Section 3. Healthy Environment

3.1   **Workplace Health Hazard Evaluations, Inspection and Abatement**

A program for inspection and evaluation of potential workplace health and safety hazards at all sites includes detailed procedures, plus follow up of hazards found and a summary of the organization's health and safety record.

ACOEM Standards

Occupational and environmental health programs should routinely inspect and evaluate the workplace to identify potential health and safety hazards and suboptimal work practices. Environmental health and safety professionals such as industrial hygienists, safety professionals, ergonomists and toxicologists should be involved as needed. Occupational and environmental health professionals should be familiar with worker job descriptions, potential chemical, physical and biological agent exposures and mental stresses that may result from those jobs.

Outcome Indicators

Program Components and Processes:

- ☐ Written policies and procedures
- ☐ System to ensure that risk assessment, management and control measures are in place
- ☐ Exposure-monitoring program ensuring that all regulatory and organization requirements are met and any overexposures of personnel are detected, monitored, evaluated and documented
- ☐ Systematic process for analyzing underlying causes of accidents/incidents and recommending preventive measures to minimize or eliminate in future
- ☐ Routinely scheduled self-inspections of the workplace
- ☐ Responses to hazard identification and accident investigations
- ☐ Interaction of occupational health professionals with industrial hygiene, safety, environmental engineering
- ☐ Reviews aimed at using 'least hazardous' technology and "design-in" principles (e.g., for ergonomics)
- ☐ Injuries, illnesses and OEH surveillance program results periodically evaluated to determine root causes
- ☐ Health hazard control evaluations and recommendations provided for new materials, designs, processes, products, procedures, acquisitions, divestments and demolitions
- ☐ Other components

Dissemination:

- ☐ Policies and protocols are widely disseminated
- ☐ Services and programs are offered to all workers in all locations

Outcome Measures:

- ☐ Rate for compliance with procedures
- ☐ Rates of occupational illnesses and injuries
- ☐ Number of work-related injuries/illnesses resulting in medical treatment, lost time from work, restricted work activity, or death
- ☐ Number of citations from health/safety regulatory agencies, or lawsuits relating to health/safety issues
- ☐ Resolutions (e.g. reduced number or magnitude) of actual/potential workplace health hazards identified
- ☐ Number of changes and improvements that promote better employee safety performance (e.g., ergonomics)
- ☐ Percentage of industrial hygiene monitoring results that exceed the permissible exposure limit

☐ Number of workers required to wear PPE (and reductions in the percentage over time owing to hazard abatement)
☐ Other outcome measures

Trends:

☐ Trend measures are in place that track changes over time (e.g., from year to year)
☐ Trend data have been used to make adjustments to policies and programs

3.2 Education Regarding Worksite Hazards

Formal communication procedures ensure that workers are educated about health and safety hazards inherent to their specific jobs in compliance with the OSHA Hazard Communication Standard.

ACOEM Standards

Occupational and environmental health (OEH) programs identify and educate workers about potential hazards at the worksite and in the community. Every worker should know the potential hazards involved in each job to which he or she is likely to be assigned. The OSHA Hazard Communication Standard ("right-to-know") stresses the importance of worker knowledge of chemical usage. State and local statutes also impact in this area and require reporting of some occupational biomonitoring results and illnesses. Effective communication procedures should ensure that all stakeholders, both within the organization and the community, are informed on an ongoing basis of the identities of these hazardous chemicals, associated health and safety hazards, and appropriate protective measures. Systematic reviews regarding the quality of information disseminated under the program are necessary to determine whether the information is consistently accurate on Material Safety Data Sheets (MSDS) and other communication materials. Substantive guidance from occupational and environmental health professionals should be sought to assist employers to evaluate hazards; provide worker training; and prepare MSDS. A longer-term approach to improving hazard communication would be part of an enhanced program, such as including provisions that address comprehensibility issues regarding hazard communication and standardized approaches to educate about labels and MSDS format.

Outcome Indicators

Program Components and Processes:

☐ Written policies and procedures
☐ Up-to-date programs for "hazard communication/worker right to know"
☐ Documented worker training and knowledge on reproductive hazards, chemical hazards, hearing protection, blood borne pathogens, manual lifting, ergonomics, safety, etc.
☐ Health hazard data and exposure control requirements readily available listing chemical, physical and biological agents and radioactive materials
☐ Pro-active advice provided on health and human factors issues, such as ergonomics and shift work
☐ Information kept current about applicable laws, regulations, permits, codes, workplace standards and practices
☐ Resolution of conflicts about potential hazards and the resulting operating requirements documented and communicated to those affected
☐ Other components

Dissemination:

☐ Policies and protocols are widely disseminated
☐ Services and programs are offered to all workers in all locations

Outcome Measures:

☐ Rate of compliance with policies and procedures
☐ Percentage of compliance with worker right to know, blood borne pathogens, etc.
☐ Documentation of worker training participation
☐ Effectiveness of training as measured by post-test evaluation and compliance inspections
☐ Degree to which organization monitors education and training needs
☐ Impact of training on OEH programs, issues, illnesses and injuries
☐ Indicators of training being adapted to address actual occupational injuries and illnesses
☐ Adaptations of programs to address safety performance
☐ Other outcome measures

Trends:

☐ Trend measures are in place that track changes over time (e.g., from year to year)
☐ Trend data have been used to make adjustments to policies and programs

3.3*   Personal Protective Equipment

Workers are carefully evaluated regarding need for protective devices and are given proper equipment and training. Equipment utilization rates, employee education and enforcement of use are well documented.

