



Envirocon

ENVIRONMENT, HEALTH, AND SAFETY PROGRAM

**TITLE:** Environment, Health, and Safety Program Manual SOPs Table of Contents**PREPARED BY:** Matthew Curran, CSP, CIH - Director of EHS**SOP NO:** TOC**PAGE:** 1 of 2**AUTHORIZED BY:** Pete Joy – President**EFFECTIVE DATE:**
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Procedure No.	Effective Date	Revision Date	Reviewed Date	Description
1403.001	10/1997	Rev 9 2/2024	1/2025	President's Policy Message
1403.002	10/1999	Rev 6 2/2022	5/2024	H&S Organization and Scope of Responsibilities
1403.003	01/2008	Rev 0	5/2024	Control of Work
1403.004	06/2015	Rev 5 3/2022	5/2024	Fatigue Management Procedure
1403.005	10/1999	Rev 7 11/2025	11/2025	Medical Monitoring Program
1403.006	09/2001	Rev 6 2/2022	5/2024	Substance Abuse Policy and Program
1403.007	10/1999	Rev 4 3/2022	5/2024	Bloodborne Pathogen Exposure Control Program
1403.008	08/1995	Rev 6 2/2022	5/2024	Hearing Conservation Program
1403.009	10/1999	Rev 6 3/2024	5/2024	Health and Safety Training Program
1403.010	10/1993	Rev 7 3/2022	5/2024	Hazard Communication Program
1403.011	10/1999	Rev 6 3/2021	5/2024	Code of Safe Work Practices
1403.012	10/1999	Rev 7 3/2022	5/2024	Fire Prevention and Protection Procedures
1403.013	10/1997	Rev 6 3/2024	5/2024	Hazard Identification and Correction Procedures
1403.014	11/2015	Rev 3 3/2024	5/2024	Hoisting and Rigging
1403.015	10/1999	Rev 6 3/2024	5/2024	Personal Protective Equipment (PPE)
1403.016	10/1999	Rev 6 3/2022	5/2024	Respiratory Protection Program
1403.017	10/1999	Rev 6 3/2024	5/2024	Site Safety and Health Plan
1403.018	09/1997	Rev 6 3/2024	5/2024	Radiation Protection Procedures
1403.019	10/1999	Rev 6 3/2024	5/2024	Fall Protection Program
1403.020	06/1996	Rev 5 3/2024	5/2024	Confined Space Program
1403.021	10/1997	Rev 6 3/2024	5/2024	Electrical and Mechanical Lockout Procedure
1403.022	09/2017	Rev 5 3/2024	5/2024	Site-Specific Silica Exposure Control Plan
1403.023	10/1997	Rev 7 3/2024	5/2024	OSHA Site Inspection Procedure
1403.024	10/1997	Rev 5 3/2024	5/2024	Incident Reporting and Investigation
1403.025	09/1997	Rev 4 3/2024	5/2024	Early Return to Work
1403.026	04/1998	Rev 5 3/2024	5/2024	OE Safety Incentives Program
1403.027	01/2008	Rev 0	5/2024	Emergency Management Plan
1403.028	08/2020	Rev 3 3/2024	5/2024	Emergency Response Drill
1403.029	07/2020	Rev 15 3/3021	5/2024	Pandemic Response Plan
1403.030	07/2020	Rev 2 3/2024	5/2024	Thermal Stress Program
1403.031	05/2022	Rev 5 7/2023	5/2024	Ground Disturbances
1403.032	02/2022	Rev 2	5/2024	Subcontractor Management Program
Appendix 1	04/1998	Rev 1	3/2024	Envirocon Environmental Policy
Appendix 2	05/2018	Rev 1	3/2024	Envirocon Sustainability Practices



STANDARD OPERATING PROCEDURE

TITLE: President's Policy Message		PREPARED BY: Peter Joy
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Envirocon's values are the principles that guide the responsible management of our company. First and foremost among these values is Safety - We do everything within our power to protect the well-being of our people and the public. Safety is our strong value and takes precedence over all other company priorities.. At Envirocon, the commitment to perform a job safely will not be compromised by production, budget, or schedule priorities. If a job cannot be performed safely, we will make the right choice and stop work until the work can be performed safely or it will not be performed.

Living our safety values requires a team effort and the commitment of all employees and our subcontract partners to conduct themselves in a safe and reliable manner, on and off the job. This also requires the commitment of Envirocon Leadership. Our employees, clients and the public can depend on us to follow three principles. First, Envirocon Leadership will always stand behind employees who prioritize safety and take proactive steps to protect themselves and others.. Second, Envirocon Leadership will provide the tools, processes, resources, training, and mentorship that enable employees to identify risks and to avoid and protect people and projects from those hazards. Third, Envirocon Leadership will promote an open culture and listen whenever employees, clients and stakeholders have ideas that improve the safety of our people and projects.

In turn, Envirocon expects the following three commitments from every employee. First, every employee will actively care for themselves and for everyone who shares their workplace. Second, every employee will ask questions and encourage others to do the same if they are unclear on a task or work scope. Third, every employee will exercise their authority to stop work whenever an unplanned, unsafe condition or unsafe behavior is encountered. Each of us has the responsibility to protect our safety and that of others.

Envirocon's Corporate Program will be maintained at each project site along with site-specific plans. Each employee will be provided the opportunity to read and be familiar with the Program and will have access to the Program during normal work hours. The Program will be updated as required to address performance objectives, client expectations, the changing needs of the Company, and to respond to changes in federal, state, and local requirements.

Safety influences every aspect of our business from strategy and sales to every phase of project execution. If you encounter any unsafe conditions, concerns, or practices that contradict these commitments, immediately report them to your supervisor or a member of Envirocon's Leadership team. Your voice matters in ensuring a safe workplace..

Peter Joy
President

TITLE: Health and Safety Organization and Scope of Responsibilities		PREPARED BY: Jerry Hipp
SOP NO: 1403.002	PAGE: 1 of 6	AUTHORIZED BY: Matthew Curran - Director of EHS
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A. PURPOSE

The purpose of this procedure is to define:

- Envirocon’s Health and Safety Organizational Structure;
- Responsibilities of the Environment, Health, and Safety (EHS) Department, project management staff, and other employees as they relate to safety and incident prevention;
- Conditions of employment for employees related to fitness for duty, participation in industrial hygiene monitoring, and compliance with the Corporate Substance Abuse Program; and
- Disciplinary actions that may be triggered as a result of safety rule violations.

B. SCOPE

This procedure applies to all Envirocon employees, subcontractors, temporary and/or contract employees, vendors, and visitors at all Envirocon offices and project sites.

C. DEFINITIONS

1. Health & Safety Department Staff

The Health & Safety staff includes all personnel reporting to the President of Envirocon in support of the Environment, Health, and Safety program. This includes but is not limited to the Director of EHS, Project Health & Safety Managers (HSM), Senior Health & Safety Professionals (SHSP), Health & Safety Officers (HSO), and all Corporate Health & Department staff member.

2. Project Management Team

The collective group responsible for overseeing the planning, execution, and safety compliance of work tasks. This includes roles such as the Project Manager, Construction Manager, Supervisors, Health and Safety Manager, Health and Safety Officer, Project Engineers and Coordinators, and Field Engineers and Coordinators.

3. Safety Competent Person

A Safety Competent Person (SCP) may be either an Operations supervisor or Health & Safety Professional. Envirocon adopts the qualifications of a Competent Person as it is defined by OSHA in 29 CFR1926.32 (f) as “one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.”

D. RESPONSIBILITIES

1. President

The President is responsible for:

- Overseeing the personnel responsible for maintaining the Envirocon Environment, Health, & Safety Program
- Ensuring all department personnel are being provided with the leadership and resources necessary to implement the program at all office and project locations.

2. Director of Environment, Health, & Safety (EHS)

The Director of EHS is responsible for:

- Overseeing and managing the development of Envirocon’s Environment, Health, and Safety Program and support functions.
- Managing the EHS Department staff and ensuring each member uniformly implements approved EHS policies and procedures across the company.

The Director of EHS shall provide, as necessary, technical support for:

- Interpretation of Occupational Health and Safety Administration (OSHA) standards;
- Interpretation of Mine Safety and Health Administration (MSHA) standards;
- Interpretation and evaluation of industrial hygiene monitoring protocols including sampling, monitoring, results interpretation, and review of exposure control methods;
- Best practices for construction safety; and
- Medical surveillance and case management.

The Director of EHS shall monitor the safety program and its effectiveness by:

- Tracking incident statistics, preparing reports, and setting performance objectives;
- Managing incident investigations and developing “Lessons Learned”;
- Performing periodic audits during site visits to ensure compliance with established rules and procedures;
- Coordinating with Operations Managers and/or members of the EHS Department staff to ensure corrective actions are effective and implemented in a timely manner;
- Revising Standard Operating Procedures (SOPs) or developing new programs or procedures in accordance with current regulations, in response to lessons learned, and/or in accordance with current best practices; and
- Ensuring appropriate resources are made available to employees and projects.

3. Project Management Team

The Project Management Team, with assistance from the EHS Department staff, has the overall responsibility for the implementation of EHS policies on Envirocon projects. The primary responsibility for implementation falls upon Project Management Team with oversight and support from Operations Directors and Senior Leaders. Operations Managers are responsible for:

- Incorporating a disciplined process for recognizing and controlling routine hazards and developing a process to address new or unexpected hazards;
- Providing time and resources for appropriate employee training relevant to responsibilities and job hazards;
- Conducting regular inspections of the worksite which may be documented using logbooks, daily reports, and/or VectorEHS;
- Ensuring project EHS staff are attentive to the needs of the project (e.g., training, sampling, monitoring, providing PPE, etc.), and where the project does not have a full-time EHS staff member on site, communicating such needs to the assigned Project Health & Safety Manager to ensure needs are met in a timely manner;
- Enforcing approved written health and safety documents (e.g., HASP, JSAs, SOPs);
- Supporting best practice initiatives such as Short-Service Employee Programs, Incentive Programs, and Behavior Based Observations;
- Participating in incident investigations and “Lessons Learned” preparation;
- Reviewing suggestions or concerns submitted by employees regarding safety or operations and implementing corrective actions as needed; and
- Bringing unsafe acts or situations to the attention of the employee(s) involved and correcting the situation through coaching, mentoring, training, or other appropriate method(s).

4. Project Health & Safety Manager

A Project Health & Safety Manager (HSM) shall be assigned to every Envirocon project to:

- Review of Requests For Proposals (RFPs) to identify potentially high-risk work activities and provide input regarding cost, control measures, training needs, regulatory requirements, and best practices to the proposal team;
- Monitor projects to ensure implementation of required Health and Safety SOPs.
- Monitor Health and Safety related project cost, schedule, and scope of work.
- Oversee development of site-specific HASPs and plan revisions;
- Provide assistance to the assigned EHS Department member and Safety Competent Persons (SCPs) during project start-up and operation as necessary;
- Provide technical assistance to projects during incident investigations; and
- Provide technical support for questions or concerns regarding safety and/or industrial hygiene.

5. Site Health and Safety Officer and Safety Competent Persons (SCPs)

Site Health and Safety Officer and Safety Competent Persons are individuals assigned to a particular project and are responsible for:

- Implementing Envirocon’s Environment, Health, and Safety Program;
- Serving as initial contact for site-specific health and safety activities and oversight;
- Determining levels of PPE based upon guidance given in the Site-Specific Health and Safety Plan (HASP) and on-site operations;

- Enforcing the project HASP;
- Providing input to the HSM on project performance including but not limited to incidents, schedule, scope changes, stop work activities, project safety performance updates, risk concerns, etc.
- Conducting required monitoring and sampling tasks;
- Maintaining PPE inventory;
- Setting up and supervising decontamination procedures,
- Supervising medical/emergency treatment;
- Providing on-site first aid, as necessary;
- Preparing or assisting in the preparation of incident reports;
- Supervising the respiratory protection program for the site, as appropriate;
- Performing assessments of the Envirocon work areas to evaluate changing conditions, the efficacy of controls, unrecognized hazards, and unsafe behaviors and conditions;
- Stopping work if the potential for an incident with potential impact or risk to employees, property, the environment, or the public is recognized;
- Developing and implementing controls for known or recognized hazards in coordination with project management;
- Preparing or assisting in the preparation of HASPs, Job Safety Analyses (JSAs), Field Crew Activity Plans (FCAPs) and other safety planning documents and implementing the requirements of these documents;
- Performing program and project-specific training;
- Maintaining documents ensuring project personnel meet training, medical and other qualification requirements;
- Providing technical support to project management on issues relating to incident prevention and implementation of control measures;
- Making informed decisions within their technical and experience range, and requesting assistance as needed to resolve issues outside that range; and
- At the discretion of the Project Health and Safety Manager, submitting the 1403.002.01 – Safety Competent Person Weekly Report on a weekly basis.

6. Safety Competent Person (SCP) for Specialized Operations

A Safety Competent Person (SCP) for Specialized Operations is responsible for:

- Performing safety competency to the limit of his or her ability in recognizing and correcting hazards;
- Has the authorization to take prompt corrective measures to eliminate recognized hazards;
- Implementing all relevant planning documents (including inspection checklists and permits) prepared for safe operations; and
- Performing hazard assessments and walk-downs.

7. Employee

Employees shall be trained on all applicable Envirocon Health and Safety procedures, participate in hazard assessments of their work areas or assignments, and abide by controls and procedures in place for the protection of themselves and others. All employees shall comply with relevant rules and regulations, including, but not limited to:

- Promptly reporting on-the-job injuries to a supervisor or safety representative;
- Promptly reporting equipment or property damage to a supervisor;
- Using safety equipment as directed;

- Understanding and following instructions within work procedures (e.g., work packages, JSAs, CAPs) and asking questions or stopping work when in doubt about any phase of operations;
- Reporting an unsafe condition or behavior immediately to a supervisor or safety representative;
- Only operating equipment on which the employee has been trained and qualified to operate;
- Stopping work when unsafe conditions or behaviors pose an immediate risk to safety and health; and
- Communicating within the employee's chain of command regarding safety issues that are unresolved or have not been satisfactorily resolved.

E. HEALTH AND SAFETY ORGANIZATION

1. Director of EHS

The Envirocon Director of EHS shall be a health and safety professional certified by one or more recognized boards of certification (e.g., American Board of Industrial Hygiene, Board of Certified Safety Professionals) and experienced in managing Health and Safety Programs for construction and hazardous materials remediation. The Director of EHS shall report to the President of Envirocon.

2. EHS Department Staff

Full-time career safety professionals assigned to an Envirocon project or office location shall report either directly, or through a chain of command within the EHS Department, up to the Director of EHS.

EHS Professionals shall have academic and/or technical training in occupational health and safety and experience implementing OSHA and/or MSHA health and safety standards and industry best practices.

Excluding administrative support staff, EHS Department staff shall have a range of project experiences applicable to at least one of the following areas; environmental remediation, demolition, industrial, mining restoration, and construction work. Depending on an individual's experience and qualifications, field positions include:

- Health & Safety Managers (HSM),
- Senior Health & Safety Professionals (SHSP),
- Health & Safety Officers (HSO), and
- Health & Safety Technicians (HST)

3. Safety Competent Person

A Safety Competent Person (SCP) may be either an Operations Department or EHS Department professional. Envirocon adopts the qualifications of a Competent Person as OSHA defines it in 29 CFR1926.32 (f) as:

“One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.”

Excluding administrative support positions, all members of the EHS Department are considered competent persons.

One or more SCPs designated as responsible for overall accident prevention shall be assigned to each Envirocon Project site on a full-time basis. Each SCP shall have demonstrated practical experience in the ability to oversee site activities and have at least one (1) year of experience performing work on equivalent assignments prior to being assigned as an SCP. In addition to demonstrated experience, persons other than EHS staff must complete a training program prior to being designated by the company as an SCP.

The Project Management Team, with input from the assigned Project Health & Safety Manager, shall match SCP personnel to projects based on their experience and technical strengths. Individuals with specialized qualifications and experience shall particularly be matched with projects having high hazard potential or those which are regulated by special OSHA regulation, specifically projects with:

- Confined space entry,
- Trench or excavation,
- Environmental remediation where the SCP is the OSHA “Site safety and health supervisor” as defined in 29 CFR 1910.120/1926.65(b),
- Demolition,
- Scaffolding, and
- Crane work.

Individuals meeting the required competency qualifications for each discipline shall have direct supervisory control over these specified activities identified in the HASP and shall be on the project site to oversee such activities as they occur.

F. RELATED DOCUMENTS

Employee Handbook (current revision)
OSHA 29 CFR 1910.120 and 29 CFR 1926.65
OSHA 29 CFR 1926 Subpart C

G. ATTACHMENTS:

1403.002.01 – Safety Competent Person Weekly Report
EHS Department Organization Chart – Located on the Envirocon portal home page.



TITLE: Control of Work		PREPARED BY: M. Curran
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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to outline the various Control of Work (COW) processes with emphasis on the Health and Safety-related programs.

B. SCOPE

This procedure covers all Health and Safety-related Control of Work programs and applies to all employees and subcontractors performing work at an Envirocon project site. Comparable or alternative methods that meet or exceed the expectations and requirements of this SOP may be implemented at the discretion of the Project Manager with approval from the Director of EHS.

C. DEFINITIONS

1. Control of Work (COW)

A systematic framework designed to ensure that all work activities are executed in accordance with predefined plans, effectively integrating planning with execution while emphasizing safety.

2. Project Management Team

The collective group responsible for overseeing the planning, execution, and safety compliance of work tasks. This includes roles such as the Project Manager, Construction Manager, Supervisors, Health and Safety Manager, Health and Safety Officer, Project Engineers and Coordinators, and Field Engineers and Coordinators.

D. RESPONSIBILITIES

1. Director of EHS

- Oversees the implementation and execution of the COW framework across all projects.
- Ensures compliance with all regulatory standards relevant to each project.
- Approves and reviews modifications to safety-related Control of Work programs.

2. Health and Safety Manager

- Assists in the development of training programs for the COW process, ensuring all relevant personnel are knowledgeable about their roles.
- Coordinates with Project Managers and Supervisors to ensure the effective implementation of the COW framework on all sites.
- Monitors and reports on the effectiveness of work planning and execution to the Director of EHS.

3. Health and Safety Officer

- Assists in the implementation and execution of the control of work programs at the project and acts as a subject matter expert for employees.
- Conducts regular inspections to ensure compliance with control of work plans/documents.
- Engages with employees to promote a culture of safety and proactive hazard recognition.

4. Project Manager

- Ensures that comprehensive work planning documents are prepared and approved prior to project mobilization.
- Coordinates with the Health and Safety Manager to integrate COW processes into project execution.
- Reviews and authorizes task-specific work plans and job safety analyses in collaboration with Supervisors and Health and Safety Officers.

5. Supervisor

- Reviews relevant COW documents to ensure an adequate level of planning and hazard identification has been performed to ensure employees understand work activities.
- Provides feedback and coaching to employees and subcontractors regarding the control of work process.
- Ensures that all work executed under their supervision conforms to the established work plans.

6. Employee

- Participates in safety meetings and training sessions related to the COW process.
- Reports any discrepancies between work plans and actual site conditions to supervisors or safety officers.
- Adheres to safety requirement and guidelines as outlined in Job Safety Analyses and work plans.

E. CONTROL OF WORK INTRODUCTION

Envirocon's Health and Safety Program is centered around the Control of Work (COW) process. COW is the combination of planning and execution, requiring effective coordination of various programs to ensure safety and efficiency.

Implemented as a continuous process, COW utilizes site-specific and hazard-specific planning to meet client and contract specifications, internal Envirocon requirements, and applicable regulations.

The Envirocon COW program consists of eight separate but interconnected programs:

- Work Planning
- Job Safety Analyses
- Plan of the Day Meetings
- Field Crew Activity Plans
- Behavior Bases Safety Observations
- Short Service Employee Mentorship
- PRIDE Cards
- Equipment Qualifications

F. WORK PLANNING

Work planning is a necessary step in the Pre-mobilization and Pre-Task planning process. Work planning helps to ensure that means and methods are well understood by the craft performing the work and the right personnel, equipment, and materials are in place prior to starting the task.

For project work planning specifics, please see the *1401.019 SOP*.

G. JOB SAFETY ANALYSIS (JSA)

The JSA is a process that breaks down a job into individual tasks, identifies potential hazards associated with each task, and describes mitigation steps to prevent employee injuries. It is also a formal written document that can describe safe work practices to avoid/eliminate hazards.

1. JSA Requirements

The Project Management Team's responsibilities include:

a. Identifying tasks requiring a JSA, focusing on:

- i. Tasks with a history of accidents.*
- ii. New tasks or jobs for new employees.*
- iii. Jobs with newly introduced or altered hazards.*
- iv. Common tasks that will have site-specific hazards and controls that will need to be addressed on a project-by-project basis.*

b. Conducting JSAs at the job site with active participation from the workforce involved in the task.

c. Ensuring JSAs are:

- i. Continually updated and improved.*
- ii. Clearly communicated to all relevant personnel.*
- iii. Understood and adhered to by all workers involved with the task(s).*

2. Conducting a JSA

a. **JSA Development Team:**

Include personnel who are properly trained in JSA procedures, ensuring a collaborative effort among field personnel, Health and Safety personnel and Project Management Team members.

b. **Procedure:**

i. *List Job Steps*

Begin with listing each step of the job on the JSA form, focusing on safety-critical aspects without excessive detail.

ii. *Identify Hazards*

Identify potential hazards for each job step listed, noting them adjacent to the respective job step on the JSA form.

iii. *Develop Controls*

Review each listed hazard and discuss safer, alternative job steps or controls to minimize risks. Document these controls next to the corresponding hazards on the JSA form or rewrite the steps as needed.

a. Be specific with recommendations and avoid vague wording. Include any relevant site-specific control measures.

b. Consider equipment/machinery options, tool selection, improving engineering controls, worker selection and rotations, or specialty PPE when necessary.

iv. *Maintain a focus on the critical safety aspects of the specific project during this process.*

v. *This process shall be documented on the 1403.003.01 Job Safety Analysis Template form.*

3. JSA Review and Validation:

a. **Review Process**

i. *Once completed, the JSA document must be submitted to the Project Manager or supervisor for review to ensure accuracy and feasibility of controls.*

ii. *The Project Manager or supervisor will validate the JSA, consulting with Health and Safety personnel or subject matter experts as needed to resolve any issues.*

b. **Site-Specific Alterations**

While JSAs can be shared across sites for reference or be used as a template, they must be reviewed and tailored to the specific location and task hazards.

c. **Post-Incident Review**

In the event of an incident, the relevant JSA must be re-examined to identify and implement necessary procedural changes.

4. Training and Implementation

a. **Training**

All individuals, including new and transferred employees, must receive training on the updated site-specific JSAs prior to beginning work.

b. Verification and Continuous Improvement

The Project Management Team is responsible for field verification of JSA adherence and ongoing validation as part of the continuous improvement effort within Envirocon's safety practices. Where gaps exist, a review and update of the JSA(s) shall take place.

H. DAILY MEETINGS AND PLANNING

1. Conducting Plan of the Day / Authorization of Work Meetings:

a. Scheduling and Attendance

- i. Plan of the Day (POD) / Authorization to Work (ATW) meetings shall be conducted at the start of each day or shift.*
- ii. Attendance is mandatory for all Envirocon employees and subcontractors on-site.*
- iii. The meeting will be led by the Project Management Team.*

b. Documentation

- i. The Project Manager or supervisor is responsible for completing the POD/ATW form with the day's tasks before the meeting begins on the 1403.003.02 Plan of the Day / Authorization to Work Form.*
- ii. All employees, subcontractors, client representatives, and visitors are required to sign in and out on the provided log listing their names, exact times in and out, and their signatures.*
- iii. Envirocon employees and subcontractors are encouraged to actively participate and provide input during the meeting.*
- iv. Previous POD/ATW forms shall be uploaded to Project Portal as part of the project recordkeeping requirements.*

c. Meeting Agenda

- i. The general POD agenda shall include, at a minimum:*
 - a. An overview of the scope of work planned for the day and a review of relevant work recently performed.
 - b. Employee equipment assignments.
 - c. Subcontractor, client, or visitor activities.
 - d. A review of relevant health and safety information, including:
 1. Recent incidents.
 2. Hazards, near misses, or stop works reported.
 3. The most recent Behavior-Based Safety Observation conducted.
 4. Elements of the Weekly Safety Share.
 5. Relevant observations or observations from the previous days.
 6. Site-Specific HASP items as necessary.
 - e. Other pertinent project activities planned for that day.

2. Handling Unplanned Tasks:

a. Procedure for Unlisted Tasks:

- i. If a task not previously included in the POD arises, an informal Stop Work should be called.*
- ii. Involved employees shall conduct a review with all involved employees to assess and authorize the task before proceeding.*

- iii. *Relative COW paperwork, such as a JSA or Field Crew Activity Plan (FCAP), shall be initiated or modified and all involved employees shall sign-off.*
- iv. *The tasks shall be added to the current POD/ATW form.*

I. FIELD CREW ACTIVITY PLANS (FCAPS)

The purpose of the *FCAP (Form 1403.003.03)* is to identify, evaluate, and control potential hazards related to the tasks of the individual crews. This field-level, task-specific process is meant to boost employee participation, increase hazard identification skills, and ensure that all employees understand the task(s) they are about to perform.

1. FCAP Development and Approval

a. Initiation

- i. *Prior to starting work, an FCAP shall be prepared for each specific task, focusing on task-specific hazards and controls.*
- ii. *Individual crews are responsible for the preparation of FCAPs, with each task requiring a separate FCAP.*
- iii. *If a task involves only one person, that worker is responsible for filling out the FCAP.*
- iv. *If multiple people are involved in a task, a group FCAP may be filled out. All involved workers must participate, and a review shall be conducted. All involved employees must sign off on the FCAP.*
 - a. *If the same general task is being performed over several days with the same crew, crew members shall take turns filling out the FCAP.*

b. Supervisor Approval

- i. *The supervisor (or a designated member of the Project Management Team) must review and approve each FCAP, ensuring all safety measures and hazard controls are adequately addressed.*
- ii. *The FCAP should be reviewed and approved prior to the crew beginning work. If a supervisor or Project Management Team member is not readily available to sign off on the FCAP, they should make every effort to review it early in the shift.*
- iii. *The supervisor or Project Management Team member should consider several things when determining when to review different FCAPs such as:*
 - a. Task risk level
 - b. Number of total workers in the crew
 - c. Number of SSEs in the crew
 - d. Familiarity with the task (from an overall project viewpoint and an individual's viewpoint)

c. Frequency

FCAPs are to be prepared at least once daily or upon the initiation of a new task. If a task spans multiple shifts, the existing FCAP shall be closed, and a new one will be prepared for continuation.

2. FCAP Content Requirements

a. Task Description and Associated JSAs

Clearly describe the task and its location, listing applicable JSA titles, names, and contact numbers relevant to the work being performed.

b. Work Area Hazard Assessment

Conduct a thorough hazard assessment, documenting specific hazards and recommended controls. Each of the hazards listed are a part of Envirocon's Standard Hazard Classifications, see 1403.003.06 for additional details. Avoid vague recommendations, focusing on actionable steps for risk mitigation.

i. The Hierarchy of Controls shall be considered when determining which controls are most preferable to implement. These controls may also be listed in relevant JSAs for reference. The Hierarchy of Controls is:

- a. Elimination: Complete removal of the hazard.
- b. Substitution: Switching a substance, tool, or process for a less hazardous or risky one.
- c. Engineering Controls: Physical barriers or processes between the hazard and workers.
- d. Administrative Controls: Procedures, policies, etc designed to reduce risk.
- e. Personal Protective Equipment (PPE): Head, eye, ear, hand, etc protection.

c. Permits and Plans

Identify and verify the issuance of required permits and plans necessary for the task's execution.

d. Personal Protective Equipment (PPE)

List and check off all required PPE for the task, ensuring all crew members are adequately equipped.

e. Pre-Task Checklist

Complete a pre-task checklist, marking all applicable requirements as prepared before task initiation.

f. Crew Sign-off

All participating crew members are required to sign off on the FCAP, acknowledging their understanding of the hazards, controls, and task requirements before starting work.

g. Post-Task Review

Conduct a review upon task completion to assess the effectiveness of the FCAP and document any deviations or additional hazards identified during execution.

