and/or employee training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reliable system for employees to notify management about hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An effective procedure for tracking hazard correction is in place. Accidents, incidents and near misses are investigated for root causes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysis of injury, illness and other related records to determine if any patterns exist, and if patterns identified, develop plans to address them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change analysis is performed whenever a change in facilities, equipment, materials, job tasks or processes occur.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAZARD PREVENTION AND CONTROL PROGRAMS			
Effective hazard controls in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasonable access to certified hygienists, safety and health care professionals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety and health rules are written and enforced.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disciplinary system effective in handling safety and health rule violations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written emergency procedures in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectively implemented program for preventive and routine maintenance of all equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational health program with, at least, first aid onsite (required for construction) and quick access to health care services that provide adequate occupational health protection for all employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SAFETY AND HEALTH TRAINING			
Employees receive safety and health training as required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All contract, temporary and sub-contractors receive training as required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New employee orientation includes applicable safety and health information and training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Safety and health training is integrated into management training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers are trained to understand their safety and health responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers assure that appropriate safety and health training is provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supervisors know and understand policies, rules and procedures to prevent hazard exposure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are trained in safe work practices as they learn new jobs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	YES	NO	N/A
Supervisors and employees know what to do in emergencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency drills are run periodically.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees know what PPE is required, why it is required, what its limitations are, and how to maintain it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees use PPE properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BILINGUAL EMPLOYEES			
Is safety and health training provided in language other than English if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are written materials, signs and posters provided in other than English if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONSTRUCTION ONLY			
Have personnel on each job been trained in first aid and CPR?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do supervisors have extensive MIOSHA/OSHA (i.e., 10/30-hr) hazard recognition/competent person training certification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does worksite have 100% fall protection over six feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has competent person safety training applicable for your business been completed? (i.e., scaffolds, trenching and excavations. etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are daily worksite inspections conducted by the competent person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are pre-job analyses performed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are weekly safety meeting (tool box safety discussions) held with all employees and sub-contractor representatives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all written site-specific plans in place? (fall protection, confined spaces, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Appendix B
MVPP APPLICATION TEMPLATE

MVPP
Application Template



*Michigan Voluntary Protection Program;
Management, Labor and MIOSHA
Working Together*

General Information

Site/Applicant Name

Site Address:

Mailing Address (if different from site address):

Site Manager:

(Name and Title)

Telephone Number(s):

e-mail address:

Site MVPP Contact:

(Name and Title)

Telephone Number(s):

e-mail address:

Applicant/Corporate Name: (if different from above)

Corporate MVPP Contact: (if applicable)

(Name and Title)

Address:

Telephone Number:

e-mail address:

Collective Bargaining Agent(s) (list all)

Union name and number of local chapter:

Union Contact:

(Name and Title)

Address(es):

Telephone Number:

e-mail address:

*If employees at the facility are represented by a collective bargaining agent(s), each authorized collective bargaining agent(s) must provide a signed statement of support for the facility's participation in the MVPP. A statement of support must be provided before the application will be considered complete. Non-represented companies must still attach a letter of employee support.

**A sample letter of union support is provided in Appendix D of the Application Guidelines.

Authorized Employee Representative(s) (non-union)

(Name and Title):

Address(es):

Telephone Number(s):

e-mail address:

*If employees at the facility are not represented by a collective bargaining agent(s), an authorized employee representative(s) must provide a signed statement of support for the facility's participation in the MVPP. A statement of support must be provided before the application will be considered complete.

**A sample authorized employee representative(s) letter of support is provided in Appendix D of the Application Guidelines.

Number of Employees

Regular Site Employees:

Temporary and Contract Employees (that are used routinely on the site, and are under applicant's *direct* supervision – fixed base construction operations must include all contractors working at the site):

Total of Site Employees and Temporary/Contract employees:

Type of Work Performed and Products Produced (construction: fixed base operation, resident contractor, or mobile workforce):

A requirement of fixed base applicants is a successful partnership with MIOSHA and statistics at or below industry average. If fixed base applicant, explain the partnership agreement and type of work performed (include copy of partnership agreement with MIOSHA):

North American Industry Classification (NAIC) System code for site:

Applicable Contractors:

-
-

List all contractors (those who have employees who have worked 1,000 hours or more in any calendar quarter on the applicant's site) and their NAICS code.

*Applicable contractors *directly* supervise their own employees.

**Fixed base construction operations must list all contractors working at the site.

Indicate which program in the MVPP you are applying for:

(Michigan Star program or Rising Star program):

If construction applicant, describe how you determined your status on your construction program: * Construction applicants must decide if they are applying as a fixed-base project (site), resident contractor or mobile workforce. Controlling employers may not apply as a mobile workforce.

Sites Subject to the Process Safety Management (PSM) Standard

Applicants whose operations are covered by the Process Safety Management (PSM) Standard must complete and submit the Application Supplement.

*The Application Supplement can be found in Appendix F of the Application Guidelines.

Worksite Hazards

Provide detail about the major hazards at the worksite to which the employees are exposed.

-
-

*Example: The hazards located on this site are skin irritant chemicals; confined space hazards for the storeroom areas; uncontrolled hazardous energy sources from maintenance conveyers; sanitation process hazards, including exposure to sanitation chemicals; elevated noise levels; and material handling hazards, such as truck operations and extensive conveyers; fall hazards when working at elevated locations; excavation and trenching hazards.

Areas of Excellence

Provide detail about the best practices and/or exemplary polices, procedures, or practices in place at the worksite.

-
-

*Example: Trend Analysis – The use of a safety and health database has resulted in trend analysis above and beyond what most sites in this industry address. They are able to pinpoint not only basic trends, but also potential interactive trends (particular locations and time of day, particular supervisors with a given piece of equipment on a particular shift) and have used this ability to target training, discipline, and corrective actions.

Machine Guarding – The machine guarding for the site is excellent. The guarding for the 200 Ton Press is particularly good. Such presses are difficult to guard effectively, but this site has found a rail, shield, and control panel system that is very effective.

Injury and Illness Data

For regular site employees (for fixed base construction operations this includes all contractors), provide the data requested in charts below for each of the last three complete calendar years. Employee hours worked for regular site employees must reflect all full and part-time regular site employees including seasonal and temporary contract employees directly under the applicant’s supervision, including administrative, supervisory, clerical and overtime. Qualifying small employers may use the best three out of the previous four years.

Also, provide the data for all applicable contractors, (those contractors whose employees worked 1,000 or more hours on your site in any calendar quarter during the last three years) in charts below. Combine data for contractors that have the same NAICS code. Prepare a separate chart for each contractor NAICS code.

The Total Case Incidence Rate (TCIR) is the frequency rate for all recordable injuries and illnesses. To calculate you’re TCIR:

$$\text{TCIR} = \frac{\text{Total Number of Recordable Injuries and Illness} \times 200,000}{\text{Actual Total Hours Worked by all Employees during the Calendar Year}}$$

The DART rate is the total case rate related to (Days Away from work/Restricted work/or job Transfer). To calculate your DART rate:

$$\text{DART} = \frac{\text{Total Number of Cases Involving (Days Away from Work/Restricted Work/or job Transfer)} \times 200,000}{\text{Actual Total Hours Worked by all Employees during the Calendar Year}}$$

200,000 = Equivalent of 100 full-time employees working 40-hour weeks 50 weeks per year.

Compare your injury and illness incidence rates (for your NAICS code) to the Management Information Systems Section (MISS) industry average rate. If Michigan NAICS code data is unavailable, use the Bureau of Labor Statistics (BLS) data. Whichever source has the most digits available, use that data (first check MISS data and if unavailable or less digits, use BLS data).

Site NAICS Code: _____ Regular Site Employees: Injury and Illness Data

Year	Employee Hours Worked	Total # of Recordable Injuries & Illnesses	TCIR	Michigan Industry Average	BLS Industry Average

Regular Site Employees: Days Away from Work/ Restricted Work /or Job Transfer Case Data referred to as the DART Rate (previously known as Lost WorkDay Case Rate)

Year	Employee Hours Worked	Total # of Cases Involving Days Away/Restricted Work/or Job Transfer	DART Rate	Michigan Industry Average	BLS Industry Average

Applicable Contractor: Injury and Illness Total Case Incidence Data

NAICS Code: _____

Year	Employee Hours Worked	Total # of Recordable Injuries & Illnesses	TCIR	Michigan Industry Average	BLS Industry Average

Applicable Contractor: Injury and Illness Total Case Data Involving Days Away from Work/Restricted Work/or Job Transfer)

Year	Employee Hours Worked	Total # of Cases Days Away/ Restricted Work or Job Transfer	DART Rate	Michigan Industry Average	BLS Industry Average

Elements of a Safety and Health Management System

(Provide complete and detailed answers to each of the questions in this section)

Written Safety & Health Management System

- 1.) Are all of the elements of an effective safety and health management system (Management Leadership and Employee Involvement, Worksite Analysis, Hazard Prevention and Control, and Safety and Health Training) part of a signed, written document (safety policy, statement of commitment, etc)? Provide a copy of this document(s).

- 2.) Is there a written safety program (that includes all of the elements of a safety and health management system) that addresses the hazards at the site? Provide details.

Management Commitment & Leadership

- 1.) How does management demonstrate effective, visible safety leadership?