ACOEM Standards

Occupational and environmental health programs should ensure that workers who need personal protective equipment (PPE) are clearly identified, provided with proper selection and fitted with personal protective devices such as ear protection (plugs/muffs), safety spectacles, gloves and respirators. The organization should determine that the devices provide adequate protection to workers, and educate the workers in proper utilization and care of equipment for all potential uses at all sites. Occupational health professionals should encourage worker compliance with proper care and use of equipment.

☐ **This section skipped because it is not applicable and does not apply to our organization.**

Outcome Indicators

Program Components and Processes:

☐ A documented system to identify need for PPE
☐ Initial, ongoing and periodic refresher training on potential work hazards, measures used to control hazards, engineering work practices, and personnel protection equipment (PPE)
☐ PPE use only when all other hazard controls are not feasible
☐ PPE is certified by appropriate independent entities, such as NIOSH, ANSI
☐ Policy on voluntary use of PPE
☐ PPE storage, cleaning, repair process
☐ Other components

Dissemination:

- ☐ Policies and protocols are widely disseminated
- ☐ Services and programs are offered to all workers in all locations

Outcome Measures:

- ☐ Protective equipment utilization rates for hearing protection, respiratory protection, radiation shielding, blood/fluid barriers, heat resistant garments (e.g., Nomex®), gloves, etc.)
- ☐ Assessment of employee knowledge and skills relative to requirements, training documentation and assessment of training effectiveness
- ☐ Indicators of effectiveness of PPE procedures and instructions in preventing occupational injuries and illnesses
- ☐ Compliance with PPE training requirements
- ☐ Rate of injuries having failure to properly use PPE as root cause (e.g., needle stick injuries)
- ☐ Results from, quantitative fit testing (both respirator and hearing protection)
- ☐ Other outcome measures

Trends:

- ☐ Trend measures are in place that track changes over time (e.g., from year to year)
- ☐ Trend data have been used to make adjustments to policies and programs

3.4* **Toxicology Assessment and Planning**

Toxicological testing is performed on chemicals that are produced or used in the workplace for which adequate data are not available. Results are communicated and appropriate action is taken.

ACOEM Standards

OEH programs should include procedures to incorporate advice on the nature, adequacy, and significance of toxicological test data pertinent to the workplace. Toxicological assessments include advice on chemical substances that have not had adequate toxicological testing. Where adequate data does not exist, the OEH staff should recommend appropriate medical surveillance and testing practices. Occupational health personnel should recommend protection and surveillance of workers in keeping with data available or until appropriate data are received.

☐ **This section skipped because it is not applicable and does not apply to our organization.**

Outcome Indicators

Program Components and Processes:

- ☐ Hazard assessments review thoroughness of toxicologic evaluations
- ☐ Particularly Hazardous Substance reviews are completed
- ☐ Organization is proactive to prevent future problems with products/services
- ☐ Amount and thoroughness of testing on products/services sold by the organization, and relevance of this testing to current and future health concerns
- ☐ Health function advised before the introduction of new materials or agents to a site
- ☐ OEH professionals provide readily available information for recognizing and treating overexposure
- ☐ Worker and customer reports of adverse health effects related to products and services

- [ ] Information on potential hazards associated with products and guidance to enable proper handling, use, and disposal is documented and communicated
- [ ] Other components

Dissemination:

- [ ] Policies and protocols are widely disseminated
- [ ] Services and programs are offered to all workers in all locations

Outcome Measures:

- [ ] Number of toxicologic evaluations
- [ ] Number of times that the toxicologic evaluations led to changes/improvements in work processes
- [ ] Number of MSDS developed as manufacturer of the product
- [ ] Frequency of updating the MSDS
- [ ] Number of different sources of data used
- [ ] Incidence of exposures to judge needs in this area
- [ ] Funds committed for toxicologic research
- [ ] Other outcome measures

Trends:

- [ ] Trend measures are in place that track changes over time (e.g., from year to year)
- [ ] Trend data have been used to make adjustments to policies and programs

3.5 Environmental Protection Programs

A systematic process is in place to identify, assess, prevent and reduce risk of potential hazardous emissions and pollution.