3. Additional Considerations

a. Training

All new employees shall be trained on how to properly fill out an FCAP as part of their new hire / HASP orientation and their Short Service Employee (SSE) program training.

b. New Employee Task Briefing

When an employee is added to a task already in progress, a briefing on the existing FCAP must be conducted by the crew leader or a knowledgeable team member to ensure the new participant is fully aware of the task requirements and associated risks. The new employee shall sign off on the FCAP.

c. Compliance and Continuous Improvement

i. Documentation

- a. The project shall maintain all completed FCAPs and upload them to the project portal in compliance with Envirocon recordkeeping requirements.

ii. Review and Update

- a. The Project Management Team shall regularly review and update FCAP procedures to incorporate lessons learned, new safety practices, and regulatory changes to continuously improve task safety and effectiveness.

J. PRIDE CARDS

PRIDE cards are a less formal, individual, or single-task process to document safe and unsafe behaviors or conditions.

1. PRIDE Cards Availability and Usage

- a. ***A PRIDE Card booklet will be issued to all employees and select subcontractors.***
- b. ***Each individual should carry their PRIDE Card booklet into the field.***

2. Documentation on PRIDE Cards

a. Categories of Observation

- i. *Safe/Exemplary Behaviors: Actions that positively reflect Envirocon's safety standards.*
- ii. *Unsafe Conditions/Behaviors: Actions or conditions that pose a risk to safety*

b. How to Document

- i. *Clearly describe the behavior or condition observed, specifying whether it is safe or unsafe.*
- ii. *Note the date, location, and, if applicable, the individuals involved.*

3. PRIDE Cards Principles

a. Five-step Process

- i. *Proactive: Actively contribute to safety improvements.*
- ii. *Respectful: Show consideration for the well-being of others.*
- iii. *Involved: Engage in addressing and resolving safety issues.*
- iv. *Decisive: Take immediate action upon recognizing safety concerns.*
- v. *Evaluate: Assess the effectiveness of solutions to ensure safety issues are resolved.*

4. Submission and Review of PRIDE Cards

a. PRIDE Card Submission

- i. *Completed PRIDE cards may be submitted to the supervisor or Health & Safety Officer / Safety Competent Person.*
- ii. *PRIDE Cards that document a hazard or detail behaviors consistent with the premise of a Behavior-Based Safety Observation shall be entered into VectorEHS.*

b. Review Process

- i. The Health & Safety Officer or Safety Competent Person will review submitted PRIDE cards for hazards or behaviors that can readily addressed.*
- ii. PRIDE Cards should be discussed in the following day's POD meeting.*
- iii. Safety personnel shall monitor PRIDE card findings and monitor them for trends that could create actionable items in pursuit of continuous improvement.*

K. BEHAVIOR-BASED SAFETY OBSERVATIONS (BBSOS)

A BBSO is a systematic, standardized process for observing a work being performed and determining if the job is being done according to best practices and specified standards. The objective is to identify and eliminate undesirable behaviors, actions, or conditions. BBSO forms are in the VectorEHS database and are used for a formal BBSO.

1. Types of Observations

a. Peer-to-Peer Observations

These are conducted among employees to encourage mutual accountability for safe work practices. Observers focus on identifying both safe and at-risk behaviors, providing immediate feedback and correction as needed.

b. Formal Observations

Project Management Team members should be conducting formal observations that have a broader scope than traditional peer-to-peer observations. This expanded scope includes a review of recent incidents, relevant JSAs, and applicable SOPs and regulations. This more comprehensive approach assesses compliance with written safety standards and also evaluates the effectiveness of training and procedural adherence.

2. BBSO Scheduling

- a. Observations must be planned and scheduled to cover all shifts and types of work, particularly high-risk activities. This ensures a representative sampling of all workplace conditions over time.**
- b. Management is responsible for scheduling a minimum of one observation for every 350 man-hours of work, prioritizing areas with known risks or a history of incidents.**
 - i. The table below outlines how many observations are required with regard to the number of manhours worked each week:*

Manhours Project Worked Per Week	Observations
0 – 350	1
351 - 700	2
701 - 1050	3
1051 - 1400	4
1401 - 1750	5
The minimum number of observations per week is based on the number of manhours being worked per week on the project, including all subcontractor hours.	

- ii. When calculating the number of minimum observations, the number shall always be rounded up to the nearest whole digit.*

3. Conducting Observations

- a. Observers should familiarize themselves with the tasks to be observed by reviewing relevant SOPs, JSAs, and recent incident reports. This preparation enables observers to effectively identify expected versus actual work practices.**
- b. A new Observer shall be named each day or on the day a BBSO is to be conducted as per the schedule. Project Management Team members assigning the observer shall ensure observer responsibility is equitably distributed throughout the crew, with attention being paid to SSEs who are required to conduct observations as part of their SSE Training (See Section L).**
- c. The Project Management Team shall participate in the BBSO process and shall conduct at least 25% of the required observations.**
- d. Observation Process:**
 - i. The observer shall pick a task to observe. This task may be chosen at random at the discretion of the observer or be assigned by a project management team member if a new, high-risk, or prioritized task is being conducted.*
 - ii. Using the VectorEHS SWO form or the 1403.003.04 - BBSO Tri-Fold Form, the observer shall document behaviors and conditions using the, distinguishing between safe (correct), unsafe (questionable) practices, or areas where improvements could be made (opportunity for improvement).*
 - iii. Any unsafe conditions or behaviors observed shall be immediately corrected, with the authority to stop work if necessary to address serious risks.*
- e. Feedback and Communication:**
 - i. Following the observation, the observer shall discuss the findings with the observed party, focusing on positive feedback for safe behaviors and constructive criticism for any at-risk behaviors or conditions identified.*
 - ii. The observer shall ensure that any hazards identified or stop works called are reported the supervisor or a Project Management Team member.*

4. Documentation and Review

- a. All observations shall be documented in detail on the VectorEHS SWO form. This includes a description of the observed behavior or condition, the immediate corrective action taken (if any), and recommendations for further improvement.**
- b. The BBSO trifold form may be used in the field by workers who may not have immediate access to a phone or tablet to use the VectorEHS application. If a BBSO tri-fold is used in the field, the content shall be transferred to the VectorEHS application as soon as practical.**
- c. Review Process:**
 - i. The Health and Safety Officer (HSO) reviews completed observation forms to evaluate the findings and determine necessary follow-up actions.*
 - ii. Based on the observations, this review also includes assessing the need for changes to work processes, training, or safety controls.*

5. Crew Debriefing and Continuous Improvement

- a. The results of observations, any corrective actions taken, or acknowledgments of positive behavior are shared with the entire project team during the next day's**

POD meeting. This debrief should reinforce positive behaviors, address common safety challenges, and foster a culture of continuous improvement.

- b. The Project Management Team shall ensure that all identified issues are addressed promptly, with corrective actions implemented and monitored for effectiveness. This includes revisiting observed areas or individuals to confirm that improvements have been implemented and are sustainable.*
- c. The BBSO process will be continuously evaluated to ensure its effectiveness and to make necessary adjustments based on operational feedback and safety performance trends.*

L. SHORT SERVICE EMPLOYEE MENTORSHIP PROGRAM

The SSE Mentorship Program is designed to integrate new and returning employees seamlessly into Envirocon's safety culture. Through detailed mentoring, the program ensures new employees are well-versed in Envirocon's Environment, Health, and Safety (EHS) programs and procedures, effectively reducing the risk of incidents during the critical first year of employment.

1. Definitions

a. Short Service Employee (SSE)

A new or rehired employee with less than 1500 man-hours with Envirocon.

b. Veteran Envirocon Employee

An employee who has achieved 3000 man-hours with the company and is eligible to mentor SSEs.

c. Rehired SSE

An individual rehired within three years who resumes their SSE status with previously accumulated man-hours or starts over if rehired after three years.

2. Procedures

a. Evaluate Background for Additional Risk Factors

- i. The hiring process includes thorough background checks and evaluations against job requirements to identify any restrictions or special mentoring needs.*
- ii. Risk factors to be considered may include but are not limited to:*
 - a. Previous Work Experience
 - b. Medical Conditions
 - c. Driving History
 - d. Incident and Injury History
 - e. Training and Certifications
 - f. Time Away from the Industry
 - g. Non-Medical Restrictions

b. Ensure Restrictions of Duty are Identified

- i. Medical or other duty restrictions identified during hiring are communicated, evaluated, and accommodated as necessary.*
 - a. Any Project Management Team member becoming knowledgeable of a medical or other duty restriction shall keep such information in the strictest of confidence as per confidentiality requirements.

- ii. *The Health & Safety Officer shall review WorkCare Work Statuses for all employees to determine if any special restrictions exist.*
- iii. *The Health & Safety Officer, Project Manager, and Supervisor shall examine SSEs in the field to ensure the Work Statuses and background information are accurate representations of the worker. Any discrepancies or concerns shall be brought to the attention of the Director of EHS and the Human Resources Manager.*

c. SSE Identification

- i. *SSEs are distinguished by wearing a yellow hard hat and are closely monitored for safety policy adherence.*

d. Establish Mentoring Relationships

- i. *Assign veteran employees as mentors to SSEs, documented using Form 1403.003.02, and engage in regular safety discussions and evaluations.*
- ii. *The mentor shall ensure the SSE is progressing toward graduation and is completing the assigned tasks regularly.*

e. SSE Graduation

- i. *After completing 1500 man-hours, completion of all assigned tasks, and a satisfactory performance review, SSEs graduate from the mentorship program, recognized by receiving a standard white hard hat.*

f. Management Planning for High SSE Ratios

- i. *Projects with an SSE staffing exceeding 33% must develop a written management plan to ensure adequate supervision and mentoring resources.*
- ii. *The Project Management Team shall staff projects with adequate supervision resources. This includes an adequate number of superintendents, foremen, and EHS personnel. The level of supervision should be adjusted based on the complexity, hazards, and SSE staff ratio associated with a project.*
- iii. *Subcontractors will manage their SSEs in accordance with the requirements of this Short-Service Employee program and the project contract.*

3. Alternative Procedures

- a. ***Project Managers, with approval from the Project Health & Safety Manager and Director of EHS, may implement alternative procedures to address specific project needs, provided these are documented in the site-specific Health And Safety Plan.***

4. Documentation

Short Service Employee progress shall be documented using the 1403.003.05 – Short Service Employee Tracking Form.

M. EQUIPMENT QUALIFICATIONS

This Control of Work program describes the process of training and qualifying Envirocon Operators/laborers for the safe and efficient operation of equipment and tools. Operating mobile and non-mobile equipment requires qualification and training, including certain powered and non-powered hand tools. This tool is also intended to ensure that all employees have documented training to verify their competency in skills and reduce incidents.

For Equipment Qualification procedures, please see the 1401.015 - *Equipment Operator and Driver Qualification Procedures SOP.*

N. MANAGEMENT OF CHANGE

1. Overview:

Changes to project work plans, equipment, personnel, or safety procedures must be managed systematically to ensure continuous adherence to Envirocon's health and safety standards. Management of change (MOC) is essential for adapting to new risks, technologies, and work conditions while maintaining control and compliance with applicable regulations and SOPs.

2. Management of Change Process

a. Identification of Change

Any deviation from the original project plans, equipment setup, personnel assignments, or safety procedures must be identified and documented.

b. Risk Assessment

Conduct a risk assessment to understand the potential impacts of the change on safety, quality, and project delivery.

c. Review and Approval

Changes must be reviewed and approved by the appropriate management level:

i. Director of EHS

Responsible for ensuring that changes align with overall Envirocon safety standards and regulatory requirements.

ii. Project Health & Safety Manager Manager

Coordinates the review and integration of changes into the project's Health and Safety Plan (HASP).

iii. Site Health & Safety Officer

Implements the changes at the site level, ensuring that all operational and safety procedures are updated and followed.

iv. Project Manager

Ensures that changes are integrated into the project work plan and communicated to all involved parties.

v. Supervisor

Monitors the day-to-day implementation of changes in work practices and ensures that employees are informed and trained as necessary.

d. Implementation

Implement the change following the approved plan, ensuring all necessary resources and training are provided.

e. Training and Communication

Communicate the change to all affected personnel. Provide training or briefings as necessary to ensure everyone understands the new procedures or changes.

f. Monitoring and Review

Continuously monitor the effects of the change. Review the effectiveness of the change and make further adjustments as needed.

3. Integration with COW Program Processes and Documents

- a. *Ensure that changes are reflected in relevant COW tools such as Work Packages, Job Safety Analyses (JSAs), Field Crew Activity Plans (FCAPs), and Behavior Based Safety Observations (BBSOs).***

Update all project documentation, including HASPs, work plans, and equipment qualification records, to reflect the changes

O. RELATED DOCUMENTS

SOP 1401.015: Equipment Operator and Driver Qualification

SOP 1401.019: Work Planning Process

P. ATTACHMENTS

Form 1403.003.01: Job Safety Analysis Template

Form 1403.003.02: Plan of the Day / Authorization to Work Form

Form 1403.003.03a: Field Crew Activity Plan

Form 1403.003.03b: Field Crew Activity Plan (Spanish)

Form 1403.003.04: Behavior-Based Safety Observation Tri-Fold Form

Form 1403.003.05: Short Service Employee Training Tracking Form

Form 1403.003.06: Envirocon Standard Hazard Classifications



STANDARD OPERATING PROCEDURE

TITLE: Fatigue Management		PREPARED BY: J. Hipp
SOP NO: 1403.004	PAGE: 1 of 4	AUTHORIZED BY:
EFFECTIVE DATE: 06/2016	REVISION DATE: 5/2024	Matthew Curran, CSP, CIH - Director of EHS

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A. PURPOSE

This procedure provides Envirocon employees and managers with the information and guidance needed to develop a site-specific Fatigue Management Plan to reduce risks associated with fatigue.

B. SCOPE

This procedure applies to all Envirocon projects, office locations, employees, and subcontractors.

C. DEFINITIONS

1. Cumulative fatigue

The increase in fatigue over consecutive sleep-wake periods resulting from inadequate rest. Fatigue from causes (e.g., restricted sleep, sustained wakefulness, task demands) occurring within the past 24 hours.

2. Day-off

A calendar day in which an individual does not start a work shift. The employee does not return to the job site nor continue to work on other project-related work until their rest cycle has been completed.

3. Fatigue

A state of being tired. The degradation in an individual's cognitive and motor functioning resulting from inadequate rest. It can be caused by long hours of work, long hours of physical or mental activity, inadequate rest, excessive stress, and/or combinations of these factors. An individual's ability to safely and competently perform their duties is not solely based on the individual's hours worked or if the individual has had adequate rest.

4. Shift cycle

A series of consecutive work shifts and days off that is planned by Envirocon to repeat regularly, thereby constituting a continuous shift schedule. A shift cycle cannot exceed 4 weeks for the purposes of calculating days off.

a. *Eight (8)-hour shift schedule*

A schedule that averages not more than 9 hours per workday over the entire shift cycle. Extended Shift(s) means the time an employee is assigned to work that extends outside their regularly scheduled shift hours and into other shifts.

b. *Ten (10)-hour shift schedule*

A schedule that averages more than 9 hours, but not more than 11 hours, per workday over the entire shift cycle.

c. *Twelve (12)-hour shift schedule*

A schedule that averages more than 11 hours, but not more than 12 hours, per workday over the entire shift cycle.

5. Work Set or Week

Consecutive shifts without time off. A Work Set or Week does not end without scheduled time off (> 24 hours) occurring. Multiple Work Sets make up a Shift Cycle.

D. RESPONSIBILITIES

1. Project Management Team

The Project Management includes the Vice President of Operations, Operations Directors, Project Manager, Construction Managers, and all supervisor or coordinator-level positions. Their responsibilities include:

- Reviewing the need and/or development of a fatigue management plan;
- Scheduling employees and planning work to avoid fatigue;
- Reporting and investigation of issues of concern;
- Observing employees for obvious signs of fatigue, physical or mental distractions;
- Taking appropriate actions to assist workers with fatigue and
- Analyzing work tasks to control fatigue.

2. EHS Department Staff

The EHS Department's staff includes the Director of EHS, the assigned Project Health & Safety Manager, the assigned Health & Safety Officer, and Safety Competent Persons (SCPs). Their responsibilities include:

- Providing fatigue awareness training using this SOP as the guidelines.
- Maintaining training records.
- Reporting and investigation of issues of concern.
- Observe employees for obvious signs of fatigue and physical or mental distractions.
- Taking appropriate actions to assist workers with fatigue and
- Analyzing work tasks to control fatigue.

3. Employees

Every employee has the responsibility and duty to care for themselves and those around them. Employee's responsibilities include:

- Ensuring they are fit for duty each day and communicating concerns to their supervisor before beginning work.
- Ensuring that they comply with site fatigue management plans and schedules.
- Maintaining records where required.
- Taking regular breaks in the normal course of duties.
- Stopping work and reporting to a supervisor if they have a reasonable belief that to continue could cause harm to them or to others and
- Observe their co-workers and notify them or the supervisor when they notice fatigue is affecting performance, judgment, or actions.

E. FATIGUE MANAGEMENT PROGRAM

1. Fatigue Management Plan Development

- a. **A fatigue management plan should be integrated as part of the site-specific Health And Safety Plan (HASP). The plan should be:**
 - i. *Specific to the site, using the 1403.003.02 – Fatigue Management Plan Template.*
 - ii. *Developed through consultation with the upper-level management team,*
 - iii. *Available to employees/workers and visitors (e.g., on display in the project trailer),*
 - iv. *Communicated regularly and appropriately, and;*
 - v. *Reviewed to take account of changes in site needs and knowledge about the risks.*
 - vi. *Address basic risk factors outlined in the 1403.004.01 – Fatigue Risk Factors form.*
- b. **The following should be used as a base guideline for employees who do not fall under the DOT standards or one of the other regulations that control work hours:**
 - i. *Projects working a normal 4-10 or 5-8 schedule do not require a fatigue management plan.*
 - ii. *Projects working a routine schedule of greater than 50 hours/week shall conduct Fatigue Awareness Training as part of their project orientation and consider developing a Fatigue Management Plan.*
 - iii. *Projects working 60+ hours per week shall routinely develop a Fatigue Management Plan and have it approved by the Vice President of Operations, Operations Manager and H&S Manager for that division. The plan should include the proposed work schedule, fatigue orientation, description of work activities and a plan that supports sufficient personnel to complete rest rotations safely to alleviate fatigue concerns. Adjustments or changes to this approved fatigue management plan must be approved in writing.*
- c. **All projects shall ensure that any individual's work hours do not exceed the following limits without a written and approved plan:**
 - i. *16 work hours in any 24-hour period;*
 - ii. *26 work hours in any 48-hour period; and*

- iii. 72 work hours in any 7-day period.
- d. **Projects shall ensure that individuals have, at a minimum, the number of days off specified in this paragraph. A day off is defined as a calendar day during which an individual does not start a work shift. For the purposes of calculating the average number of days off required in this paragraph, the duration of the shift cycle may not exceed 4 weeks.**
 - i. Individuals who are working 8-hour shift schedules shall have at least 2 consecutive days off per cycle;
 - ii. Individuals who are working 10-hour shift schedules shall have at least 3 consecutive days off per cycle;
 - iii. Individuals who are working 12-hour shift schedules shall have at least 4 consecutive days off per cycle.

Recommended Hours of Service Chart

Regular work schedule*	12-hour shifts	10-hour shifts	8-hour shifts
Maximum consecutive work shifts (Days or night shift)* in a work set**	6 shifts	7 shifts	9 shifts
Maximum hours for extended shifts	16 hours	16 hours	16 hours
Extended shifts (greater than 14 hours) shall occur only when necessary to avoid an unplanned safety-critical task. <ul style="list-style-type: none"> • A minimum of 8 hours off shall be provided before returning for the next shift. • The extended hour shifts shall not exceed 16 hours. • No more than 2 non-consecutive extended shifts of 16 hours shall occur in a work set**. 			
*A work shift is the normal daily work schedule based on 8, 10, or 12-hour days. **A work set means consecutive shifts with a minimum of 24 hours off before starting another work set. In the event that a shift change occurs between work sets, time off should be extended an additional 8-12 hours to ensure adequate employee rest.			

NOTE: All influencing factors need to be considered when deciding whether or not to extend an employee's work schedule. Items such as inadequate rest, sleep disorders, home problems, emotional stress, physical stress, prescription drugs, commute distances/times, and mental or physical illness must be taken into consideration.

F. RELATED DOCUMENTS

None.

G. ATTACHMENTS

- 1403.004.01 - Example Fatigue Risk Factors
- 1403.004.02 - Fatigue Management Plan Template



STANDARD OPERATING PROCEDURE

TITLE: Medical Monitoring Program		PREPARED BY: Matthew Curran, CSP, CIH - Director of EHS
SOP NO: 1403.005	PAGE: 1 of 10	AUTHORIZED BY: Peter Joy – President
EFFECTIVE DATE: 10/1993	REVISION DATE: 11/2025	

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A. PURPOSE

The purpose of the medical monitoring program is to layout the various medical evaluations that must be performed to ensure an employee is fit for duty prior to starting a job or specific task and the screening and surveillance requirements are in place to ensure employee health is not affected by the work activity.

B. SCOPE

This procedure applies to all Envirocon employees actively working on a project who potentially could be exposed to chemicals of concern during remediation, demolition, site clean-up work, and handling hazardous substances that could affect their health.

C. DEFINITIONS

1. Medical Review Officer (MRO)

A medical doctor with additional training in occupational medicine who provides guidance for treatment, physical exam requirements, interpretations of clinical physician's treatments and physical findings, fit for duty clearance, and evaluation of exams and treatment provided to our employees.

2. WorkCare, Inc.

A third-party medical consulting group that provides medical advice and guidance to Envirocon. It is a group of Doctors, Physician Assistants, Nurses, and administrative personnel.

3. Medical Monitoring Program

A program where medical professionals review and monitor employee health through medical exams and physical checkups to evaluate possible health concerns related to or associated with the fieldwork the employees are participating in. The MRO may also review any treatments provided to our employees to confirm the employee is physically able to return to work.

D. RESPONSIBILITIES

1. Director of Environmental Health and Safety (EHS)

The Director of EHS is responsible for:

- Developing and overseeing the implementation of the Medical Monitoring Program in conjunction with the WorkCare Medical Review Officer (MRO).
- Ensure that the program meets or exceeds all applicable OSHA requirements and is tailored to the specific needs, locations, and potential exposures of employees at each site.
- Ensure that all medical records and exposure data are maintained according to legal and regulatory requirements and that confidentiality is upheld as per HIPAA guidelines.

2. Project Health & Safety Manager

The Project Health & Safety Manager is responsible for:

- Implementing and managing the site-specific health and safety plans, including the Medical Monitoring Program.
- Acting as a point of contact between the project team, employees, and WorkCare when necessary.

3. Health & Safety Officer

The Site Health & Safety Officer is responsible for:

- Maintain medical monitoring records for employees.
- Assisting in the implementation and management of the Medical Monitoring Program on the project site.
- Provide support and information to employees regarding health and safety concerns.

4. Project Manager

The Project Manager is responsible for:

- Promote a safety-first culture on the project site. Ensure that health and safety considerations are integrated into project planning and execution.
- Allocate resources effectively to support health and safety initiatives and training programs. Ensure that safety equipment and PPE are available and maintained.
- Coordinate with the Project H&S Manager and Health & Safety Officer to ensure that health and safety policies are implemented and adhered to.

5. Employees

It is the employee's responsibility to:

- Attend all scheduled appointments.
- Provide the medical staff with complete and accurate medical history.
- Report any work-related incidents or other changes in their personal medical well-being that may affect his/her ability to work on the Envirocon project site.

E. MEDICAL MONITORING PROGRAM

Envirocon's medical monitoring process ensures that all Envirocon personnel assigned to a project are physically fit to perform their assigned duties. This process begins with the pre-placement baseline exam and continues through annual, suspected exposure, and termination examinations as developed by Envirocon's Director of EHS in conjunction with Envirocon's Medical Review Officer (MRO).

1. Medical Review Officers

- Envirocon's medical programs are administered by a Medical Review Officer (MRO) in consultation with Envirocon's Director of EHS.*
- Envirocon's MRO is a licensed physician with specialized training in occupational health and toxicology from WorkCare, Inc.*

2. The medical monitoring program is designed to:

- Assess and monitor worker's health and fitness both prior to employment and during the course of work;*
- Provide emergency and other treatment as needed;*
- Keep accurate records for future reference.*
- Envirocon's medical program is designed to meet or exceed the OSHA requirements for workers that do remediation, demolition, site clean-up work and handle hazardous substances. The medical monitoring program provides for pre-placement, annual, periodic, and separation examinations for all Envirocon employees potentially exposed to occupational health hazards at no cost to the employee.*

3. Employee Participation

- All employees potentially exposed to occupational health hazards will participate in the medical monitoring program.*
- The medical program for each project site will be developed based on the specific needs, location, and potential exposures of employees at the site. The MRO, who is tasked with overall program management and quality control, determines worker medical qualification.*
- Each employee is responsible for ensuring they are fit for duty at the start of every workday. This includes both physical and mental readiness to safely perform assigned tasks without posing a risk to themselves or others. Employees must be free from any illness, injury, impairment, fatigue, or the influence of medications (including over-the-counter or prescribed) that may limit their ability to work safely. If an employee experiences any condition—work-related or personal—that may affect their fitness for duty, they are required*

to report it immediately to their supervisor or the Site Health and Safety Officer (HSO) for further evaluation and guidance.

- d. While employees are responsible for evaluating their own fitness for duty each day, Envirocon reserves the right to make an independent determination regarding an employee's physical or mental readiness to safely perform their job duties. If a supervisor, Project Manager, or the Director of Environmental Health & Safety (EHS) observes behavior, symptoms, or conditions that raise reasonable concern regarding an employee's fitness for duty, the employee may be removed from duty pending further evaluation. The Director of EHS or designee has the authority to restrict or suspend work assignments if, in their professional judgment, the employee presents a risk to themselves or others, regardless of the employee's self-assessment. Any determinations regarding fitness for duty will be made in accordance with applicable employment, disability, and privacy laws, and may involve review by a licensed occupational health provider or the company's Medical Review Officer (MRO).**
- e. Though not mandatory, employees may be asked to disclose pertinent medical information for emergency situations or conditions such as allergies to insects, diabetes, or other medical conditions that may lead to incapacitation.**
 - i. This information may be collection by the Site Health and Safety Officer using the 1403.005.03 – Voluntary Emergency Data Form and be kept in the strictest of confidence.*

F. MEDICAL EXAMINATIONS

Envirocon and the MRO administer a program that includes a number of physical examinations and protocols suited for a wide range of site-specific hazards. Form 1403.005.02 Request for Medical Evaluation/Services (RFM) Table F provides a matrix of examinations and protocols administered by Envirocon.

1. Pre-placement Exams

- a. The purpose of the pre-placement medical exam:**
 - i. Determination of the employee's fitness for duty, including the ability to work while wearing protective equipment;*
 - ii. Provide baseline data for comparison with future medical data;*
 - iii. Identify preexisting medical conditions that may require restrictions in work assignments.*
- b. Termination physicals from previous employment, if completed through WorkCare, Inc., may be accepted in lieu of Envirocon's pre-placement exam, within the constraints of exam content and time frame of six months or less.**

2. Hazardous Waste Examination

- a. Pre-placement medical examinations may vary a great deal in content depending upon the nature of the job assignment. Pre-placement physicals for technical personnel may include but is not limited to the following components:**
 - i. Personal Medical History and physical;*
 - ii. Vision;*

- iii. Audiogram;*
- iv. Pulmonary Function Test (PFT);*
- v. Electrocardiogram (EKG);*
- vi. Chest X-ray (1 view with interpretation);*
- vii. Blood Chemistry Panel;*
- viii. Complete Blood Count (CBC);*
- ix. Urinalysis with Micro (UA);*
- x. Site-specific protocols (as determined by MRO);*
- xi. Respirator Clearance Form;*
- xii. Human Performance Exam or Back Fit Assessment;*
- xiii. Non-NIDA (standard) and /or a NIDA-Certified Drug Screen (DOT personnel only);*
- xiv. Release to Duty Form.*

3. Site-Specific Examination Protocols:

a. Lead Examination

In accordance with 29 CFR 1910.1025/1926.62 OSHA lead standards, a medical surveillance program will be instituted and medical examinations and consultations made available to every employee exposed above the action level for more than 30 days total per year (regardless of continuity of days).