- 2.) How is information about safety/health policies and goals and objectives communicated to employees?

- 3.) Do employees understand the safety/health goals and objectives? How has this been determined?

- 4.) Provide examples of the safety/health goals and objectives that the site has set.

- 5.) How does the site measure its progress towards the safety and health program goals and objectives?

Planning

- 1.) Is safety and health considered during the overall management planning process? Provide details on how safety is built in this process.

Authority and Line Accountability

- 1.) Does top management accept ultimate responsibility for safety and health in the organization (top management acknowledges ultimate responsibility even if some safety and health functions are delegated to others)? How is this demonstrated? Is it documented (if so, in what documents)?
- 2.) How is the assignment of authority and responsibility for safety/health documented and communicated (for example, organization charts, job descriptions, etc)?
- 3.) Do the individuals that are assigned responsibilities for safety and health have the authority to ensure that hazards are corrected? How is this communicated and demonstrated?
- 4.) How are managers, supervisors, and employees held accountable for meeting their responsibilities for workplace safety and health? (e.g.: annual performance evaluations, disciplinary procedures, etc)
- 5.) What resources are dedicated to ensuring workplace safety and health (equipment, budget, or experts)? How are these needs determined? How are they planned for (is there a budget dedicated to safety and health needs, is safety a line item on the site's annual budget, etc)?
- 6.) Are safety/health experts (for example, Certified Industrial Hygienists, Certified Safety Professionals, Occupational Nurses, or Engineers), available to the site? If so, under what arrangements and how often are they used?

Contract Workers

- 1.) Are contractor workers utilized at the site? If so, in what capacity? (List all)
- 2.) Describe the contractor safety program (selection, orientation/training, observation, adherence to safety/health rules and procedures, enforcement, etc).
- 3.) Provide details about the contractor evaluation/qualification process. Does the process require an evaluation of the contractor's safety/health programs (including injury and illness rates)?

- 4.) Are contractors working at the site required to comply with MIOSHA and company safety and health rules? How is information about the company rules communicated to contract employees?
- 5.) Are there provisions in the contractor safety program for dealing with situations where a contractor fails to correct or control a hazard(s)?
- 6.) Does the site contractor safety program include provisions for oversight (observation of contractors while they are on site), coordination (when contractors and site employees will be working together on a project), and enforcement of safety/health rules and policies? How are these items documented and communicated to contractors?
- 7.) Have the provisions of the program, specifying penalties for safety/health issues been enforced? Provide details.
- 8.) How does the site monitor the quality of the safety/health protection of contractors while they are on site?
- 9.) Are there procedures in place for dealing with contractors whose injury and illness rates are above industry average? How does the site ensure the effective protection of all employees working at the site?
- 10.) Are contractors required to periodically submit injury and illness data? How often? Is the information analyzed?

Employee Involvement

- 1.) How has information about the MVPP been communicated to the employees? Do the employees support the site's participation in the MVPP? How has this been determined?
- 2.) What are the opportunities for employees to participate in the safety and health management system? Are employees required to participate or do they have a choice?

- 3.) Do employees have access to results of self-inspections, accident investigations, appropriate medical records, and personal sampling data? Provide details.

Baseline Hazard Analysis

- 1.) Have the common safety and health hazards (such as those in MIOSHA regulations, building standards, etc) been identified and documented? How? What hazards have been identified? (Provide a list)
- 2.) What types of base line hazard analysis have been performed (JSA's, JHA's, etc). Include examples of instances when initial screening and full-shift industrial hygiene sampling have been used.
- 3.) Provide details about the sampling strategy used to identify health hazards and assess employees' exposure (including duration, route, and frequency of exposure). How is the number of exposed employees determined?
- 4.) What procedures are followed when performing industrial hygiene sampling, testing, and analysis?
- 5.) What exposure limits (PELs, TLVs, etc) are used for comparison to industrial hygiene sampling results?
- 6.) Are industrial hygiene sampling records kept in a logical order (provide details)? What sampling information is recorded (e.g.: sampling time, date, employee, job title, concentrated measures, and calculations)?

Hazard Analysis of Significant Changes

- 1.) When purchasing new materials or equipment, or implementing new processes, what types of analyses are performed to determine their impact on safety and health?
- 2.) When implementing/introducing non-routine tasks, materials or equipment, or modifying processes, what types of analyses are performed to determine their impact on safety and health?

Hazard Analysis of Routine Activities

- 1.) What system is in place to identify and analyze the hazards, both safety and health, associated with routine operations and activities?
- 2.) What hazard analysis techniques are employed for routine operations and activities (e.g., job hazard analysis, HAZ-OPS, fault trees)? How are the findings from the analyses documented?

Routine Inspections

- 1.) Describe the system for performing safety and health inspections. Is it a written requirement that inspections be performed? If so, where is this documentation contained?
- 2.) How often are safety and health inspections conducted? Is the entire site covered during inspections? If not, often is the entire site covered?
- 3.) Is information discovered through based line hazard analysis, job hazard analysis, accident/incident investigation, employees reports of hazard, sampling results, etc utilized during the inspection process? How?
- 4.) What are the training requirements for those participating in the inspection process?
- 5.) Are the results of inspections documented? Provide details.
- 6.) Do inspections reports indicate what needs to be corrected, by whom, and when? Are the corrections tracked to completion? Provide details.

Hazard Reporting

- 1.) Describe the methods available to employees for reporting safety and health concerns.
- 2.) Is there a system in place for employees to notify management in writing about safety and health concerns?

Hazard Tracking

- 1.) Describe the system for tracking hazard correction to completion.
- 2.) Does the hazard tracking system address hazards no matter how they were identified (through hazard analysis, inspections, accident/incident investigations, etc)?
- 3.) Are all identified hazards tracked to completion with feedback to employees for hazards they have reported?
- 4.) If the hazard cannot be corrected immediately are interim protections established? Provide examples.

Accident/Incident Investigations

- 1.) Describe the system for conducting accident/incident (near miss) investigations.
- 2.) What are the training requirements for those conducting accident/incident investigations?
- 3.) Do investigations discover and document all factors that contributed to the accident/incident? Provide details.

Safety and Health Program Evaluation

- 1.) Describe the system in place for conducting the annual site safety and health management system evaluation (the evaluation must cover all elements of the safety and health management system – management commitment, employee involvement, worksite analysis, hazard prevention and control, worksite analysis, and training).
- 2.) Does the annual evaluation include written recommendations? Provide details.
- 3.) Describe the system in place to track to completion the recommendations of the

annual evaluation.

Trend Analysis

- 1.) How are injury/illness trends identified and assessed?
- 2.) What injury and/or illness trends have been identified over the last three years? What courses of action have been taken?
- 3.) What information is assessed to identify trends (injury/illness reporting logs, first-aid reports, employee reports of hazard, accident/incident investigations, etc)?

Hazard Prevention and Control

- 1.) When selecting hazard controls, is the preferred hierarchy (engineering controls, administrative controls, work practice controls [e.g. lockout/tag out, bloodborne pathogens, and confined space programs], and personal protective equipment) followed? Provide examples.
- 2.) Describe all of the administrative controls used at the site to limit employee exposure to hazards (for example, job rotation).
- 3.) Are the work practice controls (i.e. lockout/tag out, blood born pathogens, and confined space programs) recommended by hazard analyses implemented at the site? Provide details.
- 4.) Are follow-up studies (where appropriate) conducted to ensure that hazard controls were adequate?
- 5.) Are hazard controls documented and addressed in appropriate procedures (SOP's), safety and health rules, inspections, training, etc.? Provide examples.
- 6.) Describe the disciplinary system and how it is enforced equally for both management and employees.
- 7.) Are written procedures for dealing with emergencies? If so, what types of emergencies are addressed (weather, fire, spills, workplace violence, etc)?

- 8.) How often are emergency drills held? For what types of emergencies are drills run? Are drills evaluated for effectiveness? Provide details.
- 9.) Describe the preventative/predictive maintenance system. Is it written?
- 10.) What things are considered when determining when preventative maintenance on a machine, facility, etc is required (manufacturers' recommendations, past experience, etc)?
- 11.) How is PPE selected?
- 12.) Have employees been trained on the limitations, proper use, storage, and maintenance of PPE? Do employees utilize PPE properly?
- 13.) What chemicals are used that trigger the Process Safety Management (PSM)?

Occupational Health Care Program and Recordkeeping

- 1.) Describe the occupational health care program, including the availability of physician services, first aid, and CPR/AED (include information about special programs such as audiograms or other medical tests used).
- 2.) How are licensed occupational health professionals used in hazard identification and analysis (e.g.: early recognition and treatment of illness and injury, and the system for limiting the severity of harm that might result from workplace illness or injury)?

Safety and Health Training

- 1.) Describe the safety and health training requirements for managers, supervisors, employees, and contractors.
- 2.) How are the safety and health training needs for employees determined?

- 3.) Describe the system(s) in place that ensure that all employees and contractors have received and understand the training?
- 4.) Who is trained in hazard identification and analysis?
- 5.) How has management gained a thorough understanding of the hazards at the site (e.g.: training, experience, observation, etc)?