ACOEM Standards

Environmental Protection Programs should support a scientifically based process to evaluate and prioritize the potential public health and environmental risks posed by exposure to various hazards. The goal is to identify whether any specific chemicals or other hazards generally pose an unacceptable risk and the conditions and uses under which they pose such risks, using a risk management process that follows a preventive health model and which employs a full range of pollution prevention options (e.g., substitution, source reduction, recycle and reuse, and treatment). Risk management efforts should be directed at those chemicals and processes that pose the highest risk to workers, consumers, public health, and the environment, and should be designed in light of achievable technologies.

Outcome Indicators

Program Components and Processes:

- [ ] Pollution prevention awareness and values throughout the organization
- [ ] Written policies and procedures
- [ ] Routine self-evaluation and improvement
- [ ] Tracking of materials on the Toxic Release Inventory (TRI)
- [ ] Use of environmental indicators such as the Global Reporting Index (www.globalreporting.org)
- [ ] Participation in EPA's Waste Wise, Green Lights, Energy Star Buildings, 33/50 (high priority chemicals) or other similar programs

☐ OEH professionals provide available health information for environmental releases and exposures to feedstock, streams, products, and purchased materials to business groups
☐ Plans to reduce the number of environmentally risky areas
☐ Commitment to use 'least hazardous' materials
☐ Other components

Dissemination:

☐ Policies and protocols are widely disseminated
☐ Services and programs are offered to all workers in all locations

Outcome Measures:

☐ Demonstrated commitment to use 'least hazardous' materials
☐ Number of environmental hazardous sites or locations (e.g. underground storage tanks)
☐ Number and extent of environmental mishaps
☐ Fines and penalties for non-compliance
☐ Percentage reduction of pollutants
☐ Number of processes changed to "closed systems"
☐ Use of renewable versus non-renewable resources
☐ Measured impacts on biodiversity
☐ Funds for environmental hazard research
☐ Percentage of reduction in number of environmentally risky areas
☐ Certifications or awards from external authorities/organizations
☐ Other outcome measures

Trends:

☐ Trend measures are in place that track changes over time (e.g., from year to year)
☐ Trend data have been used to make adjustments to policies and programs

3.6 Emergency Preparedness, Continuity Planning, and Disruption Prevention

Plans are in place for workplace and community emergencies that include the organization's responsibility, procedures, drills and community communication, and participation of health services personnel in hazardous materials response and follow up.

ACOEM Standards

Occupational Health programs should have a plan for managing health-related aspects of emergencies, including disasters, terrorism and public health hazards. This is important for the safety and welfare of workers and the community, as well as for continuity planning and prevention of disruption of organizational initiatives. Since community facilities and health and safety personnel are an essential part of dealing with an emergency at the workplace, such planning should be done in conjunction with the local community (Title III--Superfund Amendments and Reauthorization Act [SARA]). Under Title III, companies covered under the Hazard Communication Standard are required to make their chemical inventories known to emergency response groups of local community. Where these standards are not met, it is the responsibility of occupational health professionals to work for improvement. Concern or fear of terrorist attacks requires considerable professional judgment. Occupational health professionals should assure that proper treatment referral networks, such as employee assistance programs (EAP) and critical incident debriefing resources are in place for these individuals.

Outcome Indicators

Program Components and Processes:

- ☐ An emergency response plan integrating community resources and delineating key measures of responsibility, including emergency care
- ☐ A systematic process is used to define standards and goals to mitigate disaster effects
- ☐ Evidence that risks and possible consequences are thoroughly assessed
- ☐ Regular review meetings are held to assess emergency preparedness plans
- ☐ Plans revised as necessary based upon changes in requirements, the environment or other factors
- ☐ Worker and public concerns are incorporated into the organization's planning process
- ☐ A process for integrating emerging or future trends
- ☐ Local medical resources are informed of potential workplace injuries and illnesses
- ☐ First aid, CPR regular training and emergency medical response documented
- ☐ Investigations of all accidents and near-misses
- ☐ OEH staff on community panels
- ☐ EAP prepared for critical incident debriefing (CID)
- ☐ Other components

Dissemination:

- ☐ Policies and protocols are widely disseminated
- ☐ Plans and programs are in place at all locations

Outcome Measures:

- ☐ Number of drills and assessments of readiness
- ☐ Reports on degree of success in response to real or near-disasters
- ☐ Number of corrective actions and "lessons learned" from drills, trial sessions, and real incidents
- ☐ Progress in meeting goals and standards in the areas of public responsibility and corporate citizenship
- ☐ Survey results of employee and public concerns
- ☐ Number of critical incident debriefings and results
- ☐ Number of meetings with community groups involving OEH staff
- ☐ Other outcome measures

Trends:

- ☐ Trend measures are in place that track changes over time (e.g., from year to year)
- ☐ Trend data have been used to make adjustments to policies and programs