Prior to job commencement, a physician will evaluate and document the worker's baseline health status by:

- i. Collecting medical, environmental, and occupational histories;*
- ii. Performing a physical examination;*
- iii. Requesting physiological and laboratory tests appropriate for the anticipated occupational risks.*

The medical examination, both initial and periodic, will include the following:

- iv. A thorough physical examination that pays particular attention to the hematologic, gastrointestinal, renal, cardiovascular, and neurological systems;*
- v. An evaluation of pulmonary status to determine whether the worker is capable of wearing a respirator;*
- vi. Blood pressure measurement;*
- vii. A blood sample for analysis to determine blood lead levels, hemoglobin and hematocrit, blood urea nitrogen, serum creatinine, and zinc protoporphyrin;*
- viii. A routine urinalysis with microscopic examination;*
- ix. Pregnancy testing, or laboratory evaluation of fertility, if requested by the worker;*
- x. Any laboratory or other test that is recommended by the examining physician.*

b. Envirocon's MRO has developed protocols for all OSHA standards covered by Subpart Z, including (but not limited to):

- i. Lead,*
- ii. Cadmium,*
- iii. Chromium,*
- iv. Arsenic,*
- v. Dibromochloropropane,*
- vi. Benzene,*
- vii. Asbestos,*
- viii. Silica.*

c. BEI (Biological Exposure Index)

Where existing OSHA standards do not address a project's specific needs, Envirocon's MRO may determine that an ACGIH (American Conference of Governmental Industrial Hygienists) BEI may be appropriate. The MRO will determine the use of BEIs in consultation with an Envirocon CIH.

d. Vaccinations and Other Site-specific Protocols

Envirocon's MRO may also determine unique protocols for site-specific needs such as the use of blood cholinesterase baselines in preparation for work with certain Department of Defense munitions and hepatitis or tetanus vaccinations for certain landfill projects.

4. Annual Medical Examination

a. The annual physical exams will be equivalent to the pre-placement exam except for the medical history, which will include any relevant information concerning possible exposures, symptoms, etc. occurring since the last physical. More frequent examinations may be necessary, depending on:

- i. The extent of potential or actual exposure;*
- ii. Type of chemicals involved;*
- iii. Duration of the work assignment;*
- iv. The individual worker's profile.*

b. When the physician deems appropriate, additional tests for specific chemical exposures will be added to the annual exam.

5. Termination Medical Exams

a. A separation exam will be offered/scheduled for employees who:

- i. Request one;*
- ii. Have worked on a HAZWOPER project site;*
- iii. Have been included in the medical surveillance program;*
- iv. Have not had a physical exam in more than 6 months.*

- b. The separation exam will be similar to the pre-placement exam, with the exception of the medical history (updated since the last physical), and there will be no need for medical clearance for respirator use.*
- c. Every effort will be made to encourage employees to complete a separation exam. If an employee refuses the separation exam, the Memorandum for "Notification of Termination Physical Exam" should be completed by the employee and their supervisor at the time of separation using the 1403.005.01 – Separation – Termination – RIF Physical Exam Form.*

6. Periodic Medical Examination

- a. Periodic medical examinations will be used in conjunction with pre-placement screening exams to compare sequential medical reports with baseline data, determining biological trends that may mark early signs of adverse health effects and thereby facilitating appropriate protective measures.*
- b. The frequency and content of examinations will vary depending on guidance and direction from the MRO and depending on the nature of the work and exposures. Periodic screening exams may include:*
 - i. Interval medical history (focusing on changes in health status, illnesses, and possible work-related symptoms);*
 - ii. Review of the worker's interval exposure history, including exposure monitoring at the job site;*
 - iii. Physical examination;*
 - iv. Additional site-specific medical testing that may include:*
 - v. Pulmonary function test;*
 - vi. Audiometric tests;*
- c. Termination physicals from previous employment, if completed through WorkCare, Inc., may be accepted in lieu of Envirocon's pre-placement exam, within the constraints of exam content and time frame of 6 months or less.*
 - i. Vision tests;*
 - ii. Blood and urine tests when indicated.*
- d. An employee will receive additional medical monitoring upon notifying the employer of symptoms consistent with overexposure to on-site chemicals or if any employee is exposed to on-site chemicals at concentrations in excess of the permissible exposure limit (PEL) without protection during an emergency response operation.*

G. EMPLOYEE MEDICAL SURVEILLANCE PROGRAM

Hazardous waste work involves potential exposure to a wide variety of potential hazards. In the case of chemical exposures and physical hazards such as noise, these exposures may be measured and quantified.

1. Exposure Monitoring

- a. Exposure monitoring may be performed for the purpose of:*
 - i. Establishing or verifying work area protection levels;*

I. MEDICAL FILE REVIEW

- 1. An Occupational Health Physician or the MRO, in cooperation with the Director of EHS, will provide medical review services to all Envirocon job sites. This MRO is expected to provide medical surveillance tracking of the examination data collected at each job site location in order to detect work-related health problems and to schedule specific medical testing accordingly.**
- 2. The MRO will assist in the design of the medical monitoring program for each site based upon the specific needs, location, and potential exposures of the employees at the site. This review provides an independent evaluation of the ongoing data collection and assures the quality and consistency of the medical monitoring program.**

J. RECORDKEEPING

- 1. An employee's medical records are considered personal and confidential and are kept separate from other personnel records.**
- 2. Records generated by the Medical Surveillance Program must be preserved and maintained by the Corporation for 30 years after the employee's departure from the company. These original records are currently stored with the MRO (GMG WorkCare facility in Anaheim, California).**
- 3. The physician's written reports, x-rays, exam data, and test results make up the employee's confidential medical record. Project Managers will be made aware of medical information that is safety-sensitive only. Medical records that are at the job site (within HIPAA guidelines) will be kept in a locked, separate file.**
- 4. All examining physicians will be provided copies of:**
 - a. Any pertinent employee exposure data available since the employee's last exam;***
 - b. The employee's job description;***
 - c. The employee's exposure levels or anticipated exposure levels;***
 - d. Descriptions of any PPE used or to be used.***
- 5. The employee's exposure history data is recorded on the Project History Summary and the Personal Air Sampling Logs, in addition to the written monitoring reports given to each employee subsequent to any individual exposure monitoring performed.**
- 6. Employees may request a copy of these records using the 1403.005.04 – HIPAA Patient Request for Records From WorkCare Form.**

K. REQUEST FOR MEDICAL EXAM (RFM)

Human Resources requesting a Baseline Exam for New Hires and/or HSOs requesting an Annual medical exam or a medical exam due to job duty changes can request it on Form 1403.005.02 or contact the H&S Administrator.

L. FITNESS FOR DUTY EXAM

1. A fitness for duty exam may be requested for an employee with a health condition or health concern that may affect the employee's ability to perform their assigned work task(s) safely.
 - a. *This could pertain to an illness, injury, impairment, or a physical or mental condition that results in an overnight stay in a medical care facility or treatment by a health care provider.*
2. The fitness for duty exam also applies if the condition either prevents or restricts the employee from performing their normal work activities. Subject to certain conditions, the treatment requirement may be met by a period of incapacity or a regimen of treatment.
3. Other health conditions that may meet this definition include pregnancy and chronic health conditions.
4. Additionally, if an employee has a non-occupational injury/illness, a fitness-for-duty medical exam may be required, with an evaluation by the Envirocon Medical Review Officer. This may be accomplished through a peer-to-peer medical discussion between the Envirocon occupational medicine provider and the employee's personal physician and/or through a fit-for-duty exam at a provider clinic.
5. To obtain records for the WorkCare Physician's review, the 1403.005.05 – HIPAA Release-Disclosure to WorkCare Form shall be used.

M. RELATED DOCUMENTS

None.

N. ATTACHMENTS

- Form 1403.005.01 – Termination – RIF – Exit Physical Form
- Form 1403.005.02 – Request for Medical Evaluation/Services (RFM)
- Form 1403.005.03 – Voluntary Emergency Data
- Form 1403.005.04 – HIPAA Patient Request for Records From WorkCare
- Form 1403.005.05 – HIPAA Release-Disclosure to WorkCare
- Form 1403.005.06 – WorkCare Incident Intervention Information



STANDARD OPERATING PROCEDURE

TITLE: Medical Manual - Substance Abuse Policy Procedures		PREPARED BY: J. Ocken, CIH, CSP, CHMM
SOP NO: 1403.006.1	PAGE: 1 of 59	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
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A. PURPOSE

The purpose of the Envirocon substance abuse policy procedures is to reduce accidents that result from the use of controlled substances or the abuse of alcohol and prescription drugs.

B. POLICY

It is Envirocon's policy to:

- Maintain a safe and healthy workplace;
- Use qualified personnel, free of the effects of illegal drugs or substance abuse to perform critical (i.e., "covered") functions;
- Maintain a workplace free of drugs and/or substance abuse in accordance with applicable Federal and state laws and regulations and

- Comply with the substance abuse, security, and other related procedures of our clients and host facilities.

Conditions of Employment

As a condition of employment, employees will not abuse substances at work that could impact their ability to carry out that work safely. Substance abuse at work includes the use of illegal drugs, the abuse of alcohol and legal drugs, and the failure to adhere to this policy and its procedures.

All employees are required, as a condition of their employment, to come to work free of the influences of alcohol, illegal substances, or regulated prescription drugs used in a manner contrary to the prescription's directions.

C. POLICY BASIS

1. Controlled Substances Act

This policy is intended to comply with the Controlled Substances Act (21 U.S.C. 812) as further defined in regulation at 21 CFR, Part 1308; and the Montana Code Annotated, Title 39 "Labor;" Chapter 3, Part 2, Section 205 (MCA 39 2 205).

2. Clients' Regulations

According to the client's specifications applicable to a given project, Envirocon personnel and lower-tier subcontractors will be required to follow the DOT requirements for CDL drivers applicable to pipeline operations and DOE, FAR, and/or DFAR regulations as described below.

a. DOT—49 CFR Parts 40 and 199

Envirocon has implemented the Research and Special Programs Administration, Drug Testing Regulations as set forth in 49 CFR Part 199 and the Department of Transportation, Procedures for Transportation Workplace Drug Testing Programs as set forth in 49 CFR Part 40.

b. DOT—Pipeline Operators

The catalyst for the anti-drug plan is Title 49 Code of Federal Regulations (CFR) Part 199, which requires the pipeline operators subject to 49 CFR Parts 192, 193, and 195, and their contractors to test their employees for prohibited drugs under the following work-related conditions:

- Pre-Project (i.e., DOT or DFAR/FAR Pre-Employment)
- Post-Accident
- Random
- Reasonable Cause or "for cause"
- Return-to-Duty

c. Title 49 Part 40

49 CFR Part 40 specifies procedures that must be followed when conducting drug testing pursuant to regulations issued by agencies of the Department of Transportation (DOT).

d. DOE

The Department of Energy (DOE) regulations are contained in Title 10 of the Code of Federal Regulations (CFR), Chapter III, Part 707, "Workplace Substance Abuse Programs at DOE Sites."

e. DFAR

The Defense Federal Acquisition Regulation (DFAR) Supplement 252.223-7004 defines requirements for contractors on certain Department of Defense (DoD) facilities.

f. FAR

FAR refers to the Federal Acquisition Regulations 52.223-6 pertaining to the Drug-Free Workplace Act of January 1997 as prescribed in 23.505.

D. DEFINITIONS

1. Abuse

Refer to the definition of substance abuse.

2. Accident

An accident is an unplanned and unexpected incident that has the significant potential to, or actually results in, personal injury/illness, property damages in excess of normal wear/tear, environmental damages, or project/quality-related delays or non-conformance. Accidents include, by definition, any of the following:

a. Pipeline accidents

Pipeline accidents are further defined below.

b. Incidents requiring post-accident testing under these procedures

Refer to E.4.b below.

c. Incidents required by contract, procedures, or law

This includes any other incidents defined by contracts or project procedures. This also includes any other incidents reportable under governmental regulations. As directed by those procedures, certain incidents may require post-accident testing.

3. Alcohol

"Alcohol" means an intoxicating agent in alcoholic beverages, ethyl alcohol, also called ethanol, or the hydrated oxide of ethyl or other low molecular weight alcohols, including methyl or isopropyl alcohol.

4. Alcohol Concentration

Alcohol concentration means the alcohol in a volume of breath expressed in terms of grams of alcohol per 210 liters of breath as indicated by an evidential breath test conducted under federal regulations.

5. Alcohol Use

Alcohol use means the consumption of any beverage, mixture, or preparation, including any medication containing alcohol.

6. Blind Sample

A urine specimen submitted to a laboratory for quality control testing purposes, with a fictitious identifier, so that the laboratory cannot distinguish it from employee specimens, and which is contaminated (or "spiked") with known quantities of specific drugs or which is blank, containing no drugs.

7. Chain-of-Custody (COC)

Procedures to account for the integrity of each urine specimen by tracking its handling and storage from the point of specimen collection to the final disposition of the specimen. These procedures shall require that an appropriate testing custody form from a Department of Health and Human Services (DHHS) certified laboratory be used from the time of collection to receipt by the laboratory.

8. Collection Site

A designated clinic/facility where applicants or employees may present themselves for the purpose of providing the required biological specimen (e.g., urine or breath) to be analyzed for purposes of determining compliance with this policy.

9. Collection Site Person

A person who instructs and assists applicants and employees through the specimen collection process. These persons must be trained and qualified to perform this function.

10. Company

An organization or commercial enterprise that uses this anti-drug plan.

11. Confirmation Test

See “test” definitions below.

12. Controlled Substance

a. *Controlled Substances Act*

Controlled substance means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

b. *Related Definitions*

The term “controlled substance” includes both legal and “illegal drugs” as regulated by the Controlled Substances Act or any other Criminal drug statutes.

13. Conviction

Conviction means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State Criminal drug statutes.

14. Counseling

DOE definition for the services provided by a substance abuse specialist. See SAP (Substance Abuse Specialist) below.

15. Criminal drug statute

A criminal drug statute is a Federal or non-Federal Criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

16. Covered employee

For purposes of this procedure, a covered employee means an employee assigned to duties involving covered functions and, therefore, subject to this policy, substance abuse policies of host facilities, and/or otherwise subject to substance abuse testing.

a. Facility Definitions

Work on various Envirocon projects may involve facility-specific requirements. These site-specific requirements may include covered functions described under “covered functions.” Where host facilities include additional covered functions that are not included in Appendix Q.2, those additional functions will be described in site-specific plans.

b. Covered employee (DOT)

For DOT facilities means any person who performs on a pipeline or LNG facility an operating, maintenance, or emergency response function regulated by Parts 192, 193, or 195. Such a person may be employed directly by the operator or by a contractor engaged by the operator. As applied in the regulations, "employee" and "applicant for employment" have the same meaning for the purpose of these requirements. Clerical, truck driving, accounting, or other job functions not covered by Parts 192, 193, and 195 are not subject to the regulations.

c. Covered employee (DFAR)

This means an employee in a sensitive position. See “employee in a sensitive position.”

d. Covered employee (DOE)

Means an employee working in a testing designated position.

17. Covered Function

For purposes of this procedure, a covered function means a work assignment where the employee will be engaged in the performance, supervision, or management of work in a hazardous work environment, security position, position affecting public safety, or fiduciary position. This includes employees who may enter work zones with recognized and/or regulated hazards. This includes driving or operating Envirocon-owned or rented equipment or driving a personally owned vehicle on official company business for which the employee may be reimbursed. Covered positions are specifically listed in Appendix Q.2.

a. Host Facility Definitions

Work on various Envirocon projects may involve facility-specific requirements. These site-specific requirements may include the following covered functions. Where host facilities include additional covered functions that are not included in Appendix Q.2, those additional functions will be described in site-specific plans.

b. Covered Function (DFAR)

At a DFAR facility, a covered function is a function directly engaged in a safety-sensitive assignment or safety-sensitive position. See “employee in a sensitive position” and “directly engaged.”

c. Covered Functions (DOT)

An operation, maintenance, or emergency-response function regulated by Parts 192, 193, or 195 that is performed on a pipeline or LNG facility.

d. Covered Functions (FAR)

At a FAR facility, a covered function is a function directly engaged in a safety-sensitive assignment or safety-sensitive position. See “employee in a sensitive position” and “directly engaged.”

e. Covered Function (DOE)

Means a testing designated position.

f. Covered Functions (MCA 39 2 206)

This means an "Employee," as defined in MCA 39 2 206, is an individual engaged in the performance, supervision, or management of work in a hazardous work environment, security position, position affecting public safety, or fiduciary position.

18. Directly engaged (FAR)

"Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

19. DFAR

Means the Defense Federal Acquisition Regulations Supplement. In particular, clause 252.223 7004, "Drug-Free Work Force," as it applies to this procedure.

20. DOT

This means the United States Department of Transportation and the regulations listed as applicable to this procedure.

21. DPM (Drug Program Manager)

Envirocon's Drug Program Manager is listed in Appendix Q.1. The DPM is a company-designated individual responsible for the preparation of drug testing procedures and anti-drug plans that comply with the requirements of Envirocon's policy and the requirements of host facilities, including the DOT, DOE, FAR and/or DFAR. DPM responsibilities are described further in the following sections.

22. Drug-free workplace

Drug-free workplace means the site(s) for the performance of work done by Envirocon in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

23. Drug Certification

This means a written assurance signed by an individual with known past illegal drug involvement as a condition for obtaining or retaining a DOE access authorization, stating that the individual will refrain from using or being involved with illegal drugs while employed in a position requiring DOE access authorization (security clearance). Refer to paragraph F.2.a below.

24. EAP (Employee Assistance Program)

A program to assist employees in meeting the goals of this program. This program is discussed in the following sections. The current EAP is listed in Appendix Q.1.

25. Employee

For purposes of this policy and procedure, the term "employee" includes the common meaning of employee (i.e., personnel assigned an employee number, receiving compensation wages or salary for work performed, and subject to IRS withholding provisions) or a candidate for employment.

a. State Definition

Under the provisions of (MCA 39 2 206) "Employee" means an individual engaged in the performance, supervision, or management of work in a hazardous work environment, security position, position affecting public safety, or fiduciary position for an employer and does not include an independent contractor. The term includes an

elected official. For purposes of this policy and procedure, the term “employee,” as defined under MCA 39 2 206, is synonymous with the term “covered employee,” as described above.

b. Subcontractor Employee

Subcontractor employee means an employee of an independent contractor. Independent contractors and their employees may be included under this definition as mandated by contracting documents and applicable project plans and procedures.

26. Employee in a sensitive position

a. Envirocon Procedure

For purposes of this procedure, the term “employee in a sensitive position” is considered synonymous with the term “covered employee.” Where host facilities include additional covered functions that are not included in Appendix Q.2, those additional functions will be described in site-specific plans.

b. Employee in a sensitive position (DFAR)

This means an employee who has been granted access to classified information or employees in other positions that have been determined to involve national security, health or safety, or functions other than the foregoing requiring a high degree of trust and confidence. When required for DFAR-regulated projects, these employees will be included in site-specific procedure documents.

27. Envirocon

Envirocon holds licenses and permits in a variety of states under a variety of names. Envirocon means Envirocon, Inc., Paradigm, and any affiliated companies with other names on licenses held and independent contractors designated to support this program, such as the MRO.

28. Fail a Test

Refer to the definition “Test Positive” under “Tests” below.

29. FAR

FAR refers to the Federal Acquisition Regulations 52.223-6 pertaining to the Drug-Free Workplace Act of January 1997 as prescribed in 23.505.

30. Hazardous Materials

Under DOE requirements means any material subject to the placarding requirements of 49 CFR 172.504 Table 1 or poisons under 172.505

31. Illegal Drugs and Illegal Drug Use.

a. Illegal Drugs

For purposes of this procedure, this term means controlled substances included in Schedules I and II, as defined by section 802(6) of Title 21 of the United States Code, the possession of which is unlawful under Chapter 13 of that Title. The term “illegal drug” does not mean the use of a controlled substance according to the recommended dosage pursuant to a valid prescription from a physician or health care provider licensed to issue prescriptions or for other uses authorized by law. The term “illegal drugs” includes any other substance that is prohibited by a Criminal drug statute.

b. *Illegal Drug Use*

For purposes of this procedure, this term means the illegal use of any controlled substances included in all schedules defined by section 802(6) of Title 21 of the United States Code and any other Criminal drug statute. The term “illegal drug use” includes the illegal use of prescription drugs and/or controlled substances.

c. *Related definitions.*

- i. For purposes of site-specific procedures governed by DOT requirements, the term “illegal drug” means a prohibited drug. See the definitions under “prohibited drugs.”*
- ii. For purposes of site-specific procedures governed by FAR requirements, “illegal drugs” means a controlled substance as described in this section.*

32. MRO (Medical Review Officer)

A licensed physician with knowledge of drug abuse disorders.

- The responsibilities of the MRO are discussed in the sections that follow.
- For DOE facilities, this person must be approved by DOE.
- The Envirocon MRO(s) are listed in Appendix Q.1.

33. NIDA (National Institute on Drug Abuse) Laboratory.

A laboratory certified under DHHS Mandatory Guidelines for Federal Workplace Drug Testing Programs; 53 FR 11970, April 11, 1988 and subsequent amendments. See also SAMHSA.

34. Not Qualified or Not Fit

For purposes of this procedure, the terms “not fit,” “not qualified,” “disqualified,” or “unqualified” are used to mean the same thing. A candidate or newly hired employee who fails a pre-employment test is considered not qualified for employment. An employee who has completed or is successfully enrolled in a rehabilitation program and who subsequently fails a test is considered “not qualified.”

35. Occurrence (DOE)

a. *Occurrence means:*

Any event or incident that is a deviation from the planned or expected behavior or course of events in connection with any Department of Energy or Department of Energy-controlled operation if the deviation has environmental, public health and safety, or national security protection significance.

b. *Incidents having such significance include the following:*

- Injury or fatality to any person involving actions of a Department of Energy contractor employee.
- Involvement of nuclear explosives under Department of Energy jurisdiction, which results in an explosion, fire, the spread of radioactive material, personal injury or death, or significant damage to property.
- Accidental release of pollutants, which results in or could significantly adversely affect the public or environment.
- Accidental release of radioactive material above regulatory limits.

36. Operator (DOT)

An owner or operator of DOT-regulated pipeline facilities.

37. Pass a Test

Refer to "Test Negative" in the definitions listed under "Test" below.

38. Pipeline (DOT)

All parts of the physical facilities through which product moves in transportation. This includes pipes, valves, and other appurtenances attached to pipes, compressor units, metering stations, delivery stations, holders, and fabricated assemblies.

39. Pipeline Accidents (DOT)

a. Accidents

- i. Under DOT requirements, an operator must address the definition of "accident" under § 191.3 and/or § 195.50 and the definition of a "Covered Employee."*
- ii. An accident may be classified as a reportable incident under:*
 - Part 191 involving gas pipeline facilities or LNG facilities; or
 - Part 195 involving hazardous liquid or carbon dioxide pipeline facilities.

b. Part 191 Reportable Incident (DOT)

An accident on a gas pipeline or LNG facility is defined as a "incident" as follows:

- i. Gas releases of the following types:*
 - a. A release of gas from a pipeline or of liquefied natural gas; or
 - b. Gas from an LNG facility and
 - A death, or
 - Personal injury necessitating inpatient hospitalization; or
 - Estimated property damage, including the cost of gas lost to the operator or others, or both, of \$50,000 or more.
- ii. An event that results in an emergency shutdown of an LNG facility.*
- iii. An event that is significant in the judgment of the operator (this includes an event even if it did not meet the criteria of paragraphs 1) or 2) above.*

c. Part 195 Reportable Incident (DOT)

§ 195.50 requires an accident report for each failure in a pipeline system in which there is a release of the hazardous liquid or carbon dioxide transported, resulting in any of the following:

- i. Explosion or fire not intentionally set by the operator.*
- ii. Loss of 50 or more barrels of hazardous liquid or carbon dioxide.*
- iii. Escape to the atmosphere of more than five barrels a day of highly volatile liquids.*
- iv. Death of any person.*
- v. Bodily harm to any person resulting in one or more of the following:*
 - Loss of consciousness.
 - Necessity to carry the person from the scene.
 - Necessity for medical treatment.
 - Disability that prevents the discharge of normal duties or the pursuit of normal activities beyond the day of the accident.

- vi. *Estimated property damage, including the cost of clean-up and recovery, the value of the lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.*

40. Pipeline Facilities (DOT)

Includes new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of products.

41. Prohibited Drug

a. *Illegal Drug*

For purposes of this procedure, the term “prohibited drug” means an illegal drug.

b. *Related Definitions*

Under DOT requirements, this includes marijuana, cocaine, opiates, phencyclidine, and/or amphetamines.

42. Refusal to Submit

Refusal by an individual to provide an appropriate urine or other sample after receiving notice of the requirement that such individual be tested in accordance with Envirocon's anti-drug program.

43. Returning Employee

An employee, or a candidate for employment, who wishes to return to employment with Envirocon or continue to be considered for employment with Envirocon after failing a test. This refers to covered functions as well as those that are not covered. See the discussion regarding the status of employees who fail to test below.

44. SAMHSA

Substance Abuse and Mental Health Services Administration, formerly the National Institute on Drug Abuse (NIDA), was established by the Department of Health and Human Services in 1986 to regulate laboratories performing analytical tests (drug tests) on human body fluids for employment purposes in the public sector.

45. SAP (Substance Abuse Professional)

A licensed physician (Medical Doctor or Doctor of Osteopathy); a licensed or certified psychologist, social worker, or employee assistance professional; or an addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission or by the International Certification Reciprocity Consortium/Alcohol & Other Drug Abuse). All must have knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled substances-related disorders. For purposes of this procedure, a SAP may be an individual provided by the EAP or a qualified individual of the employee's own choosing.

46. Special Nuclear Materials

Special Nuclear Material has the same meaning as in section 11aa of the Atomic Energy Act of 1954 (42 U.S.C. 2014(aa)).

47. Substance Abuse

For purposes of this procedure, the term “substance abuse” includes both illegal and unsafe uses of controlled substances, alcohol, or medications.

a. *Illegal Substance Abuse includes:*

- Any use of illegal drugs and/or
- Any illegal use of controlled substances.

b. *Abuse of Legal Substances*

- Abuse of legal substances includes the use of legal substances in a manner that poses a hazard in the workplace.*
- Reporting for work while under the influence of alcohol is considered abuse of a legal substance.*
- Reporting for work while under the influence of a prescription medication that is not used in accordance with the prescription instructions is considered abuse of a legal substance. This includes the use of prescription medications without a legally obtained prescription.*
- Reporting for work while under the influence of a prescription or over-the-counter medication and not advising Envirocon management (supervisor responsible for assigned work) of any restrictions associated with the use of that medication.*
- Reporting for work includes:*
 - The arrival at a job for scheduled work for Envirocon;
 - Performing work for Envirocon;
 - Operating Envirocon owned, leased, or rented equipment or vehicles (including personal vehicles for which the employee receives expense reimbursement) while traveling; and/or
 - Arriving at a collection site for testing or medical surveillance evaluation.

48. Testing Designated Position

a. *Covered Function*

For purposes of this procedure, the term “Testing Designated Position” is synonymous with the term “covered function” described above.

b. *Related DOE definition*

Under DOE rules, testing designated positions subject to random testing are:

- Positions determined to be covered by the Personnel Security Assurance Program (PSAP), codified at 10 CFR part 710. PSAP employees will be subject to the testing standards of this part and any additional requirements of the PSAP rule.*
- Positions which entail critical duties that require an employee to perform work which affords both technical knowledge of and access to nuclear explosives sufficient to enable the individual to cause a detonation (high explosive or nuclear), in what is commonly known as the Personnel Assurance Program (PAP). PAP employees will be subject to the testing standards of this part and any additional requirements of the PAP program.*
- Positions identified by the contractor that entail duties where failure of an employee adequately to discharge their position could significantly harm the environment, public health or safety, or national security, such as:*
 - Pilots;
 - Firefighters;

- Protective force personnel, exclusive of those covered above, in positions involving the use of firearms where the duties also require potential contact with, or proximity to, the public at large;
 - Personnel directly engaged in the construction, maintenance, or operation of nuclear reactors; or
 - Personnel directly engaged in the production, use, storage, transportation, or disposal of hazardous materials sufficient to cause significant harm to the environment or public health and safety.
- iv. *Other positions determined by the DOE, after consultation with the contractor, have the potential to significantly affect the environment, public health and safety, or national security.*

49. Testing Related Definitions

a. Test

- Unless specified otherwise, the term “test” is used interchangeably with the terms “drug test,” “substance abuse test,” and/or “alcohol test.” In general, a “test” means the evaluation of an employee, in accordance with this procedure, for an indication of prohibited drug use or the influence of alcohol.
- This definition includes the submittal of an appropriate biological specimen at the time and place specified by Envirocon and the evaluation of that specimen by a laboratory in accordance with established substance abuse policy.
- Testing includes the following different types of tests, results, and related definitions.

b. Confirmation Test

A second analytical procedure to identify the presence of a specific drug, substance or metabolite that is independent of the initial test.