Additional Questions to Address Appendix C (MVPP for Construction)

Subcontractor Oversight

- 1.) Describe your process for selecting sub-contractors (pre selection process, modification rate, safety performance criteria, safety training).
- 2.) Describe how you will monitor that sub-contractors are working safely, how you will monitor and track hazards created by sub-contractors, and monitor and track injuries and injuries, and following required procedures.

Hazard Recognition and Control as a Non-controlling Employer (if applicant is the controlling contractor not required)

- 1.) Describe your policies, procedures and methods to ensure protection for your employees;
- 2.) Explain your employee training to recognize hazards when they are working unsupervised (refusal to work in hazardous situations, right to leave, method of communication of uncontrolled hazards discovered);

Daily Workplace and Equipment Inspections

- 1.) Describe your procedures for daily workplace and equipment inspections, training.

Employee Involvement

- 1.) Explain your system for employee involvement such as tool box talks, inspection and hazard recognition training, accident investigations.

Baseline Hazard Analysis

- 1.) Describe how you will address changing situations in the worksite (such as preconstruction analysis, environmental studies, and previous industrial hygiene studies for similar tasks, job safety analysis and new task analysis).

Emergency Response

- 1.) Explain your program for emergency response such as drills, signals, head counts, etc.

Best Practices

- 1.) Describe how you will address the leading industry hazards and concerns in your safety and health management system which include:
 - a) Falls
 - b) Caught between/crushed by,
 - c) Electrical
 - d) Struck-by
 - e) Lifting and digging
 - f) Confined space
 - g) Noise
 - h) Air Contaminants
 - i) Any other hazards or concerns specific to the work operation and project

Appendix C



Michigan Voluntary Protection Program For Construction

Introduction

The Michigan Occupational Safety and Health Administration (MIOSHA) have long recognized the value of cooperative efforts by employers, employees, and government agencies to reduce hazards and strengthen worker protection. The Michigan Voluntary Protection Program (MVPP), which recognizes employers and employees who have established effective safety and health management systems, has been particularly successful. However, the MVPP was designed primarily for fixed workplaces, and businesses within the construction industry have not been able to participate.

MIOSHA has worked with leading construction trade associations, labor organizations, and employers to find ways to adapt the MVPP model to the unique characteristics and challenges of the construction industry. In collaboration with labor and industry, MIOSHA has designed the Michigan Voluntary Protection Program for Construction (MVPPC). The program includes controlling contractors who have the ability to establish an effective safety and health program at the outset of a project, mobile workforce operations whose employees routinely move from site to site with varying work tasks and hazard exposures, and resident contractors.

MIOSHA believes that construction companies are able to implement effective safety and health management systems and can provide protections equal to those found at a fixed MVPP workplace.

MIOSHA is now offering an MVPP program for the construction industry. It is open to fixed-base projects (sites), resident contractors working at an MVPP site, and mobile workforce operations. The MVPPC is intended to create greater opportunity for employers and employees in the construction industry to participate in the MVPP and, in so doing, strengthen worker protections significantly. MIOSHA believes this new program will work for companies that typically function as controlling contractors and for companies that perform specialty trade functions, regardless of size.

Eligibility

MIOSHA welcomes applications from interested employers from the construction industry. Applicants must have been in operation in the construction industry for at least three years. For controlling joint-venture applicants, each business entity must have been in operation for at least three years.

Applicants may range from controlling employers, specialty trade contractors working in the capacity of a subcontractor, and resident contractors. An applicant applying for the MVPPC must decide if they want to apply as a fixed-base project (site), resident contractor, or mobile workforce. Controlling employers may not apply as a mobile workforce.

Definitions

Controlling Employer has general supervisory authority over the worksite, including the power to correct safety and health violations itself or require others to correct them.

Designated Geographic Area (DGA) a defined geographic area for Mobile Workforce participation in MVPPC. A DGA cannot exceed a Michigan boundary.

Fixed-base Projects (sites) are site-specific construction projects that typically are multi-employer sites with one or more controlling employers.

Mobile workforces are self-performing subcontractors or specialty trade contractors with employees who routinely move from site to site. Mobile workforces face varying work tasks and hazard exposures. To meet the requirement of a mobile workforce, 50% of the employees must work at least 50% of the time outside of the “brick and mortar” headquarters office. The applicant must provide details about their safety and health management system and how it is implemented to protect employees.

Resident contractors are generally employers that perform construction-related services at host sites such as power plants, chemical/petrol facilities, etc. An example would be a company that occupies a space at a site and, under contract, provides services at the facility. To be eligible, the host site, for which the Resident Contractor is applying, must be an MVPP facility. The resident contractor’s project/operations must have been ongoing for typically twelve continuous months or longer, and expected total work duration to last at least three years.

Unique Aspects of the MVPPC

Except as indicated below, all general industry MVPP requirements apply to MVPPC.

Fixed-base Project applicants will be considered for the MVPPC using the following steps for approval:

- Step 1: Each applicant must participate in a MIOSHA Partnership in the last three years with injury and illness data at or below the applicable industry average.
- Step 2: One or more MVPPC worksite evaluations will be conducted. The evaluation(s) will focus on verifying that the applicant's safety and health management systems are working.
- Step 3: After a project is approved for MVPPC, the applicant may be considered for MVPPC for future construction projects.

Mobile Workforce applicants will be assigned a Designated Geographic Area (DGA). MIOSHA, after consulting with an applicant and considering the applicant's preference, will define the geographic area for participation. The DGA must be for worksites under MIOSHA jurisdiction, a DGA cannot exceed a Michigan boundary.

Injury and Illness Data: All applicants must provide injury and illness data for the company's workforce for the three most recent calendar years.

Fixed-base Project applicants must provide data that reflects the nonfatal injury and illness experience of all their employees and subcontractor employees over whom they have responsibility and/or authority for safety and health. It is the applicant's responsibility to maintain records of hours worked by subcontractors under its authority and responsibility plus any recordable injuries and illnesses these subcontractors may experience. (See Appendix A).

Mobile Workforce applicants must provide data that reflects the nonfatal injury and illness experience of all their employees.

The injury and illness rates for Resident Contractors will be for work at the applicant site(s) only and for the time period worked. At least twelve months of data are typically required, then every year thereafter. The other two years will be company data in Michigan (including temporary or other sub-contractors under the resident contractor's direct control).

Employee Commitment: Applicants whose employees are represented by one or more unions will be responsible for obtaining commitment from each individual union. In addition, Fixed-base Project applicants will also be responsible for obtaining commitment from each individual union for all subcontractor employees who are represented by a union. Applicants must show evidence of employee involvement and commitment to the MVPPC.

Industry Best Practices: MVPPC is a performance-based program that gives its participants latitude to address safety and health concerns in ways that are both effective and appropriate to their specific needs, culture, and industry. MIOSHA has identified

many of the leading construction industry hazards and concerns in their Strategic Plan and expects each applicant to address these in their safety and health management system. These hazards include falls, caught between/crushed by, electrical, struck-by, lifting and digging, confined space, noise, and air contaminants. Participants must also address any other hazards and concerns that are specific to the work operation and project.

MIOSHA expects that MVPPC participants will address such concerns to the extent that employees' safety and health is affected, and will utilize industry best practices. This expectation is in line with the practices of MVPP participants, who generally view MIOSHA standards as minimum level of safety and health performance and set their own more stringent standards where necessary for effective employee protection. See appendix B for details.

Applying for the MVPPC

Applicant Self Evaluation: Prior to submitting an MVPPC application, applicants are encouraged to evaluate their safety and health management system using the self evaluation in Appendix C.

Application Submission: Each applicant must provide all data required in the MVPP application. The application must also address the hazards and unique conditions of the applicant's workforce in the construction industry. This may include management leadership and/or employee involvement strategies that ensure employee protection, such as employees' ability to leave the worksite if unsafe conditions exist; hazard analysis that uses historical sampling data for a baseline; emergency response policies and evacuation procedures appropriate to construction worksites; and other alternative approaches to safety and health.

Resident Contractor and Fixed-based Projects, where applicable, application must contain a written "host provision," that clearly states that the host employer supports the resident contractor's participation in the MVPPC. In addition, it must state that the host agrees to allow MIOSHA to perform onsite evaluations of the resident contractor's work areas where the contractor's employees are required to work within the facility. The safety and health management systems of resident contractors must provide MVPP quality protection to employees.

Applicants for the MVPPC may or may not have authority and responsibility for safety and health over the entire worksite. In addition, applicants may have employees who often work alone and without regular supervision (example, specialty trades). Details on how the employer addresses these challenges must be specified in the application.

An applicant's inspection history for the past three years must include: no open inspections or investigations (complaint and/or accident), no pending or open contested citations or notices under appeal, and no affirmed willful violations.

A general industry MVPP company acting as a controlling contractor for a construction operation is required to submit a separate application for MVPPC. Controlling employers can not apply as a mobile workforce.

Applicants should submit their MVPPC application to the MVPP Manager. Application and guidelines can be obtained from the MIOSHA Office in Lansing or downloaded at www.michigan.gov/mvpp.

Application Review: MIOSHA will review the application and determine eligibility. If accepted, MIOSHA will contact the applicant to schedule an evaluation of their safety and health management system.

Priority for MIOSHA Construction Partnership Participants: MIOSHA may offer an expedited application review and approval process to applicants who have participated in a MIOSHA Partnership on a construction project. MIOSHA Partnerships require many of the same high-level system elements as the MVPP for Construction.

On Site Evaluation

Evaluation of Applicants: MIOSHA will initially visit the company's main office or headquarters for an evaluation of the applicant's corporate, division, or business unit policies and procedures. This evaluation will also include a review of the applicant's safety and health management systems (SHMS), including systems for ensuring implementation of safety and health protection. It will include a document review and a careful assessment of the applicant's management commitment to safety and health and to the MVPPC. This evaluation will also include interviews with senior management officials and employees.

While at the company main office or headquarters, MIOSHA will also request a list of all active projects to ensure that employees will be working and available at these sites. The applicant will obtain written permission from the controlling employer or host employer to allow MIOSHA to access the worksite(s) for an evaluation. The applicant also should arrange for the project superintendent to accompany the OSHA team during the visit.

MIOSHA will then visit one or more construction worksites. Whenever possible, the onsite evaluations will be unannounced. The site(s) chosen will be determined by the MVPP Manager. The worksite evaluations will focus on verifying that the applicant's safety and health management systems are actually working.

MIOSHA will make an effort to select sites that best represent the applicant's activities. MIOSHA has the discretion to select the number of onsite evaluations based on the following criteria:

1. The number of onsite evaluations needed to cover all the types of work performed by the employer.
2. The phases of construction and the nature of the hazards associated with such work.

Fixed-base Project applicants will receive a minimum of one worksite evaluation. MIOSHA will focus on the effectiveness of the applicant's SHMS as it applies to a multi-employer worksite. Applicants will be evaluated on many factors of their SHMS. These include, for example, methods of detecting safety and health hazards, methods of abating hazards, management commitment, employee involvement, and injury and illness rates.

Mobile Workforce applicants will receive a minimum of two worksite evaluations at separate construction sites.

Resident Contractor applicants will receive a minimum of one worksite evaluation at the host employer's facility.

MIOSHA will focus primarily on an applicants work at a site. However, the applicant must inform the controlling/host employer, when applicable, that any conditions (including those created by others) that MIOSHA views and deems a serious hazard must be abated immediately or confirmed as abated according to an abatement plan approved by MIOSHA. In the MVPP spirit of cooperation, MIOSHA will take no enforcement actions and issue no citations if the hazardous conditions are corrected. Only if correction does not occur will MIOSHA exercise the option normal enforcement procedures.

Approval and Reapproval Process

Participation Level: In order to qualify for the MVPPC, the evaluation at the main office or headquarters and at the worksite(s) must conclude that the applicant's SHMS meets all MVPPC requirements. The applicant may be recognized at either the Star or Rising Star level based on how well the SHMS is implemented at the site(s) visited during the worksite evaluation phase.

Approval: The MVPP Manager will submit a recommendation and final report to the Agency Director that reflects the findings of the MVPPC evaluation team. The Agency Director will issue the approval decision.

Removal from Programmed Inspections: Once an applicant is approved, all work performed at an approved worksite will be removed from MIOSHA's programmed inspections as follows:

- At a Fixed-base Project worksite for the controlling employer(s) and all contractors.

- Within the DGA for Mobile Workforce applicants.
- At the Resident Contractor's MVPP host site.

MVPPC participants will remain subject to unprogrammed investigations, such as complaints, fatalities, and catastrophes.

Safety & Health Program Evaluation–Self Evaluation: Annually by February 15, participants must submit: (a) data related to Total Case Incidence Rate (TCIR) and cases related to Days Away from work/Restricted work/or job Transfer case Rate (DART rate), (b) a written evaluation of the site's safety and health management system, worksite success stories, and a summary of mentoring experiences.

Reevaluations: Subsequent to approval, MIOSHA will conduct one or more reevaluation visits of a participant's worksite(s) every *12 to 18 months* for the duration of approval or length of the project. The number of reevaluations will be determined by the MVPP Manager. Documentation and verification of continuous improvement of the participant's SHMS will be reviewed. Additionally, MIOSHA will return to the participant's headquarters every three years to reevaluate the SHMS policies and procedures.

Withdrawal/Termination from MVPPC: MVPPC status may be terminated for any of the conditions described in the application guidelines. In addition, if a reevaluation does not meet the MVPPC requirements, the MVPP Manager will take one of the following actions:

- Give the company 30 days to meet requirements, or
- Ask the company to withdraw from the MVPPC.

If two reevaluations do not meet the MVPPC requirements in one year, the company will be asked to withdraw. If a participant chooses not to withdraw, the MVPP Manager will recommend removal from the program. If a participant is terminated they may not reapply for MVPP participation for three years.

Management/Union Change: If at any time a participant experiences a change in management, a change in union representation/status, or other similar changes, the participant must notify the MIOSHA MVPP Manager in writing. The MVPP Manager will determine what steps, if any, must be taken to reaffirm MVPPC participation. Unions retain the right to withdraw support at any time. In such event, MIOSHA will reevaluate the participant's continuing qualification.

Where Can I Get More Information?

MIOSHA can provide you with additional information about the MVPPC and answer your questions. Information on the MVPPC can also be found on MIOSHA's webpage, www.michigan.gov/mvpp.

You also may direct your questions or comments to:

Michigan Occupational Safety & Health Administration (MIOSHA)
525 W. Allegan Street
P.O. Box 30643
Lansing, MI 48909-8143

Voice (517) 284-7720
Fax (517) 284-7725

Appendix A

Injury and Illness Rate Requirements

Total Case Incidence Rates (TCIR) and Days Away, Restricted, or Transfer (DART) Rates

Rate Phase-In Policy for Fixed-base Projects

MIOSHA expects to receive three years of I & I data for an applicant's regular workforce (which includes temporary employees) and its subcontractor employees. However, if the applicant does not maintain rate information for their subcontractors they may still apply using the below phase-in policy.

As part of the initial application, MIOSHA expects to receive TCIR and DART rates for the most recent full calendar year, plus *company-only* rates (that include temporary employees) for the two prior calendar years. These three years of rates should reflect an applicant's nonfatal injury and illness experience.

At the end of the first year of participation, participants must provide to MIOSHA *combined* TCIR and DART rates that reflect the experience of the company's regular workforce (including temporary employees) and specialty trade subcontractors for the *two most recent full calendar years* plus a third year of data that reflects *company-only* experience (which includes temporary employees).

At the end of the second year of participation, and for each subsequent year, participants must provide to MIOSHA combined TCIR and DART rates for the *three most recent calendar years*. The data for each of these three calendar years must reflect the experience of the company's regular workforce (which includes temporary employees) combined with its specialty trade subcontractors.

Rates Needed To Qualify

The MVPPC has separate data requirements for the Michigan Star Program and the Michigan Rising Star Program.

1. One of the criteria for the MVPP star award requires an applicant to be at or below the industry average for the Total Case Incidence Rate (TCIR) for each of the last three complete years. The TCIR is the frequency rate for all recordable injuries and illnesses. The applicant must also be at or below the industry average for the total case rate related to Days Away from work/Restricted work/or job Transfer (DART), for each of the last three complete calendar years. This rate is referred to as the DART rate.
2. The applicant's (NAICS) injury and illness rates will be compared to industry average rates published through the Management Information Systems Section (MISS). If Michigan data is unavailable, the comparison

will be made to the Bureau of Labor Statistics (BLS) data. Whichever data has more digits of the NAICs code available (MISS or BLS) that data will be used for comparison purposes. The last three complete years of data will be compared to each corresponding year for which data is available. The latest data from MISS and BLS may be one year behind the actual year completed. In this case the most recent data available will be used to compare the last two years.

Alternative Rate Calculation for Qualifying Small Employers

Some applicants, usually small construction companies with limited numbers of employees (including temporary employees), subcontractor employees, and/or hours worked may use an alternative method. The alternative method allows the employer to use the best 3 out of the most recent 4 years' injury and illness experience.

To determine whether you qualify for the alternative calculation method, do the following:

Using your company's actual employment statistics, determine hours worked during the most recent calendar year by your regular employees (including temporary workers) plus other controlled employees, for example, subcontractors.

Then calculate a hypothetical TCIR assuming two recordable cases during the year.

Compare this hypothetical rate to the 3 most recently published years of BLS combined injury/illness total recordable case incidence rates for your industry.

If the hypothetical rate (based on two cases) is equal to or higher than the appropriate average for your industry in at least 1 of the 3 years, you qualify for the alternative calculation method. You may use the best 3 of the last 4 calendar years of employee injury/illness experience when calculating both the TCIR and the DART rate.

If you qualify for the alternative rate calculation, you still must submit at least one year of combined rates. At least one of the best 3 years that you submit must include both regular employees (including temporary workers) plus any subcontractor employees.

Unions retain the right to withdraw support at any time. In such event, MIOSHA will reevaluate the participant's continuing qualification.

Appendix B

Good Safety and Health Management System (SHMS) Practices in the Construction Industry

The complexity of a construction company's SHMS usually will depend upon the size, the nature of the construction activities, and the general contractor's or specialty trade contractor's management role during planning and construction phases. However, successful VPP participants operating in the construction industry often utilize numerous industry good practices within their systems, such as the following:

Make Employees an Integral Part of the SHMS

There are many ways to integrate employees, specialty trade contractors and temporary employees into the SHMS. For example, some controlling employers review subcontractors' or temporary employees' safety and health policies, procedures, and protective measures, both generally and as they apply to hazardous or non-routine tasks. These controlling employers help their subcontractors improve their own SHMS. Contract agreements may also define responsibilities for safety and health inspections, hazard identification, pre-task analysis, correction of hazards, emergency planning, new employee orientation, incident reporting, and tracking methods to ensure follow-up on corrective actions. In these and other ways, VPP participants ensure that subcontractors and temporary employees are protected from hazards to the same degree as the participants' own employees.