- In the case of controlled substances, the confirmation test uses a different technique and chemical principle from that of the initial test in order to ensure reliability and accuracy.
- In the case of controlled substances, gas chromatography/mass spectrometry (GC/MS) is the authorized confirmation method for cocaine, marijuana, opiates, amphetamines, and phencyclidine (PCP).
- Confirmation of a breath alcohol test means a second test following a screening test with a result of 0.02 blood alcohol concentration or greater that provides quantitative data of alcohol concentration.

c. Directed Testing

Testing directed at individual employees as a follow-up to previous test results. This term is used interchangeably with follow-up testing. See the definition of “follow-up testing.”

d. Follow-up Testing

A program of directed testing for a returning employee. Follow-up testing is unannounced until the time of testing. Follow-up testing is also conducted in a way that avoids scheduling patterns. Follow-up testing is performed in addition to any other testing. Before beginning a covered function and starting a program of follow-up testing, the returning employee must first have a passing return-to-duty test.

e. Initial Test

For substances other than alcohol, an initial test means an immunoassay screen to eliminate "negative" urine specimens from further consideration. An initial test for alcohol means an analytic procedure to determine whether an employee may have a prohibited concentration of alcohol in a breath specimen.

f. Negative Test

See "Test Negative."

g. Positive Test

See "Test Positive."

h. Post-Accident Testing

This is a test performed in accordance with the sections below after an accident involving a covered function.

i. Pre-Employment Test

Pre-employment testing under DOT, DOE, FAR, and DFAR regulations includes two closely related procedures. Before beginning a covered function, an employee must pass a pre-employment test that is immediately and continuously maintained by a random testing program in accordance with this procedure. If qualifications are not maintained in this way, the pre-employment test must be repeated as a pre-project test performed before beginning a covered function.

i. For purposes of this procedure, unless specified to be a DOT or DFAR/FAR pre-employment test, the term "pre-employment test" will mean a substance abuse test for newly hired employees in accordance with Envirocon Procedure 1403.006.

ii. For purposes of this procedure, the term "DOT Pre-Employment Test" means a test performed in accordance with DOT regulations for pre-employment testing.

iii. For purposes of this procedure, the term "DFAR Pre-Employment Test" means a test performed in accordance with DFAR/FAR regulations for pre-employment testing.

j. Pre-Project or Site-specific Test

This is a site-specific type of pre-employment test performed before beginning a covered function and continuously maintained by a program of random testing.

i. For purposes of this procedure, the term "Pre-Project Test" means a site-specific test in accordance with facility requirements (e.g., DOT, DFAR, FAR, or DOE) performed as a pre-employment test before beginning work at a particular facility.

ii. For purposes of this procedure, the term "Pre-Project Test" is interchangeable with the terms "DOT Pre-Employment Test" or "DFAR/FAR Pre-Employment Test" as applicable.

iii. A pre-project test must be conducted before an individual begins work in a covered position.

iv. An employee becomes disqualified when:

- The employee switches back and forth from a covered position to a non-covered position; and
- Is withdrawn from a random testing program meeting the requirements of this procedure.
- This also applies to employees returning from a leave of absence who have not been participating in a qualified random testing program.

- An employee is not qualified under this program until a negative test result has been confirmed and documented.

k. Random Test

Tests are performed for the primary purpose of deterring prohibited drug use. Covered employees shall be subject to testing on an unannounced and random basis as described in the sections below.

l. Reasonable Cause Test

A test designed to provide management with a tool to identify drug-affected employees who may pose a danger to themselves and others in their job performance. Employees may be at work in a condition that raises concerns regarding their safety or productivity. Supervisors must then make a decision as to whether there is reasonable cause, in accordance with this procedure, to believe an employee is using or has used a prohibited drug.

m. Results

A properly administered test in accordance with this procedure results in either a passing or negative result or a failing or positive result. See the definitions for "Pass a test or test negative" and "Fail a test or test positive" above.

n. Returning Employee

An employee, previous employee, or candidate for employment who has previously tested positive and is currently seeking to qualify for and begin work in a covered function in accordance with the procedures described below.

o. Return-to-Duty Test

A test is performed when an employee returns to duty after failing another test. After passing a return-to-duty test an employee is subject to a program of follow-up testing as described in the sections below.

p. Screening Test

See the definition of "initial test."

q. Test Negative

- A negative test is an initial or confirmation testing result under applicable (e.g., DOE, DOT, DFAR, FAR, or Envirocon) procedures that do not show evidence of the presence of the substance being tested for in the employee's system.*
- The terms "Negative Test," "Pass a Test," or "Test Negative" are considered synonymous with this definition.*

r. Test Positive Test or Fail a Test

- A positive test is a confirmation test result that shows positive evidence of the presence of the prohibited substance being tested for in the employee's system under applicable (e.g., DOE, DOT, DFAR, FAR, or Envirocon) procedures.*
- The terms "Positive Test," "Fail a Test," or "Test Positive" are considered synonymous with this definition.*

s. Rapid Drug Screen

- i. A Rapid Drug Screen (RDS) is a test for the simultaneous detection of 2-10 drugs of abuse in a urine specimen. The RDS system is completely self-contained and results are obtained in 3 to 5 minutes.*
- ii. The RDS is now used in the pre-employment process when applicable*

50. Under the Influence

a. Detectable Amounts

For purposes of this procedure, the term “under the influence” means having a detectable quantity of a substance or a biological indicator of the presence of the substance in the tested specimen.

b. Use At Work or On Breaks

For purposes of this procedure and policy, an employee is considered to be under the influence of a substance if the substance is consumed at work or during a work break.

c. Manufacturer’s Instructions

Manufacturer’s instructions for medications may indicate a period of influence or safe usage. Example: “Do not drive for 4 hours after taking medication.” An employee is considered to be under the influence of a medication during such periods.

d. Policy Regarding Alcohol Use

It is against Envirocon’s policy to operate equipment or vehicles if alcohol has been consumed by the operator within 2 hours of operating the equipment.

51. Unqualified

See “not fit.”

E. ORGANIZATION AND RESPONSIBILITIES

Appendix Q.1 contains a list of Envirocon’s key personnel and organizations associated with this program.

1. Drug Program Manager (DPM)

a. Definition

The role of DPM is described in the definitions section above. Envirocon’s DPM is identified in Appendix Q.1.

b. Responsibilities

The DPM shall be responsible for:

- Preparation of a drug testing anti-drug plan that complies with the applicable requirements of the regulations and standards;
- Providing oversight and evaluation of this plan;
- Providing guidance and counseling for employees and supervisors affected by this procedure;
- Reviewing all disciplines applied under this plan for consistency and conformance to human resource policies and procedures;
- Scheduling random testing and return-to-duty testing;
- Maintaining a locked file system on testing results;
- Overseeing the employee assistance program (EAP); and

- Ensuring that all covered employees are aware of the provisions and coverage of Envirocon's substance abuse policy.

2. Supervisors

a. *Definition*

Supervisors include the project managers, superintendents, foremen, team leaders, safety officers, and all other individuals assigned by Envirocon to direct project tasks in accordance with established policies and procedures.

b. *Responsibilities*

Supervisors are responsible for observing the performance and behavior of employees, observing and documenting events suggestive of reasonable cause for testing, and requesting a second supervisor to substantiate and concur prior to reasonable cause testing, if applicable.

3. Employees

Each employee has the responsibility to be knowledgeable of the requirements of Envirocon's drug testing / anti-drug plan and to fully comply with the provisions of the plan.

4. The MRO and SAP

The roles and responsibilities of the MRO and SAP are discussed in sections J.1, J.2, and K below.

F. TESTING REQUIREMENTS

1. Applicability

a. *General*

This procedure applies to all employees working in the covered functions listed in Appendix Q.2.

b. *Applicability on DOT Projects*

i. *Employees are subject to testing while working on a pipeline project and performing the following types of covered functions:*

- Operating pipelines,
- Maintaining pipelines,
- Responding to a pipeline emergency, or
- Any other function regulated by Part 192, 193 or 195.

ii. *This does not include the following functions:*

- Jobs that are clerical in nature,
- Truck driving,
- Accounting, or
- Other functions not subject to Part 192, 193 or 195.

iii. *Contractor employees and Appendix Q.2 functions*

- The person may be employed by the operator, be a contractor engaged by the operator, or be employed by such a contractor.
- Refer to Appendix Q.2 for specific employee titles subject to testing under this program.

c. *Applicability on DFAR Projects*

Under DFAR requirements, this procedure applies to employees in a sensitive position. This includes employees performing the following functions:

- Functions involving access to classified information or materials;
- Functions involving national security;
- Functions involving health and safety; or
- Functions other than the foregoing that require a high degree of trust and confidence.

d. *Applicability on FAR Projects*

- Under FAR requirements, this procedure applies to employees in a sensitive position as defined above. This includes employees performing the following functions:
- Functions involving access to classified information or materials (other than DOD-classified materials regulated by DFAR);
- Functions involving national security (other than DOD materials regulated under DFAR);
- Functions involving health and safety; or
- Functions other than the foregoing that require a high degree of trust and confidence.

e. *Applicability on DOE Projects*

This procedure applies to employees working in testing designated positions on DOE projects.

f. *Applicability to Subcontractors*

Applicability to lower-tier subcontractors is discussed in Section P below.

2. Procedure for Notifying Employees

Envirocon's policy regarding substance abuse will be outlined in the Envirocon Employee Information Manual. A copy of this procedure shall be readily accessible to all covered employees at all times while work is being performed. All covered employees will be provided a complete copy of the anti-drug plan or a condensed/summarized version of the plan upon request to Envirocon's Drug Program Manager (DPM) listed in Appendix Q.1.

3. Substances for Which Testing Must Be Conducted

Envirocon will test each employee who performs a covered function listed in Appendix Q.2 for evidence of the substances as defined in Appendix Q.3.

a. *Site-specific substances tested.*

Where DOT regulations apply, the testing protocol will include all DOT-prohibited drugs. DOT forms and procedures shall be used.

Where DFAR regulations apply, the testing protocol will include all illegal drugs.

b. *Employee notification*

Under § 199.7(a), this procedure will be followed for DOT, DFAR/FAR Plans, and operators must provide procedures for notifying employees of the coverage and provisions of the plan. An operator may satisfy this requirement by either of the following methods:

- Provide each employee with a copy of the Envirocon anti-drug plan;
- Provide a summarized version of the anti-drug plan; or,

- Display the anti-drug plan or summarized version on an employee bulletin board or in an employee break/locker room.
- If the entire plan is not provided to employees, then the summarized version shall indicate where a complete copy of Envirocon's anti-drug plan is available for review by the employees.

4. Required Tests

a. *Pre-Employment and Pre-Project Testing*

i. *Pre-Employment testing*

- Employment in covered functions is conditional upon compliance with this program, its policies, and procedures.
- Employment remains conditional until the MRO determines that a pre-employment test is negative
- Rapid Drug Screens (RDS) will be used when applicable.

ii. *Pre-Project Testing*

- Before an employee can begin work in a covered function on certain projects, that employee must first be:
 - Tested in accordance with this procedure (pre-project test);
 - Have a documented negative result;
 - Maintain a qualified status by continuously participating in the random testing program applicable to this project from the time of the initial passing test and
 - Maintain a qualified status by passing any other applicable tests.
- Projects with this requirement will document the requirement in its written procedures.
- Current employees will normally have completed substance abuse testing of various types. In general, these tests can not be used to qualify an employee to perform covered functions on this project.
- Current employees may be qualified to begin covered work based on qualifications on other projects under the following conditions.
 - Previous qualifications must be documented to be continuous and equivalent to the requirements in this procedure.
 - The DPM must evaluate equivalency and certify that equivalency before a current employee can begin covered functions.

iii. *A pre-project test performed in accordance with this procedure will be used as the pre-employment test for purposes of compliance with Envirocon pre-employment testing requirements under Procedure 1403.006.*

iv. *Employees removed from this program*

- When an employee switches from a covered position to a non-covered position and drops out of this program (i.e., is removed from the random testing program), the employee is no longer qualified.
- When an employee goes on vacation or a leave of absence and is dropped from this program, that employee is no longer qualified for employment in the covered position.
- When an employee becomes disqualified, the pre-project test and negative test result are required prior to returning to work in covered functions.

b. Post-accident testing

- i. *In the event of an accident, the following procedures will be followed in the order listed:*
 - Follow established emergency procedures.
 - Ensure adequate first aid and medical treatment.
 - Make required verbal/initial notifications.
 - Ensure that immediate hazards have been addressed before resuming any other work or exposure to hazards.
 - Initiate investigations as required by applicable procedures. This includes initiation of substance abuse testing in accordance with this procedure.
- ii. *Employees will be tested as soon as possible but no later than 32 hours after the accident. Envirocon will take all reasonable steps to obtain this urine specimen from an employee as prescribed, but any injury should be treated first.*
- iii. *Post-accident testing will be automatically required for certain types of accidents or when employee performance may be a potential contributing cause of the accident.*
- iv. *Envirocon requires post-accident testing of employees involved in the following types of accidents:*
 - Motor vehicle accidents on public roads while the employee is working.
 - Motor vehicle accidents on public roads involving an Envirocon-owned, operated, or rented vehicle.
 - Any accident involving direct damages to equipment, property or the environment.
 - Any Part 191 Reportable Incident.
 - Any Part 195 Reportable Incident.
- v. *If a test is not required by policy, it may be required where employee performance may be a contributing factor. The following steps shall be used to guide the supervisor to a satisfactory outcome in a post-accident situation.*
 - Promptly determine if the employee's performance contributed to the "accident" or cannot completely be discounted as a contributing factor in the accident.
 - Does the possibility exist that the employee's performance contributed to the accident or cannot completely be discounted as a contributing factor in the accident?
 - a. Anonymous tips must be taken seriously but should not be the sole reason to initiate a request for a specimen.
 - b. If witnesses saw a specific event or behavior, ask them to describe what they saw.
 - How far away were they?
 - How long did they observe the employee in question?
 - What, if anything, caused them to believe it was substance abuse related?
 - On what basis did they reach their conclusion?
 - c. Before proceeding further, obtain approval from the division manager/department head or designee to proceed with post-accident testing.
 - Isolate and inform the employee.

- a. Remove the employee from the covered position or workplace.
- b. Explain that you have reason to believe their performance contributed to the accident or cannot completely be discounted as a contributing factor in the accident.
- Transport the employee.
 - a. The potentially affected employee will not be allowed to proceed alone to or from the collection site.
 - b. In addition to the safety concerns for the employee, accompanying the employee also assures that there is no opportunity en route to the collection site for the employee to ingest anything that could affect the test result or to acquire "clean" urine from another person.
- Document the events.
 - a. Record the activity performed that supports the decision to conduct a post-accident test.
 - b. If possible, the supervisor should prepare and sign this documentation of the employee's activity within 24 hours of the accident or before the test results are released, whichever is earlier.
- vi. *Work status of an employee following collection.*
 - After returning from the collection site, the employee should not be allowed to perform DOT-covered functions without obtaining the results of the test.
 - Functions that are not DOT-covered functions may continue.

c. Random Testing

- i. *The primary purpose of random testing is to deter prohibited drug use. Covered employees shall be subject to testing on an unannounced and random basis.*
- ii. *Envirocon will test an employee population equal to at least 25 percent of all covered employees over a 12-month period each calendar year.*
 - Envirocon will conduct random selection and testing on at least a quarterly schedule where the employees to be tested are chosen by a "neutral selection process."
 - Employee selection will involve the selection of specific employees by a random selection process or entire projects (including all offices and departments). The date of testing and the employees or projects to be tested will not be made known in advance. Selection will be based on the use of random numbers selected by the MRO's designated representative, who will not be an Envirocon employee.
 - Project-specific testing may be increased up to 100 percent of the workforce population per test period based on the requirements of the host facility or the project manager in consultation with the DPM, but it may not be decreased.
- iii. *Employees remain in the random selection pool at all times, regardless of whether or not they have been previously selected for testing.*
- iv. *The process will be unannounced as well as random. Employees will be notified that they have been selected for testing after they have reported for duty on the day of collection.*
- v. *Employees will be selected for random testing based on the number of covered employees at the time and the necessary testing rate.*

vi. *Specimen collection will be conducted on different days of the week throughout the annual cycle to prevent employees from matching their drug use patterns to the collection schedule.*

vii. *Steps for random testing*

- The DPM and the MRO will determine a test date within the period. No more than 24 hours prior to the test date, the MRO's designee will provide the DPM with a random listing of numbers to be used for selecting projects or employees.
- The DPM will ensure that the list of employee identification numbers will identify the correct employees who are to be randomly tested during the testing cycle.
- It is the intent of this plan to notify employees of their selection for random testing after they have reported for duty.
- The list of employees to be tested will be provided to the appropriate division manager, department head, or supervisor.
- The DPM (or designee) will retain the list of employees selected in a secure location until the testing is completed.
- Notification of employees
 - a. The appropriate manager/supervisor will notify the employee to be tested and report to the manager/supervisor's office at a specified time.
 - b. The employee will not be notified of the test until after reporting for duty.
 - c. Once notified by the appropriate company official, employees will report immediately to the collection site or within 30 minutes, plus travel time.

d. Reasonable Cause Testing

Reasonable cause testing is designed to provide Envirocon with a tool (in conjunction with supervisor training on the signs and symptoms of drug use) to identify drug-affected employees who may pose a danger to themselves and others in their job performance. Employees may be at work in a condition that raises concerns regarding their safety or productivity. Supervisors must then make a decision as to whether there is reasonable cause to believe an employee is using or has used a prohibited drug.

i. *The decision to test must be based on a reasonable belief that can be articulated that the employee is using a prohibited drug on the basis of specific, contemporaneous physical, behavioral, or performance indicators of probable drug use.*

- At least two of the employee's supervisors, one of whom is trained in the detection of the possible symptoms of drug use, shall substantiate and concur in the decision to test an employee.
- The concurrence by both supervisors can be accomplished by phone, by contemporaneous discussions, or by having another supervisor travel to the job site if only one supervisor is available at that particular job site.

ii. *In making a determination of reasonable cause, the factors to be considered include, but are not limited to, the following:*

- Adequately documented pattern of unsatisfactory work performance, for which no apparent non-impairment-related reason exists, or a change in an employee's prior pattern of work performance, especially where there is some indication of drug-related behavior on or off the work site.
- Physical signs and symptoms consistent with substance abuse.
- Indications of illegal substance use, possession, sale, or delivery while on duty.

- Occurrence of a serious or potentially serious accident that may have been caused by human error or flagrant violations of established safety, security, or other operational procedures.
- iii. *The following steps will be used to guide the supervisor to a satisfactory outcome in a reasonable cause situation.*
- Verify the reasonable cause decision.
 - a. Anonymous tips must be taken seriously but should not be the sole reason to initiate a request for a specimen.
 - b. Unsubstantiated hearsay is not solely an acceptable basis for a reasonable cause referral.
 - c. If witnesses saw a specific event or behavior, ask them to describe what they saw.
 - How far away were they?
 - How long did they observe the person?
 - What, if anything, caused them to believe it was substance abuse related?
 - On what basis did they reach their conclusion?
 - Before proceeding further, obtain approval from the division manager/department head or designee to proceed with reasonable cause testing.
- iv. *Isolate and inform the employee.*
- Remove the employee from the work location.
 - Explain that there is reasonable cause to believe the employee's performance is being adversely affected by substance abuse.
 - During the conversation, observe physical and mental symptoms.
 - Ask the employee to explain the suspected behavior and to describe the events that took place from his perspective.
 - Ask if there is any medication or physical condition that would explain the behavior.
 - A persuasive explanation may or may not deter you from asking for a urine sample.
 - If there is still a reasonable belief that substance abuse is a factor in the situation/incident, a request for testing should be made; if there is no reasonable belief, then no request for testing should be made.
- v. *If the decision to test is made:*
- Inform the employee that they are being requested to accompany the appropriate official to the specimen collection site to provide a urine specimen.
 - Inform the employee of the consequences of refusal to submit to testing (if necessary).
- vi. *Review your findings.*
- Be sure to document any characteristics that either support or contradict initial information.
 - In all cases, a reasonable cause decision must be made by two of the employee's supervisors.
- vii. *Transport the employee.*

- The potentially affected employee should not be allowed to proceed alone to or from the collection site.
- In addition to the safety concerns for the employee, accompanying the employee also assures that there is no opportunity en route to the collection site for the employee to ingest anything that could affect the test result or to acquire "clean" urine from another person.

viii. Document the events.

- Record the behavioral signs and symptoms that support the determination to conduct a reasonable cause test.
- This documentation of the employee's conduct should be prepared and signed by the witnesses within 24 hours of the observed behavior or before the results of the tests are released, whichever is earlier.

ix. Work status of an employee following collection.

- After returning from the collection site, the employee will not perform duties related to DOT-covered functions before receipt of the test results.
- The employee may perform functions that are not DOT covered functions, or the employee should make arrangements to be transported home.
 - a. The employee should be instructed not to drive any motor vehicle due to the reasonable cause belief that they may be under the influence of a drug.
 - b. If the employee insists on driving, the proper local enforcement authority should be notified that an employee who we believe may be under the influence of a drug is leaving the facility premises driving a motor vehicle.

e. Return-to-Duty Testing

An employee who returns to duty after failing a test or refusing to take a test shall be subject to a reasonable program of follow-up testing. Before beginning a program of follow-up testing, the employee must first pass a return-to-duty test.

i. Paragraph E.4.f discusses follow-up testing.

ii. Section F discusses the status of employees who fail a test or refuse to take a test.

iii. Refer to Section 0 and Paragraph G.1 for other requirements regarding return to duty.

iv. Candidates for employment who have previously failed a test may be considered for future hiring opportunities at such time as they are qualified to do so.

- If the Envirocon hiring supervisor determines to offer employment for a covered function, the offer will be conditioned upon the candidate successfully maintaining qualifications in the same way as employees returning to duty.
- Such candidates will be required to successfully complete return-to-duty testing before beginning work in a covered function.

f. Follow-up Testing

An employee who returns to duty after failing a test or refusing to take a test shall be subject to a reasonable program of follow-up testing.

i. The DPM and MRO will administer this program of follow-up testing following the covered employee's return to duty testing described above.

ii. See section F below for more information regarding the status of these employees.

- iii. *Candidates for employment who have previously failed a test may be considered for future hiring opportunities as soon as they are qualified.*
- If the Envirocon hiring supervisor determines to offer employment for a covered function, the offer will be conditioned upon the candidate successfully maintaining qualifications in the same way as employees returning to duty.
 - Such candidates will be required to successfully complete return-to-duty testing before beginning work in a covered function.
 - Such candidates will be subject to a reasonable program of follow-up testing the same as employees returning to duty.

G. STATUS OF EMPLOYEES AND CANDIDATES THAT FAIL/REFUSE A TEST

A covered employee who refuses to take a test, or fails a test will be terminated from work that is covered by this program.

1. Disciplinary Action

Failing a test will typically be treated as one of the following (depending on the circumstances surrounding the failure):

a. Not Qualified

Employees and/or candidates for employment who fail a pre-employment test and/or employees who are pursuing rehabilitation under the guidance of an SAP who fail a test shall not be considered fit for duty. Employees who are not fit for duty shall be subject to termination of employment.

b. Failure to Follow Policy

Failure to follow this policy is generally considered a very serious safety violation. Appropriate disciplinary measures (including termination) shall then be considered. Under no circumstances will the employee return to covered work without successfully completing a return-to-duty test and signing a written assurance to refrain from using or being involved with illegal drugs and/or abusing alcohol (see the discussion regarding procedures for ensuring compliance in F.2 below).

2. Procedures for Ensuring Future Compliance

Compliance with this substance abuse plan is a condition of employment. Refusal to take a required test or failure of a test shall result in removal from performing covered functions. Additional disciplinary action up to and including termination may result based on Envirocon's general substance abuse policies and procedures.

a. Contract to Correct

Employees who have failed substance abuse testing and/or policies shall normally be terminated. These employees will be considered for continued/future employment only if they have expressed in writing their intention to conform to Envirocon policies and laws governing substance abuse.

- A letter "contract" will be developed by the DPM for this purpose. This letter will outline the conditions under which future employment will be considered and regulated during the period of probation described in this procedure.
- The letter will also serve as a drug certification (see definitions) for documenting the employee's assurance to refrain from using or being involved with illegal drugs or abusing legal drugs while employed in a safety or security-sensitive position.
- Refer to Appendix Q.7 for an example.

b. Prohibitions on Use

Envirocon will not employ, in a function covered by Part 199, anyone who:

- Fails a test as verified by the MRO, or
- Refuses to take a test required by this plan.

3. Candidates for Employment

a. *Status*

Candidates who fail a test will not be hired for a covered function.

b. *Future Consideration*

Candidates for employment who have previously failed a test may be considered for future hiring opportunities at such time as they are qualified to do so.

- If the Envirocon hiring supervisor determines to offer employment for a covered function, the offer will be conditioned upon the candidate successfully maintaining qualifications in the same way as employees returning to duty.*
- Such candidates will be required to successfully complete return-to-duty testing before beginning work in a covered function.*
- Such candidates will be subject to a reasonable program of follow-up testing the same as employees returning to duty.*

H. STATUS OF EMPLOYEES SUCCESSFULLY REHABILITATING

1. Options for Return-to-Duty

a. *Basic Provisions for Return-to-Duty*

An employee may be given an opportunity to return to or retain employment, provided they first:

- Pass an initial test before returning to duty,
- Have a face-to-face evaluation by a SAP,
- Completed the course of drug misuse assistance, if recommended by a SAP, and
- Successfully complete a period of probation (including passing follow-up testing during that period).

b. *Applicability to employees returning to duty that is not a covered function:*

Employees who fail a test under this procedure are subject to disciplinary action under Envirocon's Corporate Substance Abuse Policy (Procedure 1403.006). For this reason, a returning employee who is covered or not covered will also be subject to the procedures described herein regarding return to duty.

c. *Candidates*

- Candidates for employment who have previously failed a test may be considered for future hiring opportunities at such time as they are qualified to do so.
- If the Envirocon hiring supervisor determines to offer employment for a covered function, the offer will be conditioned upon the candidate successfully maintaining qualifications in the same way as employees returning to duty.
- Candidates who successfully complete return-to-duty testing and begin work in a covered function will be treated in the same manner as any other return-to-duty employees.

2. Release of Medical Records Related to Rehabilitation Programs

Returning employees will be required to release confidential medical and rehabilitation information related to drug and alcohol dependency/abuse. This information will be released to the DPM and MRO for evaluating compliance with Envirocon's policy and the SAP's rehabilitation program progress. The current DPM and MRO are listed in Appendix Q.1.

a. Effective Period

This voluntary release of confidential information will be effective for the duration of the probationary period described below (a minimum of twenty-four months of employment).

b. Confidentiality of Records

Confidential substance abuse or medical records will continue to be maintained as confidential documents after release in accordance with Section 0 below.

3. Determination of Initial Fitness for Duty

Envirocon's medical monitoring program provides a temporary fit-for-duty report from the local clinic that makes the physical examination and collects samples for evaluation by the MRO. This is a temporary fit for duty based on a physical examination and is good for a period of 30 days or until a physician makes a final determination of qualifications.

a. Passing the initial test required

Returning employees will not receive a final qualification until a negative initial test has been produced in accordance with applicable testing procedures.

b. DOT, DFAR/FAR, Envirocon testing

- Returning to a DOT covered procedure will require a passing test in accordance with this procedure.
- Returning to other Envirocon tasks that are not covered will require a passing test in accordance with Procedure 1403.006.
- If at any time during initial testing, an employee fails a test, that employee will be subject to termination and/or will not be considered for employment.

4. Probation period

After passing an initial test and completing the face-to-face evaluation by a SAP, the returning employee shall begin a period of probationary employment. During probation, the employee must successfully complete any program prescribed by the SAP and pass a series of follow-up tests to determine compliance with Envirocon policies regarding substance abuse.

a. Starting date of probation

- The probation period will begin on the first day of qualified employment after the date of signature by the employee of a contract or consent and thereby accept its conditions, have passed an Envirocon substance abuse screening test, and have met with a substance abuse specialist.
- The period of probation will end only after the employee has successfully completed his/her rehabilitation program and a period of twenty-four months of probation.

b. Minimum period of probation

The probation period will continue for at least a period of twenty-four months of employment.

c. *Ending date of probation*

The period of probation shall not end until all of the following requirements have been met.

- A period of twenty-four months of employment and successful follow-up random testing has been completed. A successful period means a period that is not interrupted by a failing test of any kind. A failing test can be of any kind required by DOT, DFAR/FAR, and/or Envirocon procedures regarding substance abuse.
- The probation period shall not end until the returning employee has successfully completed his/her rehabilitation program. This period will not be longer than 60 months unless the SAP requires a longer period.