MIOSHA Training Institute (MTI) for Supervisors and Employees

The MTI offers participants certification in construction safety and health topics with courses designed for those who desire a higher level of understanding of what constitutes a comprehensive safety and health management system. The MTI was developed to assist supervisors and employees to be recognized for their educational efforts and to increase their expertise in judging potential hazards in the workplace while providing guidelines for eliminating those hazards.

MIOSHA/OSHA 10-hour for all Employees including Subcontractor Employees

Due to the nature of the construction industry, that is, short-term projects, mobile workforces, changing environments, etc., many successful construction employers require, at a minimum, MIOSHA/OSHA 10-hour or equivalent training for all personnel on the site, including subcontractors. This training heightens hazard awareness and helps to ensure that all employees, including those of subcontractors, have the information they need to recognize and avoid unsafe conditions.

OSHA 30-hour (or equivalent) Training for Supervisors

Supervisors normally are responsible for overseeing a particular operation on a construction project. They organize, direct, and control construction processes to assure, among other things, on-time completion of a quality end product. The supervisor's ability to recognize and control hazards at construction sites is not only considered an integral part of a safety and health management system; it also is an essential part of all construction-related tasks performed.

Accident prevention makes good business sense when viewed as a way to prevent and control hazards that could lead to personal injuries, property damage, or construction delays. Requiring supervisors, including those of subcontractors, to have OSHA 30-hour or equivalent training *prior to commencing work* will help ensure that basic hazard identification and the prevention, correction, or control of hazards will be consistent throughout the various phases of the project.

100% Fall Protection at 6 feet for all Trades/Employees

Falls account for approximately 33% of fatalities in the construction industry. Therefore, applicants must have an aggressive and effective fall protection program. One suggested way to accomplish this is to implement a 100% fall protection program that requires all trades to have effective means for fall protection when working at elevations of 6 feet or more above a working surface.

Prequalification for all Subcontractors

Prequalifying subcontractors is one way that some general contractors ensure consistency in protecting all employees on the job. These general contractors review potential subcontractors' past safety and health performance prior to adding them to a qualified bidders list. Reviews normally focus on safety and health policies, procedures, and protective measures used, both generally and when performing hazardous or non routine tasks. Some general contractors require their subcontractors to have injury/illness rates below the applicable industry averages and/or experience modification rates (EMR) at or below 1.

Drug Testing/Screening Policy

A drug-and alcohol-free workplace prevents injuries and illnesses, absenteeism, turnover, and a myriad of behavioral problems. One suggested way to begin to address these problems is to develop a drug testing and screening policy based on successful program models. Such models can be found at a number of internet websites, including the United States Department of Labor's [Working Partners for an Alcohol and Drug Free Worksite](#).

Required Daily Meetings/Employee Safety and Health Briefings Devoted to Planning and Safety Awareness

Many successful employers regularly conduct tool box safety and health meetings. The more involved employees get in the process, the better understanding they will have of the "big picture," including their safety and health roles and responsibilities. This method works for quality control, and it will work for safety and health.

Motor Vehicle Safety Program

Recognizing the opportunity that construction companies have to save lives and prevent injuries, a growing number of safety-minded contractors have established traffic safety programs for their employees and subcontractors.

Contact Information:

Michigan Occupational Safety & Health Administration (MIOSHA)
Consultation Education & Training (CET) Division
525 W. Allegan Street
P.O. Box 30643
Lansing, MI 48909-8143
Voice (517) 284-7720 Fax (517) 284-7725
www.michigan.gov/miosha

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Appendix D

Sample Michigan Voluntary Protection Program Statement of Commitment

A. Employee Statement

1. If your site is unionized, the authorized collective bargaining agent(s) must sign a statement that supports the site's participation in MVPP. The statement should be submitted with your application and must be on file before MVPP will schedule an onsite visit. Expressions of the commitment of nonunion employees are required.
2. If your site is non-unionized, and an "authorized employee representative" or "representative of the employee" as defined by the Michigan Occupational Safety and Health Act (MIOSHA) exists, that representative must sign a statement, or at least indicate support for the site's participation in MVPP. This statement must be on file prior to an onsite evaluation.

B. Management Statement

Please read the following statements carefully and either sign on the line following the Statement of Commitment or attach a letter that provides the same assurances.

We agree that:

1. We are committed to doing our best to provide outstanding safety and health protection to our employees through management systems and employee involvement;
2. All employees, including newly hired employees and contract employees when they reach the site, will have the MVPP explained to them, including employee rights under the program and under MIOSHA;
3. All hazards identified through employee notification, self-inspections, accident investigations, process hazard reviews, annual evaluations, or any other means or report, investigation, or analysis will be corrected in a timely manner, with interim protection provided as necessary;
4. If employees are given health and safety duties as part of our safety and health program, we will ensure that those employees will be protected from discriminatory actions resulting from their carrying out such duties, just as the Michigan Occupational Safety and Health Act (P.A. 154 of 1974, as amended) protects employees for the exercise of rights under the Act; and

5. Employees will have access to the results of self-inspections and accident investigations upon request.

C. Documentation

We agree to provide the following information for the MVPP's onsite review:

1. Written safety and health programs, (if applicable);
2. All of the following documentation:
 - a. Management statement of commitment to safety and health
 - b. MIOSHA Injury an Illness log and supplemental information
 - c. Safety and health manual(s)
 - d. Employee notifications system for reporting safety and health hazards
 - e. Safety rules, emergency procedures, and examples of safe work practices
 - f. System for enforcing safety rules
 - g. Self-inspection procedures, reports and system for tracking corrections
 - h. Accident investigations
 - I. Safety committee minutes
 - j. Industrial hygiene monitoring records
 - k. Other records which provide documentation to meet MVPP program requirements.
3. Any agreements between management and collective bargaining agent(s) or other authorized employee representative(s) concerning the functions of any joint labor-management safety and health committee and its organization and any other employee involvement in the safety and health management system.

We will retain these records until the MVPP communicates its decision regarding our approval to participate.

We will likewise retain comparable records for the period of MVPP participation to be covered by each subsequent reevaluation until MVPP communicates its decision regarding approval.

We agree to make available for evaluation purposes any data necessary to evaluate other achievement of goals not listed above.

We will provide to MIOSHA, each year by February 15th the number of our injury and illness cases, number of cases involving days away from work/restricted work and/or job transfer, incidence rates, hours worked, estimated average employment for the past full calendar year, and a copy of the most recent annual written evaluation of the site's safety and health management system.

In addition, we will submit applicable contractor's number of combined injury and illness cases, number of cases involving days away from work/restricted work and/or job transfer, incidence rates, hours worked, and estimated average employment for the past full calendar year for all contractors' employees who worked at least 1000 hours in any one quarter at our site during the year.

We understand it is important that we continue to be a leader within our community and to assist other applicant's at our discretion with knowledge and resources pertaining to both safety and health.

We will make available to the MVPP any education and training materials that are not considered confidential so that our experience in safety and health training can be shared with other Michigan companies.

We understand that we may withdraw our application or participation at any time or for any reason should we so desire.

Authorized Signature (For Applicant Worksite)

Date:

(You may add the signatures of any others you wish.)

D. Sample Host Statement of Commitment

Candidates must obtain the following statement from the host employer or attach a letter that provides the same assurances. This statement must be signed by the host employer.

We agree that:

1. We support the resident contractor's participation in the MVPPC;
2. We agree to allow MIOSHA to perform onsite evaluations of the resident contractor's work areas where the contractor's employees are required to work within the facility;
3. We agree that any conditions that MIOSHA views and deems a serious hazard must be abated immediately or confirmed as abated according to an abatement plan approved by MIOSHA. In the MVPPC spirit of cooperation, MIOSHA will take no enforcement actions and issue no citations if the hazardous conditions are corrected.

Authorized Signature (for Host Worksite)

Date:

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Appendix E

Michigan Voluntary Protection Programs (MVPP) Assurances

An MVPP participant agrees to:

1. Comply with the Act and correct all hazards discovered in a timely manner.
2. Correct site deficiencies related to the MVPP onsite review within 30 days.
3. Obtain employee/collective bargaining written support of the MVPP application and process.
4. Meet and maintain the required MVPP elements for an effective safety and health management system.
5. Explain the MVPP to newly hired and contract employees, including employee rights under the program.
6. Protect employees who are given safety and health responsibilities from discriminatory actions resulting from their carrying out such duties.
7. Allow employees access to the results of self-inspections, accident investigations, and other safety and health program data upon request.
8. Make available to the onsite Team the written safety and health management system; all documentation needed to conduct an initial onsite review; and any agreements between management and the collective bargaining agent(s) concerning safety and health.
9. Make available any necessary data to assist in the evaluation or reevaluation of established goals for Rising Star applicants, one-year conditional Star goals, and current Star sites.
10. Submit by February 15 the following information annually: (a) data related to Total Case Incidence Rate (TCIR) and cases related to Days Away from work/Restricted work/or job Transfer case Rate (DART rate), (b) a written evaluation of the site's safety and health management system, worksite success stories, and a summary of mentoring experiences.
11. Submit by February 15 data related to TCIR and DART rate for contractor's employees who have worked a total of 1,000 or more hours in any calendar quarter at the worksite.

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12. Advise the MVPP Manager if any significant organizational or ownership changes within 60 days and provide a new Statement of Commitment signed by management and any authorized collective bargaining agents.
13. Advise the MVPP Manager if a change has occurred in the authorized bargaining agent and provide a new signed statement of support for MVPP participation from the new representative.
14. Participate in mentoring activities to assist other establishments with meeting MVPP criteria.

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Appendix F

Application Supplement for Sites Subject to the Process Safety Management (PSM) Standard

VPP applicants whose operations are covered by the Process Safety Management (PSM) Standard must provide responses to each question that is applicable to their operations. Responses must cover all PSM-related operations. Please indicate that a question is “Not Applicable” if it addresses functionality outside the scope of the operations, and briefly explain why.

I. Management of Change.

- A. Has the throughput changed from its original design rate? Has the site conducted a management of change (MOC) procedure for each throughput change since May 26, 1992?
- B. For the MOC procedures conducted for the unit(s), has the procedure listed the technical basis for the change and ALL potential safety and health impacts of the change prior to its implementation?
- C. From the site’s list of MOCs, identify the oldest MOC procedure which might affect the integrity of one or more pressure vessels in the unit(s). Do these MOC procedures meet all 1910.119(l) requirements?
- D. Does the MOC process address temporary changes as well as permanent changes?
- E. Have MOCs been conducted on all changes to process chemicals, technology, equipment and procedures, and changes to facilities that affect a covered process?

II. Relief Design.

- A. For each throughput MOC procedure conducted, has the procedure addressed a review/analysis of the relief system (includes relief devices, relief discharge lines, relief disposal equipment and flare system) to determine if there may be any safety and health impacts due to increased flow as a result of throughput changes which might impact the existing relief system?

Guidance: An MOC procedure is required anytime a change per the requirements of 1910.119(l) is considered. An MOC procedure is a

proactive management system tool used in part to determine if a change might result in safety and health impacts. OSHA's MOC requirement is prospective. The standard requires that an MOC procedure be completed, regardless of whether any safety and health impacts will actually be realized by the change.

- B. After a change in the throughput in the unit(s), did the process hazard analysis (PHA) team consider the adequacy of the existing relief system design with respect to the increased throughput during the next PHA?

Guidance: Typically, the PHA team does not do a relief system engineering analysis. However, the PHA team should determine, through proper evaluation and consultation with the engineering/technical staff, if the existing/current engineering analysis of the relief system is adequate for the current/actual unit throughput.

If the throughput change was implemented between the time the PSM standard became effective (May 26, 1992) and the time the original PHA was required based on the PHA phase-in schedule, the original PHA would need to address the throughput change. However, if there was a throughput change after the original PHA, the next PHA update/"redo" or PHA revalidation would need to address the throughput change. In either event, an MOC procedure on the throughput change would need to have been conducted and incorporated into the next scheduled PHA.

- C. Does the site's process safety information (PSI) include the codes and standards used in the design of relief systems?
- D. Does the site's PSI include the relief system design and design basis?

Guidance: This includes the original design and design changes. Examples of PSI related to relief devices, their design and design basis include, but are not limited to such items as:

1. Identification/descriptor of each relief device;
2. A listing of all equipment which will be relieved through the device;
3. Design pressure;
4. Set pressure;
5. Listing of all sources of overpressure considered;
6. Identification of the worst case overpressure scenario or relief design;
7. State of material being relieved (i.e., liquid, vapor, liquid-vapor, liquid-vapor-solid, along with an identification of the material which was the basis for the relief device selection);

8. Physical properties of the relieved materials, vapor rate, molecular weight, maximum relieving pressure, heat of vaporization, specific gravity and viscosity; and
9. Design calculations.

Similar design and design bases PSI are required for the rest of the relief system equipment downstream from the relief devices, i.e., relief vent lines, manifolds, headers, other relief disposal equipment, and flare stack.

- E. Are there intervening valves on the upstream or downstream lines to/from relief devices? If so, does the PHA consider the possibility that these valves could be closed during operation, rendering the relief devices non-functional?
- F. If there are intervening valves on the upstream or downstream lines to/from relief devices, does the site have effective controls in place to ensure these intervening valves remain open during operations?
- G. If there are intervening valves on the upstream or downstream lines to/from relief devices, is there an administrative procedure (e.g., car-seal procedure) to assure these valves are in the open position during operations? If so, has this procedure been subsequently audited?
- H. Are there open vents which discharge to atmosphere from relief devices? If so, has the PHA considered whether these relief devices discharge to a safe location?

Guidance: PHA teams must address basic questions regarding what happens to the hazardous materials after they are relieved to atmosphere, including:

1. Are there negative effects on employees or other equipment that could cause another release (“domino effects”) of hazardous materials/HHC?
2. What presumptions or assessments exist to support that there will be no negative effects of an atmospheric release of hazardous materials/HHC?
3. Are employees near where relief devices discharge, including downwind locations (e.g., on the ground, on platforms on pressure vessels in the vicinity of elevated relief devices, etc.)?
4. Could a release from a relief device cause a release from other equipment, or could other nearby equipment affect the released material (e.g., a furnace stack could be an ignition source if it is

located proximate to an elevated relief device that is designed to relieve flammable materials)?

Part of the site's PHA team's evaluation, after it identifies the locations of open vents, is to determine if employees might be exposed when hazardous materials are relieved. If the PHA team concludes that a current and appropriate evaluation (such as the use of dispersion modeling) has been conducted, the evaluation could find that the vessels/vents relieve to a safe location. If the PHA team determines that this hazard has not been appropriately evaluated, the PHA team must request that such an evaluation be conducted, or make some other appropriate recommendation to ensure that the identified hazard/deviation is adequately addressed.

- I. Does the site have a mechanical integrity (MI) procedure for inspecting, testing, maintaining, and repairing relief devices which maintains the ongoing integrity of process equipment?
 - J. Does the process use flares? If so, verify that the flares have been in-service/operational when the process has been running. If the flares have not been in-service, has the site used other effective measures to relieve equipment in the event of an upset? Has an MOC procedure been used to evaluate these changes?
- III. Vessels.
- A. Do pressure vessels which have integrally bonded liners, such as strip lining or plate lining, have an MI procedure which requires that the next scheduled inspection after an on-stream inspection be an internal inspection?
 - B. Does the site have an MI procedure for establishing thickness measurement locations (TML) in pressure vessels, and does the site implement that procedure when establishing the TML?
 - C. Does the site have an MI procedure for inspecting pressure vessels for corrosion-under-insulation (CUI), and does the site inspect pressure vessels for CUI?
 - D. Does the site's MI procedure address testing (e.g. leak testing) and repair of pressure vessels? For example, does the MI procedure indicate how the testing and repair will be conducted and which personnel are authorized to do the testing and repair, including what credentials those conducting the testing and repair must have?

Guidance: API 510 requires in-service pressure vessel tests when the API authorized pressure vessel inspector believes they are necessary.

Guidance: Recognized and Generally Accepted Good Engineering Practices (RAGAGEP) that require credentials include, but are not limited to:

1. Credentials for pressure vessel inspectors, see API 510, Section 4.2.
2. RAGAGEP for pressure vessel examiners credentials/experience and training requirements, see API 510, Section 3.18.
3. RAGAGEP for contractors performing NDE are the training and certification requirements ASNT-TC-1A, see CCPS, Section 10.3.2.1, (In-service Inspection and Testing) Nondestructive Examination.
4. RAGAGEP for qualifications for personnel who conduct pressure vessel repairs, alteration and rerating including qualifications for welders, see API 510, Section 7.2.1 and the BPVC, Section IX.
5. RAGAGEP for certifications at CCPS, Section 5.4 Certifications, Table 5-3, Widely Accepted MI Certifications, and Table 9-13, Mechanical Integrity Activities for Pressure Vessels.

- E. Were any deficiencies found during pressure vessel inspections? If so, how were they resolved?

Guidance: A deficiency (as per 1910.119 (j)(5)) means a condition in equipment or systems that is outside of acceptable PSI limits. In the case of a pressure vessel, this could mean degradation in the equipment/system exceeding the equipment's acceptable limits (e.g., operating a vessel, tank or piping with a wall thickness less than its retirement thickness).

- F. Do the operating procedures for pressure vessels list the safety systems that are applicable to the vessels?

Guidance: Examples of safety systems include but are not limited to: emergency relief systems including relief devices, disposal systems and flares; automatic depressurization valves; remote isolation capabilities, aka emergency isolation valves; safety-instrumented-systems (SIS) including emergency shutdown systems and safety interlock systems; fire detection and protection systems; deluge systems; fixed combustible gas and fire detection system; safety critical alarms and instrumentation; uninterruptible power supply; dikes; etc.

- G. Have there been any changes to pressure vessels or other equipment changes that could affect pressure vessel integrity, such as a change to more corrosive feed, a change in the type of flange seal material used for the vessel heads or nozzles, etc.,? If so, was an MOC procedure completed prior to implementing the change?