5. Rehabilitation program

a. *Program determined by SAP*

In order to be assured of the returning employee's long-term compliance, Envirocon requires that the returning employees will enroll in a third party rehabilitation program prescribed by the SAP.

- The SAP may also determine that the single face-to-face visit is sufficient (i.e., no further rehabilitation program efforts are needed).
- Envirocon reserves the right to determine if the program is acceptable in this regard.
- Envirocon requires documentation of enrollment in the Rehabilitative Program before the returning employee will be finally qualified for return to duty.
- The release of confidential information discussed above will be used by the specified individuals to evaluate rehabilitation progress.
- The returning employee will be required to maintain this enrollment until successful completion is documented to Envirocon by the SAP.

b. *Changing the rehabilitation program*

It may be necessary to change programs at some time before completion. This will only be allowed in the event that the change is not being undertaken because the employee fails to maintain qualifications to work.

c. *Relationship of rehabilitation program and probation period*

- If rehabilitation is successfully completed before the end of a two-year probationary period, the probationary period will continue for a minimum of twenty-four months of employment.
- Follow-up testing will continue during the probationary period until it is successfully completed. If rehabilitation is not successfully completed within the two-year probationary period, the probationary period will be extended until the rehabilitation program is successfully completed.

6. Follow-up testing

The returning employee must agree to provide a suitable sample for follow-up testing in accordance with Envirocon's substance abuse screening procedures.

a. *Notification process*

- A suitable sample must be delivered to the appointed clinic, in accordance with testing procedures, within 30 hours of receiving a verbal or written request.

- The MRO will develop the schedule of these directed tests. The MRO's designated scheduler will contact the returning employee in accordance with the MRO's instructions when they are required to give a follow-up sample.
- The MRO scheduler will also notify the DPM or the DPM's designated coordinator when a test has been required.
- The scheduler will first attempt to notify the employee personally. If the initial attempt does not succeed and phone messages are not returned, it may be necessary to involve other persons on site or pass written messages as necessary to make the notification in a timely manner.

b. Separation of follow-up testing programs

Follow-up tests are not part of any random testing program for the general population of Envirocon employees or any other substance abuse testing programs administered by Envirocon or Envirocon's clients. These tests/samples will be required specifically of the returning employee for the purposes outlined in this procedure.

c. Schedule development

The schedule of dates when tests will be directed will not be provided to the returning employee in advance and will not follow any particular schedule except as follows:

- In establishing the schedule of tests, the MRO will be guided by the returning employee's normal hours of work.
- No more than 24 tests will be scheduled over the twenty-four months of probation.
- Should the period of probation be extended, as described above, tests will be directed at approximately the same rate, not to exceed 12 tests over any 12-month period.
- The employee will proceed to the appointed sampling location at the scheduled time. Employees contacted at work shall not be allowed to take time off prior to reporting for a scheduled test unless the delay is approved by the DPM. If the DPM is not available, the Chief Operations Officer, the Human Resources Manager, or the President will have the authority to authorize this delay.

d. Travel status of employee

If the returning employee is in a travel status at the time of the notification and/or a clinic cannot be found within 50 miles of the returning employee's work assignment, the travel time will be accounted for in the scheduling.

e. Employee's excused absence

If the employee is not present for work when a test is required, the test will be postponed.

- This postponement applies only to excused absences.
- Postponement due to unexcused absences can only be authorized by the DPM.
- The test will be postponed for a period to be determined by the MRO.

I. SPECIMEN COLLECTION REQUIREMENTS

1. Scope

The procedures contained herein and in the appendices will be complied with by the designated collection sites and all covered employees who report for testing.

a. Training of collection personnel

- Envirocon will ensure that employees who utilize collection sites are aware of their responsibilities regarding the specimen collection process.

- The collection site shall post or have readily available for inspection instructions that explain the specimen collection process.
- If information on collector, donor, and company representatives' responsibilities is provided under separate cover by Envirocon or collection site personnel, then the above requirement is not required.

b. Basis

The procedures address the requirements contained in § 40.25.

2. General

a. Equipment

The collection site shall have all necessary personnel, materials, equipment, facilities, and supervision to provide for the collection, security, temporary storage, and shipping or transportation of urine specimens to a certified drug-testing laboratory designated by Envirocon.

b. Independent facilities

An independent medical facility may also be utilized as a collection site provided the other applicable requirements of Appendix Q.3. are met.

c. Suitable location

A designated collection site shall be any suitable location where a specimen can be collected under conditions set forth in Appendix Q.3.

- Suitable locations include properly equipped mobile facilities.
- A designated collection site shall have an enclosure within which private urination can occur, a toilet for completion of urination, and a suitable clean surface for writing.
- The site must also have a source of water for washing hands, which, if practicable, should be external to the enclosure where urination occurs.

3. Training

Envirocon shall ensure that all collection site personnel have completed training on specimen collection procedures or are qualified as licensed medical professionals. If non-medical collection sites are utilized, then Envirocon shall ensure that appropriate training requirements are documented.

Appendix Q.3 outlines detailed specimen collection procedures, which are to be provided to the medical collection site personnel.

4. Collection by supervisors

The direct supervisor of a covered employee shall not serve as a collector in conducting any required test unless it is impracticable to collect the specimen without the direct supervisor's involvement.

5. Instructions for employees

A copy of the standard written instructions setting forth the donor's or employee representative's responsibilities during the specimen collection must be provided prior to the test being conducted.

J. LABORATORIES PERFORMING ANALYSIS

1. Use of consortiums

Envirocon or its MRO may use consortiums to perform certain testing functions as required by clients, contract specifications, or business reasons. When a consortium is used, Envirocon expects that the consortium will perform applicable functions for Envirocon.

2. SAMHSA Laboratory

a. *Department of Health and Human Services Mandatory Guidelines*

For compliance with DOT and DFAR/FAR procedures, Envirocon or its MRO shall use a laboratory certified under DHHS Mandatory Guidelines for Federal Workplace Drug Testing Programs; 53 FR 11970, April 11, 1988, and subsequent amendments.

- The laboratory shall provide services in accordance with Part 40 and Part 199. Appendix Q. 1 contains the name and address of each SAMHSA laboratory used by Envirocon or its MRO.
- The laboratory shall permit inspections by Envirocon or its MRO, the RSPA Administrator, or if Envirocon or its MRO is subject to the jurisdiction of a state agency, a representative of the state agency.

b. *Laboratory Procedures*

These procedures are addressed in Appendix Q.4.

3. Blind performance test for DOT and SAMHSA procedures

a. *General*

Envirocon or its MRO shall use blind testing quality control procedures as provided in this section for DOT and when required by contract testing.

b. *Rate of performance testing*

Three blind performance test specimens shall be submitted for each 100-employee specimen submitted, up to a maximum of 100 blind performance test specimens submitted per quarter. RSPA may increase this maximum per quarter number of samples if necessary to ensure adequate quality control.

c. *Proportioning of blinds*

At the time of writing this procedure, Envirocon has fewer than 400 employees (and far fewer covered employees) on any given month. For purposes of determining the proportioning of blinds, Envirocon will include all DOT, DFAR/FAR and other employees subject to SAMHSA testing.

i. *Should Envirocon employ 2,000 or more covered employees, approximately 80 percent of the blind performance test samples shall be blank.*

- Blank means containing no drugs or otherwise as approved by applicable DOT, DFAR/FAR, or Envirocon.
- The remaining samples shall be positive for one or more drugs per sample in a distribution such that all the drugs to be tested are included in approximately equal frequencies of challenge.
- The positive samples shall be spiked only with those drugs for which the employer is testing.
- Envirocon or its MRO may also spike with other (potentially interfering) compounds, as technically appropriate, in order to verify the specificity of a particular assay.

- ii. *If Envirocon employs fewer than 2,000 covered employees, it may submit blind performance test specimens as provided in the above paragraph.*
- iii. *Envirocon or its MRO may submit only blank samples or may submit two separately labeled portions of a specimen from the same non-covered employee.*

d. Consortiums

Envirocon or its MRO may be required to participate in certain client consortiums with regard to substance abuse testing. Depending on the project requirements, Envirocon may request its MRO to participate in a consortium for testing. As a member of a consortium it shall be the responsibility of the consortium to submit blind samples on behalf of their members. The blind sampling rate shall apply to the total number of samples submitted by the consortium for all covered employees.

4. Investigations and false positives

RSPA may investigate, or refer to DHHS for investigation, any unsatisfactory performance testing result, and based on this investigation, the laboratory may be required to take action to correct the cause of the unsatisfactory performance test result.

a. Corrective actions

A record may be required to document investigative findings and the corrective action taken by the laboratory. Such records may be required to be dated and signed by the individual responsible for the day-to-day management and operation of the drug-testing laboratory.

b. Requesting report findings

RSPA will be requested to send an investigation report to Envirocon or its MRO to document any unsatisfactory performance testing incident.

c. DHHS notification

RSPA is responsible for notification of the finding to DHHS.

d. False positive results from blind test specimens

- i. *Should a false positive error occur on a blind performance test specimen and the error is determined to be an administrative error (clerical, sample mix-up, etc.), Envirocon or its MRO shall promptly notify RSPA.*
- ii. *RSPA and Envirocon shall require the laboratory to take corrective action to minimize the occurrence of a particular error in the future. If there is reason to believe the error could have been systemic, RSPA may also require review and reanalysis of previously run specimens.*
- iii. *Should a false positive error occur on a blind performance test specimen and the error be determined to be technical or methodological, Envirocon shall instruct the laboratory to submit all quality control data from the batch of specimens that included the false positive specimen to RSPA.*
 - In addition, the laboratory will retest all specimens that tested positive for that drug or metabolite from the time of final resolution of the error back to the time of the last satisfactory performance test cycle.
 - This retesting shall be documented by a statement signed by the individual responsible for the laboratory's urine testing's day-to-day management.
 - RSPA may require an on-site review of the laboratory, which may be conducted unannounced during any hours of operation.

- DHHS has the option of revoking or suspending the laboratory's certification or recommending that no further action be taken.

K. REVIEW OF TEST RESULTS

1. MRO

Envirocon shall employ the MRO or contract for these services. The MRO shall be a licensed physician with knowledge of drug abuse disorders. The MRO will provide the services of MRO for this policy in accordance with the requirements of Sections 40.33 and 199.15. A listing of Envirocon MRO(s), which includes their name(s) and address(es), is contained in Appendix Q.1.

2. SAP

SAP(s) will be designated on a case-by-case basis through the EAP provider listed in Appendix Q.1. A local SAP is required to make a face-to-face determination of the appropriate action to be taken. The EAP will provide the SAP services for this policy in accordance with the requirements of Sections 40.33 and 199.15.

3. Review of test results

a. MRO responsibilities

- The MRO shall review all negative and positive test results and interview individuals who tested positive to verify the laboratory report before Envirocon is notified.*
- Reviewing a negative test may be an administrative process to ensure the chain-of-custody procedures are intact.*

b. SAP responsibilities

- Employees wishing to seek rehabilitation after being notified of a confirmed positive test result will be referred to an SAP.*
- The SAP will then:*
 - Evaluate the individual,
 - Make recommendations to Envirocon whether and when an employee who refused to take or did not pass a test may return to duty,
 - Schedule follow-up unannounced testing.

4. Reporting and Review of Results

a. The MRO shall review confirmed positive results.

- The final review of confirmed positive laboratory results is an essential part of the testing program. A positive test result does not automatically identify an employee or applicant as having used drugs in violation of a DOT or DFAR/FAR regulation.*
- The MRO is required to consider possible alternate medical explanations before transmitting results to Envirocon for action.*
- The MRO review shall include a review of the chain of custody of the sample to ensure that it is complete.*
- The MRO is responsible for referring the individual tested to a personnel or administrative officer for further proceedings in accordance with Envirocon's anti-drug program.*

v. *The duties of the MRO with respect to negative results are purely administrative.*

L. QUALIFICATIONS AND RESPONSIBILITIES.

Appendix Q.1 contains a list of current personnel performing the following responsibilities as they apply to this procedure.

1. MRO (Medical Review Officer)

The MRO shall be a licensed physician with knowledge of substance abuse disorders and may be an employee of Envirocon or a private physician retained for this purpose. The MRO shall not be an employee of any laboratory conducting any tests.

a. Conditions under which MRO may be an employee of the laboratory

Envirocon may determine that an adequate separation of functions exists between the MRO and the laboratory. This determination may be made if the laboratory establishes a clear separation of functions to prevent any appearance of a conflict of interest, including assuring that the MRO has no responsibility for and is not supervised by or the supervisor of any persons who have responsibility for the laboratory's testing or quality control operations.

b. Role of MRO

The role of the MRO is to review and interpret confirmed positive test results.

- i. In carrying out this responsibility, the MRO shall examine alternate medical explanations for any positive test result. This action may include conducting a medical interview with the individual, reviewing the individual's medical history, or reviewing any other relevant biomedical factors.*
- ii. The MRO shall review all medical records made available by the tested individual when a confirmed positive test could have resulted from legally prescribed medication.*
- iii. The MRO shall not, however, consider the results of urine samples that are not obtained or processed in accordance with other testing programs. In other words, non-SAMHSA test results cannot be used to enforce DOT or DFAR/FAR-covered functions in place of the SAMHSA test results.*
- iv. The MRO may require the original specimen to be reanalyzed to determine the accuracy of the test result and verify that the laboratory report and assessment are correct.*

c. MRO's role regarding positive test results

- i. Prior to making a final decision to verify a positive test result, the MRO shall give the tested individual an opportunity to discuss the test result.*
 - The MRO shall contact the tested individual directly, on a confidential basis, to determine whether the employee wishes to discuss the test result. A staff person under the MRO's supervision may make the initial contact, and a medically licensed or certified staff person may gather information from the employee.
 - Except as provided in this instruction, the MRO shall talk directly with the employee before verifying a test as positive.
 - If, after making all reasonable efforts and documenting them, the MRO is unable to reach the individual directly, the MRO shall contact a designated management official who shall direct the tested individual to contact the MRO as soon as possible.

- If it becomes necessary to reach the tested individual through the designated management official, such official shall employ procedures that ensure confidentiality to the maximum extent practicable.
- ii. *If, after making all reasonable efforts and documenting them, the designated management official is unable to contact the employee, Envirocon may place the employee on temporary medically unqualified status or medical leave.*
 - iii. *The MRO may verify a test as positive without having communicated directly with the tested employee about the test results in three circumstances:*
 - The employee expressly declines the opportunity to discuss the test results.
 - Despite all reasonable efforts, neither the MRO nor the designated employer representative has been able to contact the employee within 14 days of the date the MRO receives the confirmed positive test result from the laboratory.
 - The designated employer representative successfully made and documented contact with the employee and instructed the employee to contact the MRO. More than five days have passed since the date the employee was successfully contacted by the designated employer representative, and the tested employee has not contacted the MRO.
 - iv. *If a test is verified positive under the circumstances specified in paragraph 3)b) or 3)c) above, the tested employee may present to the MRO information documenting that serious illness, injury, or other circumstances unavoidably prevented the employee from being contacted by the MRO or designated employer representative or from contacting the MRO within the times provided.*
 - The MRO, on the basis of such information, may reopen the verification processing. This would allow the employee to present information concerning a legitimate explanation for the confirmed positive test.
 - If the MRO concludes that there is a legitimate explanation for the positive test, the MRO will declare the test to be negative.
 - v. *Following verification of a positive test result, the MRO shall, as provided in Envirocon's policy, refer the case to the DPM (or designee) for action.*
- d. MRO's role regarding opiates; review for prescription medication**
- i. *Before the MRO verifies a confirmed positive result for opiates, the MRO shall determine if there is clinical evidence—in addition to the urine test—of unauthorized use of any opium, opiate, or opium derivative (e.g., morphine/codeine).*
 - ii. *This requirement does not apply if Envirocon's GC/MS confirmation testing for opiates confirms the presence of 6-monoacetylmorphine.*
- e. Reconfirmation analysis authorization**
- i. *Should any question arise as to the accuracy or validity of a positive test result, only the MRO is authorized to order a reconfirmation of the original sample, and such retests are authorized only at laboratories certified by DHHS.*
 - ii. *The MRO shall authorize a reconfirmation of the original sample if requested in writing by the tested employee within 60 days of the employee having received actual notice of the positive test.*
 - iii. *If the retest is negative, the MRO shall cancel the positive test results.*

f. Results consistent with legal drug use

If the MRO determines there is a legitimate medical explanation for the positive test result, the MRO shall report the test result to Envirocon as negative.

g. Results scientifically insufficient

- i. The MRO may, based on a review of inspection reports, quality control data, multiple samples, and other pertinent results, determine that the result is scientifically insufficient for further action and declare the test specimen negative.*
- ii. In this situation, the MRO may request a reanalysis of the original sample before making this decision. The MRO may request that reanalysis be performed by the same laboratory or, as provided in paragraph K.1.e above, that an aliquot of the original specimen be sent for reanalysis to an alternate laboratory that is certified in accordance with the DHHS guidelines.*
- iii. The laboratory shall assist in this review process as requested by the MRO by making available the individual responsible for the day-to-day management of the urine testing laboratory or another employee who is a forensic toxicologist or who has equivalent forensic experience in urine testing to provide specific consultation as required by Envirocon. Envirocon shall include in any required annual report to RSPA a summary of any negative findings based on scientific insufficiency but shall not include any personal identifying information in such reports.*

2. SAP (Substance Abuse Professional)

A Substance Abuse Professional (SAP) is one of the qualified individuals with credentials as described in K.2.b who also has knowledge of and clinical experience with the diagnosis and treatment of alcohol and controlled substances-related disorders.

a. Temporary project sites

Envirocon projects are located at temporary project sites around the country. An appropriate SAP will be selected locally as needed. The input of affected employees will be included in the selection process to the extent possible. Envirocon reserves the right to make the final determination of SAP qualifications.

b. Credentials normally considered to meet qualification requirements

- A licensed physician (Medical Doctor or Doctor of Osteopathy)
- A licensed or certified psychologist
- A licensed or certified social worker
- A licensed or certified employee assistance professional
- A certified addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission or by the International Certification Reciprocity Consortium/Alcohol & Other Drug Abuse)

c. Role of the SAP

- The role of the SAP is to perform a face-to-face evaluation of an individual who has either refused to take a test or who has a confirmed positive test result.
- The SAP will determine what treatment (inpatient/outpatient), if any, is needed to assist the individual.

3. Disclosure of Information.

Except as provided in this paragraph, the MRO or SAP shall not disclose to any third-party medical information provided by the individual to the MRO or SAP as a part of the rehab verification process.

a. To the DPM

- As part of the regular process of reporting programmatic testing results as described above.
- As released by the employee.

b. Disclosure to Federal agencies

- i. The MRO or SAP may disclose such information to DOT or other Federal safety agencies or to a physician responsible for determining the medical qualification of the employee under the appropriate DOT or DFAR/FAR regulation, as applicable, only if–*
- An applicable DOT or DFAR/FAR regulation permits or requires such disclosure;
 - In the MRO's or SAP's reasonable medical judgment, the information could result in the employee being determined to be medically unqualified under an applicable DOT or DFAR/FAR rule or
 - In the MRO's or SAP's reasonable medical judgment, in a situation in which there is no DOT or DFAR/FAR rule establishing physical qualification standards applicable to the employee, the information indicates that the employee's continued performance of a covered function could pose a significant safety risk.
- ii. Before obtaining medical information from the employee as part of the verification process, the MRO or SAP shall inform the employee that information may be disclosed to third parties as provided in this paragraph and the identity of any parties to whom the information may be disclosed.*

M. RETENTION OF SAMPLES

1. General

Samples that yield positive results on confirmation must be retained by the laboratory in properly secured, long-term, frozen storage for at least 60 days (365 days for DOT samples).

2. Retention Period

Within this period, the employee or designated representative, RSPA or other state agencies with jurisdiction, or Envirocon may request in writing that the sample be retained for an additional period.

If the laboratory does not receive a request to retain the sample within the retention period, the sample may be discarded.

N. RETESTING SAMPLES

1. General

An employee/applicant may request in writing that the MRO retest a sample within 7 calendar days of notification of a positive test result from the MRO.

2. Retest Provisions

The employee may specify that the specimen be retested by the original laboratory or be sent to another certified laboratory. The employee may be required to pay in advance for the cost of the shipment and reanalysis of the sample. The employee will be reimbursed for the costs incurred in the reanalysis if the retest of the specimen is negative. If the

employee requests a retest at a second laboratory, then the original laboratory must follow the approved custody and control procedures in transferring a portion of the specimen.

3. **Detection Levels**

Because some analytes deteriorate or are lost during freezing and/or storage, quantitation for a retest is not subject to a specific cutoff requirement but must provide data sufficient to confirm the presence of the drug or metabolite.

O. **EMPLOYEE ASSISTANCE PROGRAM (EAP)**

1. **Scope of Program**

The EAP will provide education and training about substance abuse to all employees. The education shall include:

a. **Information materials**

Informational material will be displayed on bulletin boards, employee break rooms, locker rooms, etc., and distributed to employees.

b. **Hot-line**

A community service hot-line telephone number for employee assistance will be displayed on bulletin boards and distributed to employees and

c. **Distribution of policy**

Envirocon's policy regarding the use of prohibited drugs will be distributed to all new employees.

2. **Supervisor Training**

Supervisory personnel responsible for those employees covered under 49 CFR Part 199 will receive training under the anti-drug plan. The training shall include at least one 60-minute period of training on the specific, contemporaneous physical, behavioral, and performance indicators of probable drug use. This training shall be given to supervisors who may have to determine whether an employee must be tested for reasonable cause.

P. **RECORDKEEPING PROCEDURES**

1. **General**

a. **Locked files**

- i. *The DPM (or designee) shall maintain a locked file system that will contain test results.*
- ii. *This file shall be maintained as Confidential.*
- iii. *Employee files shall be handled on a strict "need to know" basis.*

b. **Human Resources Files**

- i. *Test results shall not be included in personnel files.*
- ii. *Information regarding an individual's test result or rehabilitation may be released only upon written consent of the individual, except that:*
 - *Such information must be released regardless of consent to RSPA or other government agencies as a part of an accident investigation;*

- Such information may be disclosed regardless of consent during a lawsuit, grievance, or other proceeding initiated by or on behalf of the individual and arising from a verified positive test.

2. Statistical Data

Statistical data related to testing and rehabilitation that is non-name-specified and training records may be released to clients, potential clients, RSPA, or other governmental agencies upon request.

3. Record Retention

The records that must be maintained are described below.

a. 1-Year Schedule

Employee tests that demonstrate negative results shall be retained for a period of 1 year.

b. 3-Year Schedule

- Records that demonstrate the collection process conforms to §40.25 shall be retained for a 3-year period.*
- Training records confirming that supervisors and employees have been trained as required under § 199.19 and copies of training material used shall be retained for a 3-year period.*

c. 5-Year Schedule

- Employee test results shall be retained for a 5-year period when they meet the following description:*
 - The results show positive results and test type (pre-project tests, pre-employment test, random test, post-accident test, or post-rehabilitation test); and/or
 - The records have been used in the rehabilitation process (including the MRO's and SAP's determination).
- These records must include the following information:*
 - Job classification and function of employee.
 - Prohibited drug(s) used.
 - Disposition of employee (i.e., rehab, suspension, termination, etc.)
- A record indicating the total number of employees tested and the results of tests separated into categories shall be retained for five years.*

4. Confidentiality of Records

a. Medical Confidential Records

- Medical confidential records include those records collected by medical personnel for purposes of administering this program.*
- Medical Confidential Records include medical surveillance questionnaires, raw laboratory data, physicians' notes generated during the examination, physicians' data collected during the examination, diagnosis, and similar materials.*
- The physician's written reports, x-rays, exam data, and test results also make up the employee's confidential medical record. Project Managers and safety officers will be made aware of medical information that is safety-sensitive only.*

iv. *Medical Confidential Records do not include physician's reports of fitness for duty intended to communicate fitness for duty, medical restrictions associated with a medical condition or prescriptions, or potential work relationships associated with accident investigations.*

v. *Medical Confidential Records are currently stored only at the MRO's facility.*

b. Confidential Physician's Reports

i. *Physician's reports of fitness for duty intended to communicate fitness for duty, medical restrictions associated with a medical condition or prescriptions, or potential work relationships associated with accident investigations will be treated as confidential records.*

ii. *The QEP will maintain confidential physician reports. These files will be locked and generally kept separate from personnel files.*

iii. *Confidential physician's reports will be provided to personnel who need to know this information, including employees' supervisors and health and safety officers.*

c. Substance Abuse Specialist (SAP) Records and Reports

i. *For purposes of this program, the records of SAPs will be considered to be the same as medical confidential records.*

ii. *For purposes of this program, the confidential reports of SAPs will be considered to be the same as confidential physician reports.*

d. Employee Assistance Program (EAP) Records and Reports

i. *For purposes of this program, EAP records will be considered to be the same as medical confidential records.*

ii. *For purposes of this program, confidential EAP reports will be considered to be the same as confidential physician's reports.*

5. Release of Records

a. Medical Confidential Records

i. *When medical confidential records must be transferred from the current custodian to another custodian, a release will be requested from the employee.*

ii. *Examples where releases will be required would include but are not limited to:*

- *Transfer of records from an EPP to the MRO to determine appropriate restrictions after a non-occupational illness or injury.*
- *Transfer of records from an OHC to the MRO to determine appropriate restrictions after an occupational illness or injury.*
- *Transfer of records from a PEP to the MRO to determine fitness for HAZWOPER duties as part of baseline examination for medical surveillance.*
- *Transfer of records from a SAP to the DPM & MRO to determine compliance with a return-to-duty rehabilitation program.*
- *Transfer of records from the EAP to the DPM & MRO to determine compliance with a return-to-duty rehabilitation program.*

b. Confidential Physician's Reports

i. *As needed, confidential physician's reports will be provided without release to supervisors and managers in the line of command responsible for the employee.*

Confidential physician's reports will be similarly provided without release to health and safety officers, human resource personnel, and others with a need to know.

- ii. When required by law, regulation, specification or the facility manager's substance abuse procedures, confidential physician's reports will be provided without a release to those client supervisors and managers in the line of command responsible for the compliance of contractor employees.*
- iii. Other requests for confidential physician's reports by third parties will normally not be honored without a release from the employee.*

c. Record Release Forms

- i. Releases will be for specified records, for limited purposes between specified custodians.*
- ii. Releases will be signed by the employee.*

Q. LOWER TIER SUBCONTRACTORS

1. General

Lower-tier subcontractors to Envirocon will be included in this procedure in accordance with contracting documents, applicable host facility procedures, and written site-specific procedures. Unless otherwise specified, lower-tier subcontractors will use their own established policies and procedures provided they meet or exceed Envirocon's procedures as applicable to the contract.

2. Lower Tier Subcontractor Monitoring (DOT)

Lower-tier subcontractors will be required to adopt this procedure or use an equivalent procedure in accordance with project specifications. In particular, Envirocon shall include a clause in the gas pipeline contracts stating that testing, education, and training shall be addressed by its lower-tier subcontractors in accordance with Part 199 and Part 40 for covered functions where applicable.

a. Records and Access

Lower-tier subcontractors shall retain copies of appropriate records required by Part 199 and Part 40. The records and access to the contractor's property shall be readily accessible for inspection by Envirocon, RSPA, and representatives of those state agencies in the jurisdiction in which Envirocon operates.

b. Monitoring Procedures

Confirmation of contractor compliance - see Appendix Q.5 for Contractor Monitoring Procedures.

c. Lower Tier Subcontractor Coverage

Envirocon may, as an alternative to the above guidance, provide coverage for the contractor's employees by including them in Envirocon's testing program and random pool for the duration of the contract.

R. ADDITIONAL INFORMATION

1. Envirocon's Substance Abuse Organization

a. Drug Program Manager (DPM)

Matthew Curran, CSP, CIH
Director of EHS
Envirocon, Inc. (406) 523-1150
P.O. Box 16655
Missoula, MT 59808

b. Medical Review Officers (MRO)

Dr. Jeffrey Jacobs
WorkCare™ Inc. (800) 455-6155

c. 300 S. Harbor Blvd. Suite 600 Anaheim, CA 92805 SAMHSA (Substance Abuse and Mental Health Services Administration) Laboratories

Pacific Toxicology (800) 328-6942
9348 De Soto Avenue Chatsworth, CA 91311
MedTox Laboratories, Inc. (800) 832-3244
402 W. County Road D St. Paul, MN 55112

d. EAP (Employee Assistance Program).