IV. Piping.

- A. Is there information in the MI piping inspection procedures or other PSI that indicates the original thickness measurements for all piping sections?
- B. Is there information in the MI piping inspection procedures or other PSI that indicates the locations, dates and results of all subsequent thickness measurements?
- C. Is there anomalous data that has not been resolved for any piping? (For example, the current thickness reading for a TML indicates the pipe wall thickness is greater/thicker than the previous reading(s) with no other explanation as to how this might occur.)
- D. Has each product piping been classified according to the consequences of its failure?

Guidance: If the site inspects and tests all piping the same, regardless of the consequence of failure of the piping (i.e., piping inspections are implemented using the same MI program (1910.119(j)(2) and action/task (1910.119(j)(4) procedure for all piping without consideration of their consequence of failure or other operational criteria), then this question is not applicable.

- E. Based on a review of piping inspection records, have all identified piping deficiencies been addressed?

Guidance: An example of a piping deficiency would be a situation where piping inspection data indicates that its actual wall thickness is less than its retirement thickness, and the site has conducted no other evaluation to determine if the piping is safe for continued operation. For a discussion on equipment deficiencies the definition of deficient/deficiency.

- F. How does the site ensure that replacement piping is suitable for its process application?

Guidance: Typically, piping replacements are replacements-in-kind (RIK) when the process service does not change. However, if the piping replacement is not an RIK, then an MOC procedure is required.

- G. Does the site's MI procedure list required piping inspectors' qualifications, welders' qualifications for welding on process piping, and when qualified welding procedures are required?
 - H. Is there information in the MI piping inspection procedures or other PSI that indicates the original installation date for each section of piping?
 - I. Is there information in the MI piping inspection procedures or other PSI that indicates the specifications, including the materials of construction and strength levels for each section of piping?
 - J. Does the site's MI procedure for piping inspections list criteria/steps to be followed when establishing TML for injection points in piping circuits?
- V. Operating Procedures – Normal Operating Procedures (NOP), Emergency Shutdown Procedures (ESP) and Emergency Operations (EOP).
- A. Are there established operating procedures, including: normal operating procedures (NOP), emergency operating procedures (EOP), and emergency shutdown procedures (ESP)?
 - B. Are operating procedures implemented as written?
 - C. Are there ESP for the all Unit(s), and if so, do these ESP specify the conditions that require an emergency shutdown?

Guidance: ESP are usually warranted during events that may include the failure of process equipment (e.g., vessels, piping, pumps, etc.) to contain or control HHC releases, loss of electrical power, loss of instrumentation or cooling, fire, explosion, etc. When EOP do not succeed during upset or emergency conditions in returning the process to a safe state, implementation of an ESP may be necessary.

When normal operating limits for parameters such as pressure, temperature, level, etc., are exceeded during an excursion, system upset, abnormal operation, etc., a catastrophic release can occur if appropriate actions are not taken. These actions must be listed in the EOP and must specify the initiating conditions or the operating limits for the EOP (e.g., temperature exceeds 225°F or pressure drops below 15 psig).

Information typically listed in EOP and/or ESP includes, but is not limited to the responsibilities for performing actions during an emergency, required PPE, additional hazards not present during normal operations, consequences of operating outside operating limits, steps to shutdown the involved process in the safest, most direct manner, conditions when

operators must invoke the emergency response plan, or scenarios when they themselves must stop and evacuate.

- D. Have control board operators received sufficient training, initial and refresher, to be qualified to shutdown the units?
- E. Does the ESP specify that qualified operators are assigned authority to shutdown the unit(s)?
- F. Are qualified control board operators authorized or permitted to initiate an emergency shutdown of the unit without prior approval?
- G. Do EOP procedures identify the “entry point,” i.e., the initiating/triggering conditions or operating limits when the EOP is required, the consequences of a deviation from the EOP, and the steps required to correct a deviation/upset once the operating limits of the EOP have been exceeded?
- H. Do NOP list the normal operating limits or “exit points” from NOP to EOP; the steps operators should take to avoid deviations/upsets; and the precautions necessary to prevent exposures, including engineering and administrative controls and PPE?

Guidance: For NOP, the "operating limits" required are those operating parameters that if they exceed the normal range or operating limits, a system upset or abnormal operating condition would occur which could lead to operation outside the design limits of the equipment/process and subsequent potential release. These operating parameters must be determined by the site and can include, but are not limited to, pressure, temperature, flow, level, composition, pH, vibration, rate of reaction, contaminants, utility failure, etc.

It is at the point of operation outside these NOP "operating limits" that EOP procedures must be initiated. There may be a troubleshooting area defined by the site's EOP where operator action can be used to bring the system upset back into normal operating limits. During this troubleshooting phase, if an operating parameter reaches a specified level and the process control strategy includes automatic controls, other safety devices (e.g., safety valves or rupture disks) or automatic protection systems (e.g., safety instrumented systems/emergency shutdown systems), would activate per the process design to bring the process back to a safe state. Typically, once the predefined limits for troubleshooting have been reached for a particular operating parameter, the process has reached a "never exceed limit". A buffer zone is typically provided above (and below if applicable) the trouble shooting zone ("never exceed limit") to ensure the operating parameters do not reach the design safe upper or lower limit of the equipment/process. This design safe upper and lower

limits of the equipment or process are also known as the boundaries of the design operating envelope or the limit above (or below) which it is considered unknown or unsafe to operate. Once the operating parameter(s) reach the buffer zone entry point, there is no designed or intentional operator intervention (i.e., troubleshooting) to bring the process system upset back to a safe state. Any intervention in the buffer zone is as a result of the continued activation of the safety devices and automatic protection systems which initially activated at the predefined level during the troubleshooting phase. All of these predefined limits are important information for operators to know and understand and must be included in the PSI and operating procedures.

- I. Are operating procedures implemented as written?
- VI. PHA, Incident Investigation, and Compliance Audits Findings/Recommendations.

- A. Have all corrective actions from PHA, incident investigations, MOCs, and compliance audits been corrected in a timely manner and documented? Provide a list of all outstanding corrective actions, the date of corrective initiation, and the projected completion dates.

Guidance: There may be instances when a PHA team identifies deficiencies in equipment/systems which would violate the requirements of 119(j) (5) if left uncorrected. If the site continues to operate the deficient equipment/system, they must take interim measures per 119(j) (5) to assure safe operation, and they must also meet the 119(e)(5) requirements to resolve the findings and recommendations related to the identified deficiency.

The phrase from 119(j)(5), “safe and timely manner when necessary means are taken to assure safe operation”, when taken in conjunction with 119(e)(5) means that when a PHA team identifies a deficiency in equipment/systems and the site does not correct the deficiency before further use, the site’s system for promptly addressing the PHA team's findings and recommendations must assure: 1) that the recommendations are resolved in a timely manner and that the resolutions are documented; 2) the site has documented what actions are to be taken, not only to resolve the recommendation, but to assure safe operation until the deficiency can be corrected; 3) that the site complete actions as soon as possible; and 4) that the site has developed a written schedule describing when corrective actions related to the resolution and any interim measures to assure safe operations will be completed.

The system that promptly addresses and resolves findings and recommendations referred to in both 1910.119(e) (5) and 1910. 119(m) (5) are not requirements to develop a management program for globally

addressing the resolution of findings and recommendations. Rather, these “system” requirements address how each specific finding and recommendation will be individually resolved (Hazard Tracking requirement under VPP). Each finding or recommendation will have its own unique resolution based on its nature and complexity.

- B. Has the PHA incorporated all the previous incidents since May 26, 1992 which had a likely potential for catastrophic consequences?

VII. Facility Siting/Human Factors.

- A. Does the PHA consider the siting of all occupied structures?

Guidance: Facility siting considerations for occupied structures include both permanent and temporary (e.g., trailers) structures.

Global/generic facility siting questionnaires/checklists. Some employers (PHA teams) attempt to comply with this 1910.119(e) (3) (v) requirement by answering global/generic facility siting questions on a short questionnaire/checklist. PSM is a performance standard and the means the site uses to comply with the standard are generally up to them as long as their performance ensures compliance with the requirement of the standard. If the site uses a questionnaire/checklist as part of its PHA to identify, evaluate and control all hazards associated with facility siting, this is permissible as long as the method they used complies with the PHA methodology requirement, and, more importantly, all facility siting hazards have been addressed (i.e., identified, evaluated and controlled). This questionnaire/checklist type of methodology would not be compliant if the site (PHA team) did not have specific justifications for each individual situation/condition that the global/generic questions addressed.

For example, a PHA team responds "Yes" to a questionnaire/checklist asking, “Is process equipment located near unit battery limit roads sited properly?” In this case, OSHA would first expect that the site (PHA team) would have identified each location where process equipment is sited near a unit battery limit road. Next, OSHA would expect the site would have evaluated each piece of process equipment located in the vicinity of a roadway. This evaluation is conducted to determine if each of the specific process equipment’s siting is adequate/controlled (e.g., guarded by crash barriers, elevated on a concrete pedestal, etc.) to protect it from releasing its hazardous contents should it be struck by vehicular traffic. Without specific justification or other specific evidence that corroborates the site’s “Yes” response to this global/generic questionnaire/checklist question, a possible regulatory issue could exist for failing to address process equipment siting near roadways when it conducted its PHA.

Guidance: Occupancy Criteria Evaluations for Employee Occupied Structure. OSHA does not accept occupancy criteria evaluations (see API 752, Section 2.5.2) as the basis for a site's determination that adequate protection has been provided for employees in occupied structures which sites have identified as being potentially subject to explosions, fires, ingress of toxic materials or high energy releases. In these occupancy criteria evaluations, the site identifies vulnerable employee occupied structures and the hazards they may be subjected to, but rather than providing protection to either the structures or employees through measures like employee relocation, spacing, or protective construction, the site simply accepts the employee exposures as adequate based on their own acceptable occupancy criteria. This occupancy criteria evaluation is solely based on the occupancy threshold criteria a site is willing to accept. For instance, API 752 list occupancy threshold criteria used by some companies as 400 personnel hours per week as acceptable exposure for employees in an occupied structure, regardless of the magnitude of the hazard these employees are potentially exposed to. The 400 personnel hours per week equates to 2 employees continually exposed in an occupied structure even if that structure has virtually no protective construction and it is sited immediately adjacent to a high pressure-high temperature reactor which contains flammable or extremely toxic materials.

Non-Essential Employees. A site's PHA facility siting evaluation must consider the presence of non-essential personnel in occupied structures in or near covered processes. The "housing" of these non-essential employees in occupied structures near operating units may expose them to explosion, fires, toxic material, or high energy release hazards. Therefore, unlike direct support/ essential personnel (e.g., operators, maintenance employees working on equipment inside a unit, field supervisors, etc.) who are needed to be located in or near operating units for logistical and response purposes, sites (PHA teams) must consider and justify why non-essential employees are required to be located in occupied structures which are vulnerable to the hazards listed above. The term "non-essential" identifies those employees who are not needed to provide direct support for operating processes. Non-essential employees include, but are not limited to, administrative personnel, laboratory employees when they are working inside a lab, maintenance staff when they are working inside maintenance shops/areas, and employees attending training classes.

Guidance: An example of how a temporary structure could affect a release of HHC would include a situation where a trailer's unclassified electrical system could potentially ignite flammable materials/unconfined vapor cloud if released from the process.

- B. Do the PHA teams identify and evaluate all situations where operators are

expected to carry out a procedure to control an upset condition, but where the operators would not have enough time to do so based on operating conditions?

- C. Do the PHA team(s) identify and evaluate all situations where field employees must close isolation valves during emergencies, but where doing so would expose the employees to extremely hazardous situations? For example, to isolate a large inventory of flammable liquids, a downstream manual isolation valve would need to be closed, but the isolation valve is located in an area that could be consumed by fire.

Guidance: Some sites (PHA teams) attempt to comply with this requirement by simply addressing some global/generic human factors questions on a short questionnaire/checklist. This type of methodology would not, by itself, be adequate if the PHA team did not have specific justifications for each of its global/generic responses.

For example, if a PHA team responds "Yes" to a questionnaire/checklist asking whether emergency isolation valves (EIV) are accessible during emergencies, OSHA would then expect that the PHA team had identified, evaluated, and considered each EIV's accessibility (i.e., would the EIV be located in an area that might be consumed in fire, or is the EIV located above grade).

- D. How do the PHA teams identify likely human errors and their consequences? Have appropriate measures been taken to reduce the frequency and consequences of these errors?

VIII. Operator Training.

- A. Have operating employees been trained on the procedures each is expected to perform?

Guidance: An "A" operator might be required to perform a different set of operating procedures than a "C" operator. Therefore, to determine if the employee has in fact been trained on the specific operating procedures they are expected to perform, cross-reference the specific procedures that an individual operator is expected to perform with the training records of the specific procedures for which the individual operator has received training. Also determine if operators perform tasks more than what is expected for their level of training.

- B. From interviews with control board operators in the units, have these operators received sufficient training, initial and refresher, to be qualified to shutdown the units per the requirements of 119(f) (1) (i) (D)?

- C. Based on the employer's explanation of their management of operator refresher training, verify that selected operating employees received, completed, and understood the refresher training. For each employee who operates a process, has the employer ensured that the employee understands and adheres to the current operating procedures and that the refresher training is provided at least every three years, and more often if necessary?

IX. Safe Work Practices.

- A. Does the site have a safe work practice which it implements for motorized equipment to enter operating units and adjacent roadways?

Guidance: “Motorized equipment” includes, but is not limited to automobiles, pickup trucks, fork lifts, cargo tank motor vehicles (CTMV), aerial lifts, welder’s trucks, etc.

- B. Does the site audit its safe work practices/procedures for opening process equipment, vessel entry, and the control of entrance to a facility or covered process area?
- C. Does the site have a safe work practice for opening process equipment, e.g. piping and vessels, and does the site require their employees and contractor employees to follow it?

X. Incident Investigation Reports.

- A. Provide a list of actual incidents and near-miss incidents that occurred at the site within the last year. Have all factors that contributed to each of the incidents been reported and investigated?

Guidance: An “actual incident” is defined as an incident with negative consequences such as a large HHC release, employee injuries or fatality, or a large amount of property or equipment damage. Typically, based on loss-control history, there is a much higher ratio of near-miss incidents in the chemical processing and refining industries than there are actual incidents.

XI. Blowdown Drums and Vents Stacks (Blowdowns).

- A. Does the site have any blowdowns? If so, does the PSI include the original design and design basis for each blowdown at the site?

Guidance: Blowdown(s) – refers to a piece of disposal equipment in a pressure-relieving system whose construction consists of a drum to collect

liquids that are separated (“knockout”) from vapors and a vent stack, which is an elevated vertical termination discharging vapors into the atmosphere without combustion or conversion of the relieved fluid. Blowdown(s) are separate vessels intended to receive episodic (e.g., when de-inventorying a vessel for a planned shutdown) or emergency discharges. Blowdown(s) are designed to collect liquids and to dispose of vapors safely. In the refinery industry, hydrocarbons typically enter blowdown(s) as liquids, vapors, or vapors entrained with liquids. Blowdown(s) typically include quench fluid systems which reduce the temperature of hot, condensable hydrocarbons entering the blowdown as well as the amount of vapor released via the vent stack. These systems can include internal baffles to help disengage liquids from hydrocarbon vapors. Sometimes, blowdown(s) include inert gas or steam systems to control flashback hazards and to snuff vent stack fires if ignited by sources such as lightning

Examples of PSI related to blowdowns, their design and design basis include, but are not limited to, such items as:

1. Physical and chemical properties of the materials relieved to blowdowns (See API STD 521, Section 6.2.1);

Guidance: Of particular concern are heavier-than-air hydrocarbons with relatively lower boiling points. Additionally, hot hydrocarbons pose a greater risk because they are more volatile. Releasing these materials under the right conditions can result in the formation of unconfined vapor clouds which can and have resulted in major catastrophes at refineries and chemical plants.
2. A definition of the loadings to be handled (See API STD 521, Section 7.1);
3. The exit velocity of gasses/vapors released from the vent stack (See API STD 521, Section 7.3.4);
4. Design basis/“worst-case” scenario for maximum liquid – vapor release to blowdown (See API STD 521, Section 4.5.j and 7.1.3);
5. When more than one relief device or depressuring valve discharges to a blowdown, the geographic locations of those devices and valves must be defined (See API STD 521, Section 4.4.q. and 7.2.3);
6. The design residence time of vapor and liquid in the drum (See API STD 521, Section 7.3.2.1.2);

7. The design basis for the vapor – liquid separation for the drum;
 8. The design basis for the exit velocities for the vent stack; and
 9. The nature of other, lesser hazards related to smaller releases not related to the design “worst-case” scenario such as the release of toxic (e.g., H₂S) and corrosive chemicals.
- B. Since the original installation of the blowdowns, have the original design and design basis conditions remained the same? If not, was an MOC conducted to determine if the blowdown design and capacity are still adequate?

Guidance: Examples of conditions that may have changed since the original design and installation of the blowdowns include: increased throughput in the unit(s) that relieve to the blowdowns; additional relief streams routed to the blowdown, blowdowns originally designed only to handle lighter-than-air vapor emissions from their stacks have had liquids or other heavier-than-air releases emitted from their vent stacks; additional equipment, a new unit, or occupied structures have been sited near the blowdowns in a manner that was not addressed in the original design or design basis, etc.

- C. Did the PHA identify all scenarios where hot, heavier-than-air, or liquid hydrocarbons might be discharged from blowdown stacks to the atmosphere?
- D. Can the site demonstrate that atmospheric discharges from blowdowns are to safe locations?

Guidance: Other structures such as control rooms, trailers, offices, motor control centers, etc., must be considered in a PHA to determine if they have been sited in a safe location that might be affected by a hydrocarbon or toxic material release from a blowdown. Unsafe locations can include, but are not limited to, the location of equipment which could act as an ignition source, such as a furnace stack; an employee platform on a column where employees would be exposed in the event of a release; a control room; a satellite building; a trailer; a maintenance area/shop; an emergency response building; an administration building; a lunch or break room; etc.

- E. If there is a high-level alarm in the blowdown drum, is there an MI procedure for calibrating, inspecting, testing and maintaining the instrument/control?

Guidance: The required documentation data must include the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

- F. Have blowdown operators received appropriate training, either initial or refresher?

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