Aetna
www.mylifevalues.com Login: WASHCO Password: WASHCO
(800) 272-7252 (24/7) Confidential Access

e. QSAP (Substance Abuse Professional).

The EAP includes a network of substance abuse professionals.

2. Appendix: Job Classifications/Positions Subject to Testing

a. Job Classifications / Titles

The following job classifications are considered to be safety-sensitive and subject to the provisions of this program when performing covered functions.

Covered	Description	Covered	Description
X	Accounting, Accountant	X	Management, Controller
X	Accounting, Support	X	Management, Director
X	Administrative Assistant, Field	X	Management, Manager
X	Administrative Assistant, Office	X	Management, President
X	Contracts Administrator	X	Management, Project
X	Engineer, AutoCad	X	Management, Vice-President
X	Engineer, Project Engineer	X	Mechanic
X	Engineer, Senior Engineer	X	Mechanic, Equipment Coordinator
X	Engineer, Senior Project Engineer	X	Mechanic, Maintenance Manager
X	Equipment Operator	X	Mechanic, Senior
X	Equipment Operator - Union	X	Safety, Senior Safety Professional
X	Estimating, Coordinator	X	Safety, Site Health & Safety Officer
X	Estimator	X	Safety, Site Health & Safety Supervisor
X	Human Resources, Payroll Coordinator	X	Safety, Manager
X	Laborer	X	Sales and Marketing, Representative
X	Laborer /Driver	X	Supervisor, Foreman/Laborer
X	Laborer /Driver, CDL	X	Supervisor, Foreman/Operator
X	Laborer /Equipment Operator	X	Supervisor, Superintendent
X	Laborer/Water Truck Driver	X	Technician, Field (Eng, Env, H&S, RAD)

3. Included Substances and Protocols for Various Tests

TEST	Envirocon Standard	Envirocon Standard	DOT Sites and CDLs	add breath alcohol	add any/all Schedule I & II	Add a specific Schedule III, IV, or V
	DOT/SAMHSA substances non-SAMHSA forms	breath alcohol	DOT / SAMHSA forms			
Pre-Employment	X		X	where indicated	where indicated	where indicated
Pre-Project	X		X			
Post-Accident	X	X	X			
Random	X		X			
Reasonable Cause	X	X	X			
Return-to-Duty	X		X			
Follow-up/directed	X		X			

a. DFAR

Controlled substances included in Schedules I and II, as defined by section 802(6) of Title 21 of the United States Code, the possession of which is unlawful under Chapter 13 of that Title.

b. DOT

Marijuana, cocaine, opiates, phencyclidine, and/or amphetamines

c. FAR

Controlled substances in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

d. DOE

Under the DOE rules, this term means controlled substances included in Schedules I through V, as defined by the Controlled Substances Act sections 811 and 812 of Title 21 of the United States Code.

e. Schedules

i. Schedule I

- The drug or other substance has a high potential for abuse.
- The drug or other substance has no currently accepted medical use in treatment in the United States.
- There is a lack of accepted safety for the use of the drug or other substances under medical supervision.
- Some Schedule I substances are heroin, LSD, marijuana, and methaqualone.

ii. Schedule II

- The drug or other substance has a high potential for abuse.
- The drug or other substance has a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions.

- Abuse of the drug or other substance may lead to severe psychological or physical dependence.
- Schedule II substances include morphine, PCP, cocaine, methadone, methamphetamine, Fentanyl, and Opium.

iii. Schedule III

- The drug or other substance has a potential for abuse less than the drugs or other substances in Schedules I and II.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substance may lead to moderate or low physical dependence or high psychological dependence.
- Anabolic steroids, codeine and hydrocodone with aspirin or Tylenol, and some barbiturates are Schedule III substances.

iv. Schedule IV

- The drug or other substance has a low potential for abuse relative to the drugs or other substances in Schedule III.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substance may lead to limited physical dependence or psychological dependence relative to the drugs or other substances in Schedule III.
- Included in Schedule IV are Darvon, Talwin, Equanil, Valium, and Xanax.

v. Schedule V

- The drug or other substance has a low potential for abuse relative to the drugs or other substances in Schedule IV.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substance may lead to limited physical dependence or psychological dependence relative to the drugs or other substances in Schedule IV.
- Over-the-counter cough medicines with codeine are classified in Schedule V.

4. Specimen Collection Procedures for SAMHSA and DOT

These procedures or equivalent procedures shall be used to collect specimens in compliance with this procedure.

a. Scope

- The testing custody and control form is to be used as a permanent record on which identifying data on the employee and on the specimen collection and transfer process are retained. The drug-testing plan requires testing for marijuana, cocaine, opiates, amphetamines, phencyclidine, and any other illegal or prohibited drugs/substances as applicable.
- Urine specimens collected under this plan may be used only to test for controlled substances designated or approved for testing as described in this appendix and shall not be used to conduct any other analysis or test.
- This plan does not prohibit procedures reasonably incident to the analysis of the specimen for controlled substances (e.g., determination of pH or tests for specific gravity, creatinine concentration, or presence of adulterants).

b. Security

- Adequate security shall be provided to prevent unauthorized access, which could compromise the integrity of the specimen's collection process.
- The designated collection site is to be secure
- A collection site facility dedicated solely to urine collection shall be secure at all times.
- If a facility cannot be dedicated solely to testing, the portion of the facility used for testing shall be secure during testing.
- A facility normally used for other purposes, such as a public rest room or hospital examining room, may be secured by visual inspection to ensure other persons are not present and undetected access (e.g., through a rear door not in the view of the collection site person) is not possible.
- Security during collection may be maintained by effective restriction of access to collection materials and specimens.
- In the case of a public restroom, the facility must be posted against access during the entire collection procedure to avoid embarrassment to the employee or distraction of the collection site person.
- If it is impractical to maintain continuous physical security of a collection site from the time the specimen is presented until the sealed mailer is transferred for shipment, the following minimum procedures shall apply:
 - The specimen shall remain under the direct control of the collection site person from delivery to its being sealed in the mailer.
 - The mailer shall be immediately mailed, maintained in secure storage, or kept under the personal control of the collection site person until mailed.

c. Federal Drug Testing Custody and Control Forms (CCF)

- The collection site person shall utilize the (CCF) form provided by Envirocon or the MRO; this form must address the requirements as contained in § 40.45. The CCF form must comply with the provisions as contained in 49 CFR Part 40 with regard to the information that must be contained on the form.
- The testing custody and control form may include such additional information as may be required for billing or other legitimate purposes necessary to the collection, provided that personal identifying information on the donor (other than the social security number or employee identification number) may not be provided to the laboratory. Donor medical information may appear only on the copy provided to the donor.
- The chain-of-custody block of the testing custody and control form shall be properly executed by authorized collection site personnel upon receipt of specimens.
- Handling the transportation of urine specimens from one authorized individual or place to another shall always be accomplished through chain-of-custody procedures. Every effort shall be made to minimize the number of persons handling specimens.

d. Access to Authorized Personnel Only

- No unauthorized personnel shall be permitted in any part of the designated collection site when urine specimens are collected or stored. Only the collection site person may handle specimens prior to being secured in the mailing container or monitor or observe a specimen collection (under the conditions specified in this section).

- To promote the security of specimens, avoid the distraction of the collection site person, and ensure against any confusion in the identification of specimens, the collection site person shall have only one donor under supervision at any time.
- A collection procedure is complete when the urine bottle has been sealed and initialed, the testing custody and control form has been executed, and the employee has departed the site (or, in the case of an employee who was unable to provide a complete specimen, has entered a waiting area).

e. Privacy

- Under normal circumstances, procedures for collecting urine specimens shall generally allow individual privacy.
- If there is a reason to believe that a particular individual may alter or substitute the specimen to be provided, the following procedures will be followed.

f. Alternate procedures for suspicious specimens

i. For purposes of this procedure, any of the following circumstances may be considered grounds constituting a reason to believe that the individual may have altered or substituted the specimen:

- a. The employee has presented a urine specimen that falls outside the normal temperature range (32° – 38°C/90° – 100°F), and either.
 - The employee declines to provide a measurement of oral body temperature, as provided in paragraph Q.4.i of this section; or
 - The oral body temperature varies by more than 1°C/1.8°F from the temperature of the specimen.
- b. The laboratory determined that the last urine specimen provided by the employee (i.e., on a previous occasion) had a specific gravity of less than 1.003 and a creatinine concentration greater than or equal to 2mg/dL but less than or equal to 5mg/dL.
- c. The collection site person observes conduct clearly and unequivocally, indicating an attempt to substitute or adulterate the sample (e.g., substituting urine in plain view, blue dye, or the smell of bleach in the specimen presented).
- d. The employee has previously been determined to have used a controlled substance without medical authorization and the particular test was being conducted under a DOT or DFAR/FAR regulation providing for follow-up testing upon or after return to service.

ii. A higher-level supervisor of the collection site person, or a designated employer representative, shall review and concur in advance with any decision by a collection site person to obtain a specimen under the direct observation of a same-gender collection site person based upon the circumstances described in paragraph 1) above.

g. Integrity and Identity of Specimen

i. The collection site person shall take precautions to ensure that a urine specimen is not adulterated or diluted during the collection procedure and that information on the urine bottle and on the urine custody and control form can identify the individual from whom the specimen was collected. The following minimum precautions shall be taken to ensure that unadulterated specimens are obtained and correctly identified:

- ii. *To deter the dilution of specimens at the collection site, toilet-bluing agents shall be placed in toilet tanks wherever possible so that the reservoir of water in the toilet bowl always remains blue. Where practicable, there shall be no other source of water (e.g., no shower or sink) in the enclosure where urination occurs. If there is another source of water in the enclosure, it shall be effectively secured or monitored to ensure it is not used as a source for diluting the specimen.*
- iii. *When an individual arrives at the collection site, the collection site person shall ensure that the individual is positively identified as the employee selected for testing (e.g., through presentation of photo identification or identification by the employer's representative). If the individual's identity cannot be established, the collection site person shall not proceed with the collection. If the employee requests, the collection site person shall show proper identification to the employee.*
- iv. *If the individual fails to arrive at the assigned time, the collection site person shall contact the appropriate authority to obtain guidance on the action to be taken.*
- v. *The collection site person shall ask the individual to remove any unnecessary outer garments, such as a coat or jacket, that might conceal items or substances that could be used to tamper with or adulterate the individual's urine specimen. The collection site person shall ensure that all personal belongings, such as a purse or briefcase, remain with the outer garments. The individual may retain their wallet. If the employee requests it, the collection site person shall provide the employee with a receipt for any personal belongings.*
- vi. *The individual shall be instructed to wash and dry their hands prior to urination.*
- vii. *After washing hands, the individual shall remain in the presence of the collection site person and shall not have access to any water fountain, faucet, soap dispenser, cleaning agent, or any other materials which could be used to adulterate the specimen.*
- viii. *The individual may provide their specimen in the privacy of a stall or otherwise partitioned area that allows for individual privacy. The collection site person shall provide the individual with a clean specimen bottle or collection container, if applicable, that is securely wrapped for this purpose.*
- ix. *The collection site person shall note any unusual behavior or appearance on the urine custody and control form.*
- x. *In the exceptional event that an employer-designated collection site is not accessible and there is an immediate requirement for specimen collection (e.g., circumstances require a post-accident test), a public restroom may be used according to the following procedures:*
 - a. *A collection site person of the same gender as the individual shall accompany the individual into the public rest room which shall be made secure during the collection procedure.*
 - b. *If possible, a toilet-bluing agent shall be placed in the bowl and any accessible toilet tank.*
 - c. *The collection site person shall remain in the restroom, but outside the stall, until the specimen is collected.*

- d. If no bluing agent is available to deter specimen dilution, the collection site person shall:
 - Instruct the individual not to flush the toilet until the specimen is delivered to the collection site person.
 - After the collection site person has possession of the specimen, the individual will be instructed to flush the toilet and to participate with the collection site person in completing the chain-of-custody procedures.

h. Collection Methodology

- i. *In either collection methodology, upon receiving the specimen from the individual, the collection site person shall determine if the specimen has at least 45 milliliters (ml) of urine for the primary or single specimen bottle and, where the split specimen collection method is used, an additional 15 ml of urine for the split specimen bottle.*
- ii. *If the individual is unable to provide such a quantity of urine, the specimen shall be discarded. The collection site person shall instruct the individual to drink up to 40 ounces of fluid, distributed reasonably through a period of up to three hours or until the individual has provided a new urine specimen, whichever occurs first. If the employee refuses to drink fluids as directed or to provide a new urine specimen, the collection site person shall terminate the collection and notify the employer that the employee has refused to submit to testing.*
- iii. *If the employee has not provided a sufficient specimen within three hours of the first unsuccessful attempt, the collection site person shall discontinue the collection and notify the employer.*
- iv. *The employer shall direct the employee who does not provide a sufficient urine specimen to obtain, as soon as possible, an evaluation from a licensed physician who is acceptable to the employer concerning the employee's ability to provide an adequate amount of urine.*
- v. *If the physician determines, in his/her medical judgment, that a medical condition has, or with a high degree of probability, could have, precluded the employee from providing an adequate urine specimen, the employee's failure to provide the specimen shall not be deemed a refusal to test.*
- vi. *Section 49 CFR Part 40.25(f)(10)(iv)(B)(1) defines what types of medical conditions would result in an employee being unable to provide an adequate specimen for testing.*
- vii. *If the physician's medical judgment is that there is no medical reason why the employee is unable to provide an adequate urine specimen, it will be deemed as a refusal to test.*
 - a. The physician shall provide to the MRO a brief written statement stating his/her conclusions and the basis for them, which shall include detailed information on the employee's medical condition.
 - b. Upon receipt of this statement, the MRO shall report his/her conclusions to the employer in writing.
 - In pre-employment testing (including pre-project testing that is also used for pre-employment testing), if Envirocon does not wish to hire the individual, the MRO is not required to make such a referral.
 - Upon completion of the examination, the MRO shall report his or her conclusion to Envirocon in writing.

viii. Single collection method

- a. If Envirocon is using the single collection method, then the following procedures shall be used:
- b. The collector may choose to direct the employee to urinate either directly into a specimen bottle or into a separate collection container.
- c. If a separate collection container is used, the collection site person shall pour at least 30 ml of the urine from the collection container into the specimen bottle in the presence of the employee.

ix. Split sample collection method

- a. This method is optional and may be omitted if Envirocon determines that it will not conduct split sample testing at this site.
 - For DOT pipeline procedures, split samples are not mandated by RSPA for pipeline operators.
 - Where split sampling is used on a DOT pipeline site, the collection procedures shall be conducted in accordance with the requirements of 49 CFR Part 40.
- b. Employers using the split sample method of collection shall follow the procedures set forth below:
 - The donor shall urinate into a collection container or specimen bottle capable of holding at least 60 ml.
 - If a collection container is used, the collection site person, in the presence of the donor, pours the urine into two specimen bottles. Thirty (30) ml shall be poured into one bottle to be used as the primary specimen. At least 15 ml shall be poured into the other bottle to be used as the split specimen.
 - If a single specimen bottle is included as a collection container, the collection site person shall pour 30 ml of urine from the specimen bottle into a second specimen bottle (to be used as the primary specimen) and retain the remainder (at least 15 ml) in the collection bottle (to be used as the split specimen).
 - Both bottles shall be shipped to the laboratory in a single shipping container, together with copies 1 and 2 and the split specimen copy of the chain-of-custody form.

i. Post-collection procedures

- i. After the specimen has been provided and submitted to the collection site person, the individual shall be allowed to wash their hands.*
- ii. Immediately after the specimen is collected, the collection site person shall measure its temperature.*
 - a. The temperature-measuring device used must accurately reflect the temperature of the specimen and not contaminate the specimen.
 - b. The time from urination to temperature measurement is critical and in no case shall exceed 4 minutes.
 - c. A specimen temperature outside the range of 32°C – 38°C/90°F – 100°F constitutes a reason to believe that the individual has altered or substituted the specimen as set forth in section Q.4.f. In such cases, the individual supplying the specimen may volunteer to have their temperature taken to

provide evidence to counter the reason to believe the individual may have altered or substituted the specimen.

- iii. *Immediately after the specimen is collected, the collection site person shall inspect it to determine its color and look for any signs of contaminants. Any unusual findings shall be noted on the urine custody and control form.*
- iv. *All specimens suspected of being adulterated shall be forwarded to the laboratory for testing.*
- v. *Whenever there is reason to believe that a particular individual has altered or substituted the specimen as described in Section Q.4.f, a second specimen shall be obtained as soon as possible under the direct observation of a same-gender collection site person (see Q.4.f for specific procedures).*
- vi. *Sealing and labeling*
 - a. Both the individual being tested and the collection site person shall keep the specimen in view at all times before sealing and labeling it.
 - b. The specimen(s) shall be sealed by placement of a tamper-proof seal over the bottle cap and down the sides of the bottle and labeled in the presence of the employee.
 - c. If the specimen is transferred to a second bottle, the collection site person shall request the employee to observe the transfer of the specimen and the placement of the tamper-proof seal over the bottle cap and down the sides of the bottle.
 - d. Labeling
 - The collection site person shall place an identification label that contains the date, the individual's specimen number, and any other identifying information provided or required by the employer securely on the bottle.
 - If separate from the label, the tamper-proof seal shall also be applied.
 - e. The employee shall initial the identification label on the specimen bottle for the purpose of certifying that it is the specimen collected from the donor.
 - f. The collection site person shall enter on the testing custody and control form all information identifying the specimen. The collection site person shall sign the testing custody and control form certifying that the collection was accomplished according to the applicable Federal requirements.
 - g. The employee shall be asked to read and sign a statement on the testing custody and control form certifying that the specimen collected from him/her is, in fact, the specimen that he/she provided.
- vii. *The collection site person shall complete the chain-of-custody portion of the testing custody and control form to indicate receipt of the specimen from the employee and shall certify proper completion of the collection.*
- viii. *The urine specimen and chain-of-custody form are now ready for shipment. If the specimen is not immediately prepared for shipment, the collection site person shall ensure that it is appropriately safeguarded during temporary storage.*

j. Control of Specimen

- i. While any part of the above chain-of-custody procedures is being performed, the urine specimen and custody documents shall be under the control of the involved collection site person.*
- ii. If the involved collection site person leaves the workstation momentarily, he/she shall take the specimen and testing custody and control form and secure them. After the collection site person returns to the workstation, the custody process will continue. If the collection site person is leaving for an extended period of time, he/she shall package the specimen for mailing before leaving the site.*
- iii. The collection site person shall not leave the collection site in the interval between the presentation of the specimen by the employee and the securing of the sample with an identifying label bearing the employee's specimen identification number and seal initialed by the employee.*
 - a. If the collection site person must leave the site during this interval, the collection process shall be nullified.*
 - b. At the election of Envirocon, a new collection process may begin.*

k. Collection Control

- i. To the maximum extent possible, collection site personnel shall keep the individual's specimen bottle within sight both before and after the individual has urinated.*
- ii. After the specimen is collected, it shall be properly sealed and labeled.*

l. Transportation to Laboratory

- i. Collection site personnel shall arrange to ship the collected specimens to the drug-testing laboratory.*
- ii. The specimens shall be placed in shipping containers designed to minimize the possibility of damage during shipment (e.g., specimen boxes and/or padded mailers); and those containers shall be securely sealed to eliminate the possibility of tampering.*
- iii. On the tape sealing the container, the collection site person shall sign and enter the date the specimens were sealed in the containers for shipment.*
- iv. The collection site person shall ensure that the chain-of-custody documentation is attached to each container sealed for shipment.*

m. Failure to Cooperate

If the employee refuses to cooperate in the collection process, the collection site person shall inform the designated Envirocon site representative and shall document the non-cooperation on the testing custody and control form.

n. Employee Requiring Medical Attention

If the sample is being collected from an employee in need of medical attention as part of a post-accident test given in an emergency medical facility, necessary medical attention shall not be delayed in order to collect the specimen.

o. Use of Chain-of-Custody Forms

A chain-of-custody form shall be used for maintaining control and accountability of each specimen from the point of collection to the final disposition of the specimen. The

date and purpose shall be documented on the form each time a specimen is handled or transferred, and every individual in the chain shall be identified. Every effort shall be made to minimize the number of persons handling specimens.

5. DOT and SAMHSA Laboratory Procedures

a. Testing

- i. Initial Test - The initial test shall use an immunoassay that meets the requirements of the Food and Drug Administration for commercial distribution.*
- ii. Confirmatory Test - All specimens identified as positive on the initial test shall be confirmed using gas chromatography/mass spectrometry (GC/MS) techniques at the cutoff values listed in this paragraph for each drug. All confirmations shall be by quantitative analysis. Concentrations that exceed the linear region of the standard curve shall be documented in the laboratory record as "greater than highest standard curve value."*
- iii. Reporting Results*
 - a. The laboratory shall report test results to Envirocon's MRO within an average of 5 working days after receipt of the specimen by the laboratory. Before any test result is reported (the results of initial tests, confirmatory tests, or quality control data), it shall be reviewed and the test certified as an accurate report by the responsible individual. The report shall identify the drugs/metabolites tested for, whether positive or negative, the specimen number assigned by the employer, and the testing laboratory specimen.
 - b. The laboratory shall report all specimens that are negative on the initial test or the confirmatory test as negative. Only specimens confirmed positive for a specific drug shall be reported as positive.
 - c. The MRO may request from the laboratory, and the laboratory shall provide quantitation of test results. The MRO shall report whether the test is positive or negative and may report the drug(s) for which there was a positive test but shall not disclose the quantitation of test results to Envirocon. The MRO may reveal the quantitation of a positive test result to Envirocon, the employee, or the decision-maker in a lawsuit, grievance, or other proceeding initiated by or on behalf of the employee and arising from a verified positive test.
 - d. The laboratory may transmit results to the MRO by various electronic means (e.g., teleprinter, facsimile, or computer) in a manner designed to ensure the confidentiality of the information. Results may not be provided verbally by telephone. The laboratory and employer must ensure the security of the data transmission and limit access to any data transmission, storage, and retrieval system.
 - e. The laboratory shall send only to the MRO the original or a certified true copy of the testing custody and control form (copy 1), which, in the case of a report positive for drug use, shall be signed (after the required certification block) by the individual responsible for day to day management of the testing laboratory or the individual responsible for attesting to the validity of the test reports, and attached to which shall be a copy of the test report.

- f. The laboratory shall provide to the Envirocon official responsible for the coordination of the testing program a quarterly statistical summary of urinalysis testing of Envirocon's employees and shall not include in the summary any personal identifying information. Confirmation data shall be included from test results reported within that quarter. Normally this summary shall be forwarded not more than 14 calendar days after the end of the month covered by the summary. The summary shall contain the following information:
 - Number of specimens received for testing.
 - Number of specimens confirmed positive for the applicable illegal or prohibited drugs (refer to the scope and definitions).
 - Number of specimens for which a test was not performed.
- g. Quarterly reports shall not include data from which it is reasonably likely that information about individuals' tests can be readily inferred. If necessary, to prevent the disclosure of such data, the laboratory shall not send a report until data are sufficiently aggregated to make such an inference unlikely. In any quarter in which a report is withheld for this reason, the laboratory will inform the employer in writing.
- h. The laboratory shall make available copies of all analytical results for company testing programs when requested by DOT or other Federal agencies with regulatory authority over Envirocon.
- i. Unless otherwise instructed by Envirocon in writing, the testing laboratory shall retain all records pertaining to a given urine specimen for a minimum of two years.

b. Long-Term Storage

- i. *Long-term frozen storage (-20°C or less) ensures that positive urine specimens will be available for any necessary retest during administrative or disciplinary proceedings.*
- ii. *Laboratories shall retain and place in properly secured long-term frozen storage for a minimum of 1 year all specimens confirmed positive in their original labeled specimen bottles.*
- iii. *Within this one-year period, an employer (or other person designated in a DOT or other Federal Agency regulation) may request the laboratory to retain the specimen for an additional period of time, but if no such request is received, the laboratory may discard the specimen after the end of one year, except that the laboratory shall be required to maintain any specimens known by it to be under legal challenge for an indefinite period.*

c. Retesting Specimens

- i. *Because some analytes deteriorate or are lost during freezing and/or storage, quantitation for a retest is not subject to a specific cutoff requirement but must provide data sufficient to confirm the presence of the drug or metabolite.*
- ii. *If the primary specimen's test result is positive, the employee may request that the MRO direct that the split specimen be tested in a different laboratory.*
 - The laboratory shall meet the same certification requirements as the regular laboratory (e.g., a DHHS-certified or SAMHSA laboratory for DOT purposes)

for the presence of the drug(s) for which a positive result was obtained in the test of the primary specimen.

- The MRO shall honor such a request if it is made within 72 hours of the employee having been notified of a verified positive test result.
- When the MRO informs the laboratory in writing that the employee has requested a test of the split specimen, the laboratory shall forward the split specimen bottle, with the seal intact, a copy of the MRO request, and the split specimen copy of the chain-of-custody form with appropriate chain-of-custody entries.
- The result of the test of the split specimen is transmitted by the second laboratory to the MRO.
- If the second laboratory reconfirms the analysis of the split specimen for the presence of the drug(s) or drug metabolite(s), the MRO shall notify the employer of the test results.
- Action required by DOT or other Federal agency regulations as a result of a positive test (e.g., removal from performing a safety-sensitive function) is not stayed pending the result of the split specimen test. Therefore, the actions required by DOT or DFAR/FAR in the event of a positive test shall proceed while awaiting the results of the split sample analysis.
- If the result of the split specimen test fails to reconfirm the presence of the drug(s) or drug metabolite(s) found in the primary specimen, the MRO shall cancel the primary test and report the cancellation and the reasons for it to the DPM, the employee, and federal agencies (where applicable).

d. Subcontracting

- i. Laboratories hired to do testing by Envirocon shall not subcontract and shall perform all work with their own personnel and equipment.*
- ii. This paragraph does not prohibit subcontracting of laboratory analysis if specimens are sent directly from the collection site to the subcontractor, the subcontractor is a laboratory with the applicable certifications required in this appendix, the subcontractor performs all analysis and provides storage required under this appendix, and the subcontractor is responsible to Envirocon for compliance with this appendix and applicable DOT or DFAR/FAR regulations as if it were the prime contractor.*
- iii. The subcontractor laboratory must be capable of performing testing for the applicable illegal or prohibited substances (refer to the scope and definitions section) using the initial immunoassay and confirmatory GC/MS methods specified in this appendix.*

e. Inspections

- i. DOT, and other appropriate Federal Agencies, any company utilizing the laboratory, DHHS, or any organization performing laboratory certification on behalf of DHHS reserves the right to inspect the laboratory at any time.*
- ii. Contracts with laboratories for testing, as well as contracts for collection site services, shall permit Envirocon and the DOT or appropriate Federal Agency of jurisdiction (directly or through an agency) to conduct unannounced inspections.*

f. Documentation

- i. The testing laboratories shall maintain and make available documentation of all aspects of the testing process for at least two years. This two-year period may be extended upon written notification by DOT or other appropriate Federal agencies or by any company for which laboratory services are being provided.*
- ii. The required documentation shall include:*
 - Personnel files on all individuals authorized to have access to specimens;
 - Chain-of-custody documents;
 - Quality assurance/quality control records;
 - Procedure manuals;
 - All test data (including calibration curves and any calculations used in determining test results);
 - Reports; records on performance testing;
 - Performance on certification inspections; and
 - Hard copies of computer-generated data.
- iii. The laboratory shall maintain documents for any specimen known by it to be under legal challenge for an indefinite period.*

g. Protection of Employee Records

- i. Employer contracts with laboratories shall require that the laboratory maintain employee test records in confidence, as provided in DOT, DFAR/FAR or other appropriate Federal regulations.*
- ii. The contracts shall provide that the laboratory shall disclose information related to a positive test of an individual to the individual, the employer, or the decision-maker in a lawsuit, grievance, or other proceeding initiated by or on behalf of the individual and arising from a certified positive test.*

6. DOT's Contractor Monitoring Procedures

As a DOT contractor, Envirocon is subject to the following procedures to verify compliance with client programs. For purposes of this appendix, the term "contractor" refers to Envirocon and its lower-tier subcontractors.

a. Objective

In order to assure a contractor's compliance with DOT's regulations, the following procedures are to be followed in determining compliance with the testing regulations as set forth in 49 CFR Part 199 and Part 40.

b. Procedures for Determining Compliance

- i. Qualifying Potential Contractor:*
 - The potential contractor's qualifications as it pertains to testing policies/procedures are assured by requesting that the potential contractor submit a copy of its anti-drug plan for review and compliance with RSPA/DOT regulations.
 - After the anti-drug plan is reviewed, written correspondence to the contractor will advise whether it is acceptable or needs further additions, deletions, revisions, or clarifying language.
 - The contractor plan shall be reviewed using the criteria established in the RSPA Headquarters Drug Inspection form and the DOT Part 40 Drug Inspection form.

- Addenda made to the contractor's plan shall be attached to the previously submitted plan. Upon approval of the addendums, a letter of acceptance is then sent to the contractor.
- The contractor is now eligible to bid on company contract work that would be covered under Part 199 and Part 40.

ii. Monitoring Contractor's Compliance:

- The contractor may be required to provide information on his/her employees who will perform covered functions for the operator.
- This information may include the name and job title of the employees who will perform any work or functions covered by Part 199 under that contract. A list of each contractor's covered employees may be distributed to the appropriate company field management.
- All contractors will be required to submit testing statistical information on a periodic basis, which may be based on the duration of the contract. Typically, this requirement will be on a monthly or quarterly basis. A more frequent schedule for submitting testing data may be required if it is determined that such statistics are needed.

iii. Envirocon's clients are required to maintain a complete file on each contractor's statistical testing reports. Envirocon shall make these records available to our clients. Our clients, in turn, may be required to make these records available upon request by the RSPA Administrator, an agency-designated representative, or representatives of the state agencies having jurisdiction over the client.

7. Appendix: Sample Letter Agreement to Refrain From Substance Abuse

The following text is a sample letter of agreement for returning employees. An employee who has been previously found to be “not fit” due to substance abuse or who has been found to be in violation of policy regarding substance abuse shall enter into a written agreement with Envirocon to refrain from further substance abuse. This agreement shall be considered only a condition of continued employment.

Subject: Conditions of Employment with Regard to Substance Abuse Policies

It is Envirocon’s policy to maintain a drug-free workplace. Your post-incident/pre-employment drug screen resulted in a positive test for substance abuse. This is against our policy and is grounds for termination. At this time, your employment has been terminated. In response, you have verbally offered to address this disqualification before returning to work by:

- Seeking a face-to-face evaluation by a qualified substance abuse specialist;
- Enrolling in and successfully completing a rehabilitation program as prescribed by that specialist;
- Demonstrating a qualifying status by passing an Envirocon substance abuse screening protocol and
- Demonstrating continuing compliance with this policy and qualification for work over a probationary period of at least twenty-four months.

The purpose of this letter is to specify the manner and conditions under which Envirocon will consider any future applications for re-hiring made by yourself. This letter is not an offer of employment or a guarantee of future employment. Should you decide to meet these conditions, you will be considered for future employment in all other ways in the same manner as other applicants for available positions. Should you be re-hired the terms of this letter will become conditions of your employment. Regardless of your compliance with the terms of this letter, your employment will be considered to be “at will.”

RELEASE OF CONFIDENTIAL INFORMATION

By accepting the terms of this letter, you hereby release confidential medical and rehabilitation information related to drug and alcohol dependency/abuse. This information is released to the following designated individuals responsible for evaluating your compliance with Envirocon’s policy and your rehabilitation program progress:

- Myself as Envirocon’s current Drug Program Manager (DPM); and
- WorkCare, Inc., and/or the physician(s) currently designated as Envirocon’s Medical Review Officer (MRO).
- APS Healthcare, Envirocon’s currently designated Employee Assistance Program provider.

This release of confidential information will be effective for the duration of the probationary period described below (a minimum of twenty-four months).

OBTAINING AND MAINTAINING QUALIFICATION

During the probation period described below, you must maintain your qualifications regarding Envirocon’s substance abuse policy. If, after providing a qualifying (i.e., negative) baseline screen, you again screen positive at any later date, you will be considered not qualified, and

your employment will be terminated. Envirocon reserves the right to modify policies and procedures related to these qualifications.

REHABILITATION PROGRAM

In order to be assured of your long-term compliance, Envirocon requires that you have a face-to-face evaluation by a third-party Substance Abuse Professional (SAP). The following individuals are generally considered to be Substance Abuse Professionals if they have knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled substances-related disorders:

- A Substance Abuse Specialist recommended by Envirocon's EAP provider or
- A licensed physician (Medical Doctor or Doctor of Osteopathy), or
- A licensed or certified psychologist, social worker, or employee assistance professional;
- An addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission or by the International Certification Reciprocity Consortium/Alcohol & Other Drug Abuse)

Envirocon reserves the right to determine if the SAP you choose is acceptable in this regard. After the initial face-to-face meeting, the SAP must provide a written evaluation for the Envirocon DPM, MRO, and EAP provider to review. The SAP's written evaluation must specify if a course of rehabilitation is recommended. If rehabilitation is recommended, an appropriate rehabilitation program will be prescribed, and you will be required to successfully follow and complete that program. The release of confidential information discussed above will be used by the DPM, MRO, and EAP provider to monitor your progress in this program.

It may be necessary to change programs before completion. This will only be allowed if the change is not being undertaken because you have failed to officially qualify. You must continue to maintain your Envirocon qualifications to work during the entire period of rehabilitation.

If rehabilitation is successfully completed before the end of the two-year probation period, directed substance abuse testing will continue until the twenty-four months of probation are successfully completed. If rehabilitation is not completed within the two-year probation period, the probation period will be extended until the rehabilitation program is successfully completed.

PERIOD OF PROBATION AND DIRECTED TESTING

In order to ensure future compliance with policies, maintenance of qualifications and/or your successful rehabilitation, Envirocon will monitor your rehabilitation program performance and require you to participate in directed substance abuse screening tests during a period of probation. That period will begin when the following conditions have been met:

- You have signed and returned this letter accepting its conditions of employment;
- You have passed an Envirocon substance abuse screening test;
- You have provided the required report from the initial face-to-face meeting with a substance abuse professional as described in the rehabilitation program section above;
- If prescribed by the SAP, you have initiated the prescribed rehabilitation program, and
- You have been re-hired and began work for Envirocon.

The period of probation will continue at a minimum over the next 24 months of employment and will be extended as necessary until your rehabilitation program (if required) has been successfully completed.

During your probation, you shall provide suitable substance abuse samples in accordance with Envirocon's substance abuse screening procedures. You will provide these samples at the times and places directed. WorkCare will develop the schedule of these directed tests and approve it by the MRO. The WorkCare scheduler for Envirocon's medical monitoring program will contact your supervisor and finalize the time and place for you to provide the required sample.

When you are notified of a directed test you must immediately proceed to the place directed at the time directed. If this schedule cannot be met you must immediately advise the scheduler, your supervisor, the MRO, or myself immediately. If you are in a travel status at the time of the notification and/or a clinic cannot be found within 50 miles of your work assignment, the travel time will be accounted for.

It is emphasized that these tests are not part of any random testing program for the general population of Envirocon employees or any other substance abuse testing programs administered by Envirocon or Envirocon's clients. These tests/samples will be required specifically of you for the purposes outlined in this letter.

The schedule of dates, when tests will be directed, will not be provided to you in advance and will not follow any particular schedule or pattern except as follows.

- In establishing the schedule of tests, the MRO will be guided by your normal work hours to attempt the initial phone notification at the job site.
- No more than 24 tests will be scheduled over the twenty-four months of probation.
- Should the period of probation be extended, as described above, tests will be directed at approximately the same rate, not to exceed 12 tests over any 12-month period.

ACCEPTANCE OF THE CONDITIONS DESCRIBED IN THIS LETTER

Indicate your acceptance of the conditions outlined in this letter by signing below and at the bottom of each page and immediately returning the signed original to me. If I have not received your reply within 30 days, you must contact me and request an extension or a revised letter. By accepting the conditions of this letter, this letter will become your written assurance that you will refrain from using or being involved with illegal drugs while employed in a safety or security-sensitive position.

Sincerely,

Matthew Curran, CSP, CIH
Program Manager



TITLE: Bloodborne Pathogens Exposure Control Plan		PREPARED BY: Jerry Hipp
SOP NO: 1403.007	PAGE: 1 of 14	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
EFFECTIVE DATE: 10/1999	REVISION DATE: 5/2024	

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A. PURPOSE

To reduce the risk of occupational exposure to bloodborne pathogens, and/or other potentially infectious materials at Envirocon work areas in compliance with federal and state regulations.

B. SCOPE

This SOP pertains to all Envirocon employees working at all locations within the company.

C. DEFINITIONS

1. Biohazard Label

A label affixed to containers of regulated waste, refrigerator/freezers and other containers used to store, transport, or ship blood and other potentially infectious materials. The label must be fluorescent orange-red in color with the biohazard symbol and the word biohazard on the lower part of the label.

2. Bloodborne Pathogens

Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

3. Contaminated

The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

4. Decontamination

The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

5. Engineering Controls

Controls (e.g., sharps disposal containers) that isolate or remove the bloodborne pathogens hazard from the workplace.

6. Exposure Control Officer

An employee who is designated by the employer and who is qualified by training or experience to provide technical guidance in the development and implementation of Envirocon's Exposure Control Plan.

7. Exposure Control Plan

A written program developed and implemented by the employer sets forth procedures, engineering controls, PPE, work practices, and other methods that are capable of protecting employees from exposure to bloodborne pathogens and meet the requirements spelled out by the OSHA Bloodborne Pathogens Standard.

8. Exposure Incident

A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

9. HBV

Hepatitis B Virus.

10. HIV

Human Immunodeficiency Virus.

11. Licensed Healthcare Professional

A person whose legally permitted scope of practice allows him/her to independently perform the activities required by paragraph (f) "Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-Up" of OSHA's Bloodborne Pathogens Standard.

12. Medical Consultation

A consultation takes place between an employee and a licensed medical professional for the purpose of determining the employee's medical condition resulting from exposure to blood or other potentially infectious materials, as well as any further evaluation for treatment that is required.

13. Other Potentially Infectious Materials

The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental

procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

14. Parenteral

Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

15. Prophylaxis

Prophylaxis is an action taken to prevent disease, especially by specified means or against a specified disease.

16. Source Individual

Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

17. Sterilize

The use of a physical or chemical procedure to destroy all microbial life, including highly resistant bacterial endospores.

18. Universal Precautions

An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

19. Work Practice Controls

Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting the recapping of needles by a two-handed technique).

D. RESPONSIBILITIES

1. Exposure Control Officer

The Director of EHS will serve as the Envirocon Exposure Control Officer. This person will be responsible for the overall management and support of the Bloodborne Pathogen Exposure Control Program. The Exposure Control Officer's responsibilities include but are not limited to:

- Overall responsibility for implementing the Exposure Control Plan;
- Working with Project Management, the EHS Department, and employees to develop the policies and work practices needed to support the effective implementation of this plan;
- Develop procedures to improve the Exposure Control Plan, as well as lead an annual review update of the plan when necessary, including non-management employee's input;
- Knowing current legal requirements concerning bloodborne pathogens;
- Acting as Envirocon's liaison during OSHA inspections;
- Conducting or assigning periodic project audits to assist in updating the Exposure Control Plan and

- Implementing and maintaining Envirocon's Biohazard Warning Labeling Program.

2. Project Management Team

The Project Management Team generally includes the project-specific Operations Director (OD), Project Manager (PM), Project Engineer and/or Coordinator, Construction Manager (CM), Superintendents (Super), and Leads.

The Project Management Team will work directly with the Exposure Control Officer, following the guidelines of the Exposure Control and Infection Control Program to ensure that proper exposure control procedures are followed.

3. EHS Department

The EHS Department will be responsible for coordinating the training to all employees who have the potential for exposure to bloodborne pathogens. Responsibilities of the EHS Department Team include:

- Maintaining an up-to-date list of Envirocon's personnel requiring training.
- Coordinating and scheduling periodic training for employees.
- Maintaining appropriate training documentation.
- Periodically reviewing the policy and the training program to ensure the information is current.
- Maintaining and updating the lists of job classifications and tasks/procedures in which occupational exposure to bloodborne pathogens occurs.
- Managing Envirocon's Hepatitis B Vaccination Program, and
- Overseeing Envirocon's post-exposure evaluation and follow-up process.

4. Employees

Employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP. Additional employee responsibilities include:

- Know what tasks they perform that have the potential for occupational exposure;
- Attend the Bloodborne Pathogens training and be familiar with the Exposure Control Plan;
- Plan and conduct all operations in accordance with our practice controls and
- Develop good personal hygiene habits.

E. GENERAL PROGRAM MANAGEMENT

The Envirocon Exposure Control Plan shall be available to employees at any time. The most up-to-date copy will be kept on the Envirocon SOP portal, and a hard copy shall be maintained in the on-site project trailer.

F. EXPOSURE DETERMINATION

Envirocon will determine which employees can reasonably be expected to be exposed to blood or other body fluids containing blood in the course of their work. (See Table A in Section K below)

1. Job Classifications and Hazard Analysis

- a. The job classifications shall be changed when/if a Job Safety Analysis (JSA) identifies an exposed job task or classification.**

- b. **The JSA analysis must consider exposure risk without regard to the use of personal protective equipment.**

2. Potential Exposure Situation Categories

- a. **Job classifications in which all employees have occupational exposure to bloodborne pathogens;**
- b. **Job classifications in which some, but not all, employees have occupational exposure to bloodborne pathogens; and**
- c. **Tasks and procedures for those job classifications in which occupational exposure to bloodborne pathogens may occur.**

3. Notes

- a. **It is not required to list those tasks and procedures associated with job classifications in which all individuals within that classification can be expected to have occupational exposures (i.e., first aid providers). It is only required that the tasks and procedures be listed when some, but not all, individuals within a classification are exposed, and then it is only necessary to list the tasks associated with a potential occupational exposure.**
- b. **The Project HSO/SCP and Project Management Team will work with the Director of EHS to revise and update these lists as our tasks, procedures, and classifications change.**

G. IMPLEMENTATION AND CONTROL METHODS

The following methods of implementation and control shall be incorporated into this ECP. The Director of EHS, in coordination with the EHS Department and Project Management Team, will determine appropriate specific guidelines for cleaning, decontamination, and waste disposal procedures when necessary.

1. Universal Precautions

- a. **Universal precautions will be used to prevent contact with blood or other potentially infectious materials (OPIM). All blood or other potentially contaminated body fluids shall be considered to be infectious. Under circumstances in which differentiation among body fluid types is difficult or impossible, all body fluids will be considered potentially infectious materials. Types of bloodborne pathogens and OPIMs include but are not limited to:**

- i. Semen;*
- ii. Vaginal secretions;*
- iii. Cerebrospinal fluid;*
- iv. Synovial fluid;*
- v. Pleural fluid;*
- vi. Pericardial fluid;*
- vii. Peritoneal fluid;*
- viii. Amniotic fluid;*
- ix. Unfixed tissue or organs (other than intact skin);*

- x. *Saliva in dental procedures; and*
- xi. *Any body fluid visibly contaminated with blood.*

2. Exceptions to Universal Precautions

a. Universal precautions do not apply to the following unless they contain visible blood:

- i. *Feces;*
- ii. *Nasal secretions;*
- iii. *Sputum;*
- iv. *Sweat;*
- v. *Tears;*
- vi. *Urine;*
- vii. *Vomit;*
- viii. *Saliva; and*
- ix. *Breast milk.*

b. Notes:

- i. *In circumstances where it is difficult or impossible to differentiate between body fluid types, we assume all body fluids to be potentially infectious and*
- ii. *The HSO/SCP Department Team and Project Management Team are responsible for overseeing our Universal Precautions Program.*

3. Engineering Controls

- a. **Engineering controls are designed to eliminate or minimize employee exposure. Where occupational exposure remains after implementing these controls, personal protective equipment shall also be used.**
- b. **The Envirocon EHS Department and Project Management Team shall periodically review tasks and procedures performed at Envirocon project sites where engineering controls can be implemented or updated.**

4. Work Practice Controls

- a. **In addition to engineering controls, Envirocon uses a number of safe work practices, which will be referred to as Work Practice Controls, to help eliminate or minimize employee exposure to possible infectious materials.**
- b. **Envirocon has adopted the following Work Practice Controls as part of our Bloodborne Pathogens Compliance Program:**
 - i. *Employees wash their hands immediately, or as soon as feasible, after removal of gloves or other PPE;*
 - ii. *Following any contact of body areas with blood or any other infectious materials, employees wash their hands, exposed skin, and, where practical, their exposed mucous membranes with soap and water as soon as possible.*

- iii. *Equipment that becomes contaminated shall be examined prior to further use or prior to servicing or shipping and decontaminated as necessary (unless it can be demonstrated that decontamination is not feasible):*
 - a. An appropriate biohazard warning label is attached to any contaminated equipment, identifying the contaminated portions and
 - b. Information regarding the remaining contamination is conveyed to all affected employees, the equipment manufacturer, and the equipment service representative prior to handling, servicing, or shipping.

5. New Employees

- a. **When a new employee comes to Envirocon or an employee changes jobs within Envirocon, the following process ensures that they are trained in the appropriate Work Practice Controls.**
 - i. *The employee's job classification, the tasks, and the procedures that they will be working under are checked against the Job Classifications and Tasks, which have been identified as those in which occupational exposure may occur.*
 - ii. *If the employee is transferring from one job to another within Envirocon, the job classifications and tasks/procedures pertaining to their previous position are also checked.*
 - iii. *Based on this "cross-checking," the new job classifications and/or tasks and procedures that will bring the employee into occupational exposure situations are identified.*
 - iv. *The employee is then trained regarding any work practice controls that the employee is not experienced with.*

6. Personal Protective Equipment (PPE)

a. Basic Considerations

- i. *Where the potential of occupational exposure remains after the consideration and implementation of engineering and work practice controls, personal protective equipment (PPE) will be used. PPE will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.*
- ii. *PPE will be considered to be appropriate only if it prevents blood or other potentially infectious materials from passing through or reaching the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions and for the duration of time which the protective equipment will be used. Appropriate protective equipment or clothing shall be worn when the employee has a potential for occupational exposure. This equipment includes, but is not limited to:*
 - a. Gloves;
 - b. Gowns (fluid-resistant, if indicated);
 - c. Shoe/boot covers;

- d. Disposable masks, and;
- e. Mouthpieces or resuscitation bags.

b. Project HSO/SCP and Project Management Team

The Project HSO/SCP and the Project Management Team are responsible for ensuring that all potentially hazardous tasks have appropriate PPE available to employees and that employees are trained regarding the use of the appropriate PPE for their job classifications and tasks/procedures they perform. Additional training is provided, when necessary, if an employee takes a new position or if new job functions are added to their current position.

c. PPE Inspection

i. To ensure that PPE is not contaminated and is in the appropriate condition to protect employees from potential exposure, Envirocon adheres to the following practices:

- a. All PPE is inspected periodically and repaired or replaced as needed to maintain its effectiveness;
- b. All PPE is removed prior to leaving a *contaminated* work area;
- c. Gloves are worn in the following circumstances:
 - 1. Whenever employees anticipate hand contact with potentially infectious materials; and
 - 2. When handling or touching contaminated items or surfaces.

d. Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured, or otherwise lose their ability to function as an exposure barrier;

e. Utility gloves will not be reused; gloves are automatically disposed of if they are cracked, peeling, torn, or exhibit other signs of deterioration; and

f. Protective gowns/garments should be worn whenever potential exposure to the body is anticipated.

g. Envirocon will ensure that appropriate personal protective equipment is readily accessible at the worksite. Personal protective equipment will be available in the Blood Borne Pathogen Kits.

h. Envirocon will clean, launder, and dispose of clothing and/or personal protective equipment at no cost to the employee when necessary.

i. Envirocon will replace personal protective equipment as needed to maintain its effectiveness at no cost to the employee.

j. All personal protective equipment will be removed prior to leaving the work area. When personal protective equipment/supplies are removed, the equipment will be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

H. VACCINATION: HBV/HIV POST-EXPOSURE EVALUATION AND FOLLOW-UP

1. Vaccination Program

- a. The on-site HSO will provide training to employees on hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability.
- b. The hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of this plan. Vaccination is encouraged unless:
 - i. Documentation exists that the employee has previously received the series;
 - ii. Antibody testing reveals that the employee is immune or
 - iii. Medical evaluation shows that vaccination is contraindicated. However, if an employee declines the vaccination, the employee must sign a declination form.
- c. Employees will be given form 1403.007.02 - OSHA Fact Sheet Hepatitis B Vaccination Protection following exposure or declination of the vaccine.
- d. Employees who initially decline the vaccine may request and obtain the vaccination at a later date at no cost. Employees who have declined to take part in the program are listed as well and have signed 1403.007.01, the Bloodborne Pathogens Vaccination Declination Form.
- e. Following the medical evaluation, a copy of the health care professional's written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. It will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

2. Post-Exposure Evaluation and Follow-Up

- a. Should an exposure incident occur, the site-specific HSO and Director of EHS shall be notified immediately. An immediately available confidential medical evaluation and follow-up will be conducted by a local healthcare professional. Following initial first aid, the following activities will be performed:
- b. Document the routes of exposure and how the exposure occurred;
- c. Identify and document the source individual;
- d. Immediately cleanse or request assistance to cleanse the areas involved in the exposure as follows:
 - i. *Mucous Membrane*
 - a. Eyes - flush with water for at least 5 minutes.
 - b. Mouth - rinse with a 50/50 mix of hydrogen peroxide and water, followed by rinsing with plain water.
 - ii. *Needle Sticks*
 - a. Wash the area thoroughly with soap and water.
 - iii. *Cuts, Bites, Scratches, or Non-Intact Skin Exposure*

- a. First, wash the area thoroughly with soap and water or pour a small amount of hydrogen peroxide on the wound, followed by washing. After washing, cover the wound site with a sterile dressing.

Note: Although contamination of intact skin is not considered an exposure incident and does not require a post-exposure evaluation and serological testing, all affected areas must be immediately washed thoroughly with soap and water.

- e. Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider;
 - i. *If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed;*
 - f. Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual;
 - g. After obtaining consent, have a local healthcare professional collect the exposed employee's blood as soon as feasible after the exposure incident, and test blood for HBV and HIV serological status;
 - h. If the employee does not give consent for HIV serological testing during the collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.
 - i. The Envirocon Project HSO and Project Management Team will complete the incident investigation as per the 1403.024 Incident Reporting and Investigation SOP.
3. The on-site HSOP shall ensure that the healthcare professional responsible for the employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard. The on-site HSO will also ensure that the healthcare professional evaluating an employee after an exposure incident receives the following:
- a. A description of the employee's job duties relevant to the exposure incident;
 - b. Route(s) of exposure;
 - c. Circumstances of exposure;
 - d. If possible, results of the source individual's blood test;
 - e. Relevant employee medical records, including vaccination status.
4. After the post-exposure evaluation has been completed, the EHS Department will review the circumstances of all exposure incidents to determine:
- a. Engineering controls in use at the time and their effectiveness;
 - b. Work practices that were or were not followed;
 - c. A description of the devices being used (including type and brand) that initiated the incident;

- d. Protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.) and their effectiveness;
- e. Location of the incident;
- f. Task or job being performed when the incident occurred;
- g. The Director of EHS and/or WorkCare will provide the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.
- h. All medical determinations made by a local healthcare professional shall be reviewed by Envirocon's Medical Review Officer. Additional determinations shall be shared with the employee as soon as practical.
 - i. *All medical record information and pertinent documentation will be maintained by Envirocon's Medical Surveillance team, WorkCare, for the length of employment plus 30 years.*
- i. Record all the injuries on the Sharps Injury Log, if necessary.

I. BIOHAZARD WARNING LABELING PROGRAM

- 1. All potential biohazard materials are identified in our facility using labels or when appropriate, using red "color-coded" containers;
- 2. If laundry is processed off-site by a vendor that uses universal precautions when handling all soiled laundry, alternate coding is sufficient if it permits all employees to recognize the containers requiring compliance with universal precautions (e.g., contaminated laundry).
- 3. On biohazard labels affixed to contaminated equipment, we have also indicated which portions of the equipment are contaminated. If unspecified, it shall be assumed that the entire instrument is contaminated.

J. INFORMATION AND TRAINING

1. Training

- a. The EHS Department and Project Management Team are responsible for seeing that all employees who have potential exposure to bloodborne pathogens receive the required training.
- b. This team will be assisted by the Exposure Control Officer;
- c. Employees will be retrained at least annually to keep their knowledge current.
- d. All new employees and employees changing jobs or job functions will receive any additional training their new position requires at the time of their new job assignment.

2. Training Topics

The topics covered in our training program include, but are not limited to, the following as well as those materials in the Infection Control training program:

- a. **The Bloodborne Pathogens Standard;**

- b. The epidemiology and symptoms of bloodborne diseases (including HBV, HIV, and others, as requested);**
- c. The modes of transmission of bloodborne pathogens;**
- d. Envirocon's Exposure Control Plan, where this plan is located for employee use, and how they can obtain a copy of the OSHA Bloodborne Pathogens Standard;**
- e. Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;**
- f. A review of the use and limitations of methods that will prevent or reduce exposure, including:**
 - i. Engineering controls;*
 - ii. Work practice controls; and*
 - iii. PPE.*
- g. Selection and use of PPE including:**
 - i. Types available;*
 - ii. Proper use;*
 - iii. Location within the facility;*
 - iv. Removal;*
 - v. Handling;*
 - vi. Decontamination;*
 - vii. Disposal; and*
 - viii. Basis for selection.*
- h. Visual warnings of biohazards within our company include labels, signs, and "color-coded" containers;**
- i. Information on the Hepatitis B vaccine, including its:**
 - i. Efficacy;*
 - ii. Safety;*
 - iii. Method of administration;*
 - iv. Benefits of vaccination; and*
 - v. Envirocon's free vaccination program.*
- j. Actions to take and persons to contact after exposure involving blood or other potentially infectious materials;**
- k. The procedures to follow if an exposure incident occurs, including incident reporting;**
- l. Information on the post-exposure evaluation and follow-up, including medical consultation, that Envirocon will provide at no cost to the employee; and**
- m. An opportunity for interactive questions and answers with a person knowledgeable in the subject matter covered in the training program.**

3. Recordkeeping

a. Envirocon and WorkCare, Inc. will establish and maintain an accurate medical record for each employee with an occupational exposure. This record will include:

- i. The name and social security number of the employee;*
- ii. A copy of the employee's hepatitis B vaccination record or declination form and any additional medical records relative to hepatitis B;*
- iii. If exposure incident(s) have occurred, a copy of all results of examinations, medical testing and follow-up procedures;*
- iv. If exposure incident(s) have occurred, a copy of the health care professional's written opinion;*
- v. If exposure incident(s) have occurred, a copy of the information provided to the health care professional, i.e., exposure incident investigation form and the results of the source individual's blood testing, if available, and if consent has been obtained for release.*

b. Envirocon will ensure that the employee's medical records are kept confidential and are not disclosed or reported without the employee's expressed written consent to any person within or outside of Envirocon, except as required by law. These medical records will be kept separate from other personnel records and maintained for the duration of employment plus 30 years.

c. Training Records

- i. Training records will include:*
 - a. The date(s) of the training session
 - b. The contents or a summary of the training sessions
 - c. The name of all employees attending the training session

d. Availability of Records

- i. Envirocon will ensure:*
 - a. All records required to be maintained by this standard will be made available to regulatory authorities upon request for examination and copying.
 - b. Employee training records required by this standard will be provided upon request for examination and copying to employees, to employee representatives, and to the applicable regulatory authorities.
 - c. Employee medical records required by this standard will be provided upon request for examination and copying to the subject employee and to anyone having written consent of the affected employee and to the appropriate regulatory authorities.
 - d. Envirocon will comply with the requirements involving the transfer of records set forth in this standard.
 - e. Personal medical records can be made available to that employee upon request.

K. INITIAL JOB CLASSIFICATIONS LIST

Job Tasks	Table A: Initial Job Classification List											
	Superintendent	Foreman	Safety Officers or 1st Aid/CPR Provider	Exclusion Zone Equipment Operator	Exclusion Zone Laborer	Engineer	Support Area laborers and Equipment	Grade Checkers and Surveyors	Truck Driver	Drillers	Estimators, Directors, Managers	Office and Corporate Staff
Civil Construction			2									
Hazardous Waste Placement			2									
Landfill Cut/fill with Potential Red Bags	2	2	1	2	2	3	3	2	3	2		
Red Bag/Medical Waste Cleanup or Placement	3	2	1	1	1	1	3	3	3	1		
Slurry Walls			2									
Cell Construction and Capping			2									
Soil Remediation			2									
Building Demolition			2									
Pipeline Demolition			2									

1 = Job classifications in which all employees have occupational exposure to bloodborne pathogens.

2 = Job classifications in which some, but not all, employees have occupational exposure to bloodborne pathogens.

3 = Tasks and procedures for those job classifications listed in item “2” above, in which occupational exposure to bloodborne pathogens may occur.

L. RELATED DOCUMENTS

1403.024 – Incident Reporting and Investigation SOP

M. ATTACHMENTS

Form 1403.007.01: Bloodborne Pathogens Vaccination Declination Form

Form 1403.007.02: OSHA Fact Sheet Hepatitis B Vaccination Protection



STANDARD OPERATING PROCEDURE

TITLE: Hearing Conservation Program		PREPARED BY: Matthew Curran, CSP, CIH – Director of EHS
SOP NO: 1403.008	PAGE: 1 of 9	AUTHORIZED BY: Pete Joy - President
EFFECTIVE DATE: 8/1995	REVISION DATE: 5/2024	

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A. PURPOSE

The purpose of this procedure is to provide guidelines for compliance with 29 CFR 1926.52 and 29 CFR 1910.95.

B. SCOPE

This procedure applies to all Envirocon and subcontractor employees performing work at Envirocon project sites. This procedure also applies to any vendors and/or visitors to project sites who may be exposed to noise above the action level.

C. DEFINITIONS

1. Action Level (ACGIH)

The American Conference of Governmental Industrial Hygienists (ACGIH) Action Level for noise exposure is 82 dB(A) for 8 hours of exposure. Envirocon's SVP of Health & Safety has implemented 85dB as the company's action level.

2. Action Level (OSHA)

The OSHA Action Level for noise exposure is 85 dB(A) for 8 hours of exposure.

3. Audiogram

A chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

4. Audiologist

A professional specializing in the study and rehabilitation of hearing who is certified by the American Speech-Language-Hearing Association or licensed by a state board of examiners.

5. Baseline Audiogram

The initial audiogram against which all future audiograms are compared.

6. Decibel

dB is the standard abbreviation for the decibel unit used in the Hearing Conservation Program. The sound pressure level, in dB, is equal to 20 times the common logarithm of the ratio of the existing sound pressure to a reference sound pressure of 20 micronewtons per square meter.

7. dB(A)

The standard abbreviation for sound levels (decibels) is measured with a C-weighting network, which does not discriminate against any lower frequencies. A comparison of both A and C weighting will indicate predominant frequencies and, in so doing, highlight the feasibility of hearing protection.

- If the C-A value is negative, zero, or a small positive number, the lower frequencies contribute little to the overall sound level, and hearing protection would be feasible.
- If the C-A value is a larger positive number (10 or more), noise in the lower frequencies contributes significantly, and hearing protection would provide very little attenuation.

8. Dose

An expression of allowable noise exposure in percentage.

9. Frequency

A measure of how close together the sound waves are and is measured in sound vibrations per second or Hertz (Hz). The generally accepted standard range of audible frequencies is 20 to 20,000 Hz.

10. Hertz

Unit of measurement of frequency, numerically equal to cycles per second.

11. Impulse Noise

Sudden bursts of loud sounds with peaks occurring at intervals greater than one per second

12. Intensity

The loudness or amplitude as measured in Decibels.

13. Noise Dosimeter

An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a dose.

14. Otolaryngologist

A physician specializing in the diagnosis and treatment of disorders of the ear, nose, and throat.

15. Permanent Threshold Shift

Continuous unprotected exposure to noise levels greater than 90 dB(A) for 8 hours or short exposures to louder noises can cause permanent sensorineural hearing loss. This type of loss is not medically treatable.

16. Sensorineural hearing loss (SNHL)

SNHL occurs when the inner ear (cochlea) or the nerve pathways from the inner ear to the brain are damaged. It is the most common type of permanent hearing loss and cannot usually be medically or surgically corrected.

17. Standard Threshold Shift (STS)

Defined by Federal OSHA as a "change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2,000 Hz, 3,000 Hz, and 4,000 Hz in either ear." It is important to note that individual states may require more stringent cut-off levels.

18. Temporary Threshold Shift

This is a temporary loss of hearing in the higher (3,000-6,000 Hz) frequencies resulting from prolonged exposure to noise levels above 90 dB(A) during a single day. This loss will show during audiometry, but more importantly, the hearing will return to its original levels within 24 hours of noise-free exposure.

19. Time-Weighted Average (TWA) Sound Level

That sound level, which, if constant over an 8-hour exposure, would result in the same noise dose as is measured.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS shall be the Hearing Conservation Program administrator and shall be responsible for program implementation and maintenance.

2. EHS Department Staff

In consultation with the Director of EHS, the project EHS Department staff is responsible for the anticipation, evaluation, and control or elimination of excessive noise exposures at a project as well as the required recordkeeping, training, and selection of personal protective equipment.

3. Project Management and Supervisors

The Project Management Team includes the Vice President of Operation, Operations Director, Project Manager, Construction Managers, Field Engineers and Coordinators, and supervisors. The Project Management Team is responsible for addressing concerns regarding excessive noise levels and/or referring these concerns to the EHS Staff and enforcing the provisions of this SOP.

4. Employees

It is the responsibility of every employee to protect his or her health and hearing by following the directives contained in this program. When questions arise, it is the

responsibility of each employee to seek guidance from the Project Management Team or the project EHS Staff.

5. WorkCare, Inc

Audiometric testing procedures are evaluated and implemented by the designated physician at WorkCare, Inc. WorkCare shall also maintain all medical records for Envirocon employees.

E. HEARING CONSERVATION PROGRAM OVERVIEW

1. OSHA regulation 29 CFR 1910.95(c)(1) states, “the employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent.
2. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with Appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.”

F. THRESHOLD LIMIT VALUES

1. The ACGIH and NIOSH define hazardous noise exposure as equal to or more than an 8-hour TWA sound level of 85 decibels, with an exchange rate of 3 dB. Because these limits are more protective of workers’ hearing than the OSHA standard, Envirocon has adopted the ACGIH Threshold Limit Values (TLVs) as the best practice exposure limits.
2. **ACGIH Threshold Limit Values and Dose Rates**

Duration	TLV	Dose%
16 Hours	82 dB	50
8 Hours	85 dB	100
4 Hours	88 dB	200
2 Hours	91 dB	400
1 Hours	94 dB	800
30 minutes	97 dB	~2800
15 minutes	100 dB	~4,000

G. NOISE MONITORING

1. Employee Exposure Determination

- a. *29 CFR 1910.95(d)(1)(ii) states, “where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring*

requirements of this paragraph unless the employer can show that area sampling produces equivalent results.”

- b. Envirocon will monitor noise exposure levels in a manner that will identify employees who are exposed to noise at or above 82 decibels dB(A). The exposure measurement must include all noise within an 80 dB to 130 dB range and must be taken during a typical work situation.**
- c. Results of the noise monitoring determine the extent of the necessary actions:**
 - i. If the 8-hour TWA equals or exceeds 85 dB(A), a medical surveillance plan, including audiometric testing, is required.*
 - ii. In addition, if the levels exceed 85 dB(A), engineering controls and administrative programs or personal protective equipment (PPE) must be implemented to control the exposure.*

2. Noise Survey

a. Initial Survey

- i. Every job utilizing equipment with the potential to generate noise levels greater than 82 dB(A) receives an initial survey. This survey determines whether a noise hazard is present, whether a more detailed survey is needed to evaluate actual 8-hour exposure levels, and what type of interim hearing protection is needed.*
- ii. A sound level meter that meets ANSI S1.4 in slow mode is used for the initial survey. This instrument will be calibrated with an acoustical calibrator before and after each noise survey.*
- iii. The Sound Level Meter should be held at arm's length, perpendicular to the noise path, and at a height equal to the employee's hearing zone.*
- iv. The microphone should be pointed between the noise source and the surveyor and pointed at the source.*
- v. At least 10 measurements should be made throughout the full work shift for each personal exposure determined and*
- vi. All noise level readings must be documented on Envirocon's Sound Level Meter Survey Form 1403.008.02.*

b. Individual Noise Exposure

- i. All employees whose 8-hour TWA noise exposure may exceed 82 dB(A) shall be subject to exposure measurements.*
- ii. A Noise Dosimeter should be used for this survey. When using these dosimeters, the microphone must be placed on the employee's shirt collar at the top of the shoulder closest to the employee's ear.*
- iii. Ensure that the microphone is not covered with any clothing or PPE.*
- iv. For a group of employees doing similar work with the same noise exposure, it is permissible to monitor the most highly exposed individual and assign this measurement to each group member.*
- v. Readings obtained during this survey should be recorded on Envirocon's Dosimetry Survey Form 1403.008.01.*

c. Frequency of Monitoring

- i. Sound level monitoring shall be initiated at any time that production processes or equipment present a potential for employee noise exposure levels above the OSHA action level 85.*
- ii. If results of the initial/documented noise survey indicate the noise level is continuous throughout the day, the sound level meter readings may be combined with estimates of the length of exposure of all individuals to particular sound levels in order to calculate the TWA;*
- iii. When circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, personal noise dosimeters should be used to obtain representative personal sampling and*
- iv. Regardless of the instrument or method chosen, noise levels must be measured whenever any change relating to operations is suspected of increasing exposures to the extent that additional employees may receive doses at or above the action levels or the attenuation provided by the selected hearing protectors is rendered inadequate.*

d. Computing TWAs:

- i. The 8-hour TWA sound level is the sound level that would produce a given noise dose if an employee were exposed to that noise level continuously over an 8-hour workday. This is true regardless of the length of the actual work shift.*

e. Dosimeter Settings

- i. Dosimeters may be set to read out in terms of dose or percent exposure according to either OSHA or ACGIH scales in accordance with manufacturers' instructions. Set the dosimeter to ACGIH settings for compliance with this procedure and OSHA scales for verification of OSHA compliance.*

H. AUDIOMETRIC TESTING

Envirocon shall establish and maintain an audiometric testing program for all employees whose exposures equal or exceed an 8-hour TWA of 85 decibels. This program may be administered in conjunction with other required medical examinations, such as those necessary for work at hazardous waste sites.

1. Components of Audiometric Testing

a. Program Costs

- i. The program shall be provided at no cost to the employees.*

b. Audiograms

- i. All audiograms accomplished under this program will meet the requirements of 29 CFR 1910.95.*

c. Baseline Audiograms:

- i. This audiogram must be given within 6 months of an employee's first exposure at or above the action level, the employer shall establish a valid baseline audiogram against which subsequent audiograms can be compared;*
- ii. These audiograms must be preceded by 14 hours of noise-free exposure;*

- iii. Both ears are examined in the 500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz, 4,000 Hz, 6,000 Hz; and
- iv. The following parameters are established for screening potential applicants:
 - a. 25 dB or lower in 500/1,000/2,000 frequencies (both ears)

d. Annual Audiograms:

- i. This test is to be given within 12 months of the baseline or previous annual for each employee exposed at or above an 8-hour TWA of 82 decibels and
- ii. Results of this test are compared to the baseline for determination of shifts in hearing.

e. Evaluation of Audiograms:

- i. Each employee's annual audiogram must be compared to the employee's baseline audiogram to determine if an STS has occurred. The comparison shall be made by the Occupational Physician/Medical Review Officer from WorkCare;
- ii. OSHA defines an STS as changes in hearing acuity that exceed an average of 10 dB or more at 2,000 Hz, 3,000 Hz, and 4,000 Hz in either ear relative to the baseline audiogram. Offices that fall under the guidelines of State OSHA use slightly different criteria;
- iii. Results of all baseline and annual audiograms must be sent to Envirocon's Director of EHS;
- iv. If a review of the annual and baseline audiogram indicates that an employee has experienced an STS as defined by Federal or State OSHA:
- v. The individual may be rescheduled for a retest within 30 days, and consider the results of the retest as the annual audiogram;
- vi. An audiologist, otolaryngologist, or qualified physician should review the audiograms to determine if there is a need for further evaluation and
- vii. If a comparison of the annual and/or 30-day retest audiogram confirms an STS, the employee must be notified in writing within 21 days of the determination
- viii. The Occupational Health Physician/Medical Review Officer will determine if the STS is work-related or aggravated by occupational noise exposure. This decision requires a review of all appropriate noise level readings taken on the various jobs the individual was assigned to.
- ix. If a clinical review determines that an STS has occurred and could be occupationally related:
- x. Employees not using hearing protectors shall be fitted with hearing protectors, retrained in their use, and provided with hearing protectors offering greater attenuation and
- xi. Employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors of greater attenuation.
- xii. If a subsequent retest and/or clinical review indicates that an employee does not have a demonstrated STS and is not exposed to noise greater than the 8-hour TWA [85 dB(A)]:

- xiii. *Inform the employee in writing of the new audiometric interpretation and*
- xiv. *The employer may discontinue the use of hearing protection at the discretion of the Senior Vice President of Health and Safety.*
- xv. *Revised Baseline: An annual audiogram may be substituted for the baseline audiogram when, in the judgment of the audiologist, otolaryngologist, or qualified physician who is evaluating the audiogram:*
- xvi. *The STS revealed by the audiogram is permanent or*
- xvii. *The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram. Hearing threshold levels that are 20 dB better at two or more frequencies than the baseline should be considered as significantly better or*
- xviii. *The old baseline should be left in the medical records with large bold markings on it that it has been superseded.*

f. Standard Threshold Shifts

- i. *If an employee's audiogram reveals that the employee has experienced a work-related STS in hearing in one or both ears, and the employee's total hearing level is 25 decibels or more above audiometric zero (averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS, the Director of EHS shall determine if it meets the criteria in 29 CFR 1904 for a new case to be included on the OSHA 300 Log*

I. HEARING PROTECTION

1. Hearing Protector Provision Requirements

- a. ***All Envirocon projects must provide hearing protectors at no cost to employees exposed to a noise level of 85 dB or greater.***
- b. ***Employees should be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the employer. OSHA interprets "variety" to mean at least one type of plug and one type of muff.***
- c. ***Addition requirements regarding hearing protection selection will depend upon the specific job, operational, and protective equipment limitations.***
- d. ***Supervisors shall ensure that hearing protectors are worn by any employee who is exposed to noise levels greater than or equal to 85 decibels and/or has experienced an STS.***
- e. ***Hearing Protector Attenuation:***
 - i. *Hearing protectors must attenuate or reduce the amount of high-frequency noise reaching the employee's inner ear to a minimum of an 8-hour TWA of 85 decibels;*
 - ii. *The specific amount of noise reduction provided by hearing protectors will vary depending on what brand of earplug or muff is used. This information is called a Noise Reduction Rating (NRR) and is printed on each package. The NRR is a laboratory-assigned number, which means that adjustments must be made to compensate for differences in fit and day-to-day use.*
 - iii. *OSHA recommends the following options to estimate a hearing protector's adequacy.*

- iv. *NIOSH Method 2: When using a sound level meter or noise dosimeter to obtain a workplace TWA in dB(C), subtract the NRR from the dB(C). The resulting number is the estimated A-weighted TWA under the ear protector or*
- v. *NIOSH Method 3: When using a sound level meter or noise dosimeter to obtain a workplace TWA in dB(A), subtract 7 dB from the NRR and subtract the remainder from the A-weighted TWA to obtain the estimated TWA under the ear protectors.*
- vi. *The final number must be less than the 8-hour 85 dBA ACGIH limit. If it is not, you must obtain a brand with a higher NRR or go to a combination of plugs and muffs.*

J. TRAINING

- 1. Employee training is an essential element of our operations. Proper training is required to provide personnel with the information necessary to ensure compliance with the Envirocon Hearing Conservation Program.**
- 2. Envirocon managers shall conduct a training program for all employees who are exposed to noise at or above 85 dB(A) and shall ensure employee participation in the program. The training program should be repeated annually for each employee included in the hearing conservation program. Training should include the following information or topics:**
 - a. The effects of noise on hearing;*
 - b. The purpose, advantages, disadvantages, and attenuation of the hearing protectors being offered; and*
 - c. The purpose of audiometric testing and an explanation of the test procedures.*
- 3. Portions of this training may be provided during the employee's annual audiometric exam.**

K. RELATED DOCUMENTS

None

L. ATTACHMENTS

Form 1403.008.01 – Noise Dosimetry Survey
Form 1403.008.02 – Sound Level Meter Survey

TITLE: Health and Safety Training Program		PREPARED BY: Mel Lockridge
SOP NO: 1403.009	PAGE: 1 of 11	AUTHORIZED BY: Matthew Curran, CSP, CIH – Director of EHS
EFFECTIVE DATE: 10/1999	REVISION DATE: 3/2024	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to define the overall process for ensuring employee job competency and qualifications and to define the specific procedures for the health and safety training component for behavior competency with regard to health and safety programs.

B. SCOPE

This SOP applies to all employees and subcontractors conducting work at Envirocon project location. The training programs include all categories of topics specified by:

- 29 CFR 1910.120, Hazardous Waste and Emergency Response Operations;
- Federal General Industry and Construction Safety (29 CFR 1910 and 1926) Regulations;
- Federal Mine Safety and Health Administration (30 CFR Part 48, 56, and 77) Regulations;
- Applicable state regulations;

C. DEFINITIONS

1. Competency

Competency is the ability of an individual to do a job properly. There are four primary elements of competency:

- Knowledge
- Skills

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- Behaviors
- Medical fitness

2. Knowledge Competency

Knowledge competency is a familiarity with job-related activities and duties which include facts and information.

3. Skills Competency

A skill competency is a learned ability to carry out certain activities in order to arrive at a pre-determined result with a limited expenditure of time and/or energy.

4. Behavior Competency

Behavior competency is a range of actions and mannerisms made in the conduct of carrying out activities.

5. Fitness for Duty (Medical Competency)

Fitness for duty is the physical ability to complete a task without detrimental effects on yourself or others. For purposes of this procedure, this is taken to be a medically qualified opinion.

6. Competent person

A person who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them

D. RESPONSIBILITIES

1. Health and Safety Department

Responsibilities include:

- Ensuring the content of the training meets the needs of the job.
- Ensuring the trainers are qualified to conduct the training.
- Maintaining a collection of approved curricula and/or approved providers to support this requirement.

2. Supervisors

Responsibilities include:

- Ensuring that their personnel are trained in accordance with the requirements of this SOP.
- Ensuring the job-specific training requirements in their project Health and Safety Plans (HASP), and Job Safety Analysis (JSA) documents are adhered to.

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3. Employees

Responsibilities include:

- Adhering to the behaviors instructed in the training that they receive.
- Completing all assigned training in a professional, honest, and truthful manner.
- Being proactive in asking questions or seeking answers when instruction is unclear.

E. CORPORATE HEALTH AND SAFETY TRAINING PROGRAM

1. Training Course Development

- The Envirocon courses were developed under the guidance of the Envirocon Director of EHS, Project Management Team members, subject matter experts, and the Senior Leadership Team (when applicable).***
- Training courses may be delivered using several platforms, which include:***
 - Computer-based Training (CBT) is completed by each employee using the internal learning management system (LMS) or a third-party vendor's system.*
 - Instructor Lead Training (ILT) is delivered by a qualified instructor to an individual or group of employees. This may or may not include the use of the LMS.*
 - A hybrid of computer-based training and instructor-led training.*
- All courses provided for employees shall be reviewed by competent persons and/or subject matter experts to ensure accuracy and compliance with relevant federal or state regulations.***

2. Instructor Qualifications

- All Envirocon instructors shall have the necessary experience or education (or a suitable combination) for the subject they will be presenting.***
- Instructors who only partially fulfill the education and/or experience requirement may only teach the course in the presence of a competent person or subject matter expert.***
- Instructors must have the necessary certifications or designations to teach certain courses when required by federal or state regulations.***
 - For example, all instructors for MSHA Part 48 New Miner or Annual Refresher Training must have a Surface Instruction (IS) designation from MSHA and be placed on the Envirocon MSHA training plan.*

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F. TRAINING COURSES

1. HAZWOPER 40-Hour Initial Training

Envirocon currently provides an initial 40-hour training course to all personnel, prior to assignment to HAZWOPER project. This course is designed to provide an employee with the background information necessary to evaluate the hazards associated with work around hazardous materials or conditions.

The course is designed to meet the 40-hour initial training requirements specified by *OSHA 29 CFR 1910.120*, commonly known as the HAZWOPER training.

The course agenda includes:

- Chemical hazards
- Selection/maintenance and decontamination of protective clothing
- Respiratory protection as outlined in *29 CFR 1910.134*
- Use and interpretation of results from air monitoring instrumentation
- Hazards and precautions necessary for working in hot or cold environments
- Safe working procedures for confined spaces
- Emergency responses/evacuations
- Explanation of applicable Envirocon SOPs
- How to use and interpret a site-specific HASP

The personal protective equipment (PPE) and respirator use section of this course allow students to receive a respirator fit test and to wear the protective gear required for Levels A, B, and C protection.

2. HAZWOPER 8-Hour Refresher

This course satisfies the provisions of *29 CFR 1910.120* which requires that workers, supervisors, and managers receive annual refresher training designed to reinforce and update current health and safety practices. This course is given to all Envirocon personnel on the anniversary date of their 40-hour course.

The course agenda includes:

- Legal Issues
- Respiratory Protection
- Physical Hazards
- Chemical Hazards
- Toxicology
- PPE
- Hazardous Waste Site Operations
- Revisions of applicable Envirocon SOPs

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3. Site-Specific Training for Unique or New Hazards

Envirocon requires that all employees receive additional training in the hazards unique to a job or project prior to the project's initiation. Courses may be site—or hazard-specific and can vary in length.

The Site-Specific Health & Safety Officer or Project Health & Safety Manager develops training material for each course. Instructors with specific expertise on the subject matter conduct the site-specific training courses.

Typical special training courses may include, but are not limited to:

- Handling medical waste / Blood Borne Pathogens
- Spill response and cleanup procedures
- Low-level radiation
- Demolition safety
- Fall protection
- Lead, arsenic, asbestos, etc awareness
- Emergency response procedures
- Special or uncommon tools or equipment
- Confined spaces
- Defensive Driving

4. Cardiopulmonary Resuscitation (CPR), Automated External Defibrillators (AED), and First Aid Training

Select employees will receive semi-annual CPR-AED-First Aid training by certified instructors. Instructors must be certified by a major, well-known training center such as:

- American Heart Association (AHA)
- American Red Cross (ARC)
- National Safety Council (NSC)
- Medic First Aid / American Safety & Health Institute (MFA / ASHI)

The curriculum of each specific course will be based on the individual training center's provided content, whether in-person, hybrid, or online.

5. Hazard Communication Program

All Envirocon employees receive training to meet the requirements of *29 CFR 1910.1200*. This training ensures that employees understand the hazards and proper handling of hazardous materials.

The course agenda includes:

- Location and use of Safety Data Sheets (SDSs)
- Labeling of chemical containers

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- HazCom Program Management
- Specific training for any chemicals brought onto a site

The site-specific HASP will include a list of all hazardous materials brought on-site and copies of SDSs for each.

6. Excavation Competent Person (ECP)

This course is designed to give supervisors and Safety Competent Persons (SCP) the knowledge and skills necessary to satisfy the requirements of a Competent Person in the OSHA excavation standards *29 CFR 1926.650 through 652*.

The course agenda includes:

- Regulatory compliance
- Soil classification and soil mechanics
- A concentrated explanation of protective systems
- How to understand Tabulated Data

Excavation competent person training can also be taken as an online course from a certified instructor. After the course is complete, employees must review the relevant Envirocon SOPs.

7. Health & Safety Department Training Videos & CBT

a. *Internal Envirocon Procedures Training Videos*

The Envirocon EHS Department has created several internal training videos covering various health and safety subjects. These training videos are used for Safety Competent Persons or can be used to train newly hired employees or promoted managers and supervisors.

These training videos are located on the Envirocon Learning Management System (LMS). The LMS catalog provides a complete list of available training.

b. *Computer Based Training (CBT)*

Envirocon may use third-party vendors to deliver computer-based training (CBTs) to augment training requirements or for specific job skills training. These courses are provided by approved vendors that provide content, testing, and certificates that satisfy OSHA requirements.

8. Safety Competent Person (SCP) Training

The OSHA HAZWOPER (Hazardous Waste Operations and Emergency Response) standard requires that a safety and health-competent person be on site during hazardous waste operations, tasked with implementing and overseeing the site's safety and health plan to ensure worker protection and regulatory compliance.

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The Envirocon Safety Competent Person (SCP) training is designed to give employees specific knowledge of the various requirements of the Envirocon EHS Program and applicable OSHA regulations. This training may also be used to train newly promoted or hired supervisors or managers.

This training consists of the following components:

- An OSHA 30-hour Construction course. This may be completed online or in person.
- Internal Envirocon training videos. See the LMS catalog for the latest training video list.
- CPR-AED-First Aid certification obtained by a nationally recognized training center such as:
 - American Heart Association (AHA)
 - American Red Cross (ARC)
 - National Safety Council (NSC)
 - ASHI / Medic First Aid
- An in-the-field evaluation of the applicant. The evaluation will cover knowledge of the material from the training, site review with hazard identification, and inspection of project H&S records, including contractor and oversight documents.
- Safety Competent Person training documentation and information can be found in 1403.009.01 – Safety Competent Person Training Packet.

9. Competent Person Training

OSHA requires the designation of competent persons in several specific areas to ensure workplace safety in both general industry and construction settings. In addition to the competent person designations listed above, the following competent person designations may be required on an Envirocon project, depending on the scope of work:

a. Scaffolding (29 CFR 1926.451)

A competent person must supervise the erection, movement, dismantling, and alteration of scaffolds to ensure they meet safety standards.

b. Fall Protection (29 CFR 1926.500)

A competent person must be involved in the implementation of the fall protection plan and ensure the proper setup of fall protection systems.

c. Demolition (29 CFR 1926.850)

Demolition activities must be conducted under the supervision of a competent person who can identify potential hazards related to the structure's stability and employee exposure to materials.

d. Cranes and Derricks (29 CFR 1926.1413 and 29 CFR 1926.1425)

A competent person must inspect cranes and other hoisting equipment to ensure it is safe to operate.



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- e. Confined Spaces (29 CFR 1910.146 and 29 CFR 1926 Subpart AA)**
A competent person must evaluate confined spaces to determine if they are permit-required and if so, implement the appropriate safety measures and entry procedures.
- f. Personal Protective Equipment (PPE) (29 CFR 1910.132)**
A competent person is required to assess the workplace to determine if hazards are present that necessitate the use of PPE and ensure the proper selection, maintenance, and use of PPE.
- g. Lockout/Tagout (29 CFR 1910.147)**
A competent person must oversee the lockout/tagout procedures to ensure that machinery is properly shut off and not started up again before the completion of maintenance or servicing work.
- h. Asbestos (29 CFR 1926.1101)**
A competent person is required for asbestos abatement projects, responsible for setting up and ensuring compliance with safety protocols, including exposure monitoring and the establishment of regulated areas.
- i. Hazardous Waste Operations and Emergency Response (HAZWOPER) (29 CFR 1910.120)**
A competent person must supervise hazardous waste operations, ensuring compliance with safety practices and emergency response procedures.
- j. Steel Erection (29 CFR 1926 Subpart R)**
A competent person must supervise steel erection activities, including identifying and correcting hazards associated with structural stability and fall protection.
- k. Lead (29 CFR 1926.62)**
In construction activities involving lead, a competent person is required to implement and monitor lead-safe work practices and compliance with regulatory standards.

10. Competent Person Training

The following general procedure shall be used to identify, train, and designate competent persons at Envirocon projects:

- a. Candidate Nomination**
 - Project Managers or Project Health and Safety Managers may nominate individuals based on their experience, skill set, and the specific needs of the project.
- b. Training Requirements**
 - All nominated individuals must complete the following core training modules:
 - Understanding OSHA Regulations
 - Hazard Identification and Risk Assessment
 - Compliance and Hazard Control Measures
 - Emergency Response

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- Additionally, candidates must complete specialized training relevant to their specific area of operation, as dictated by OSHA standards and project requirements. This may include site-specific JSAs, client program requirements, or additional regulatory requirements.
- Training may be delivered through a combination of classroom instruction, online courses, and hands-on practical exercises.
- External certified trainers, approved computer-based trainers, or internal experts with appropriate qualifications may conduct the training sessions.

c. Training Documentation

- Except where previous experience and knowledge have been deemed sufficient, candidates must pass both written and practical assessments to demonstrate their proficiency in the relevant safety protocols and their ability to act competently.
- Upon completion of the training, the competent person designation shall be documented on the 1403.009.02 – Site Competent Person Designation Form and added to the site-specific HASP.
- The new competent person designation form will be added to the employee's training profile.
- Refresher of the competent person training may be required based on OSHA regulations, changes in the work environment, regulations, or procedures, or as an internal requirement. Competent persons should make reasonable attempts to stay current on the subjects of their designations.

G. TRAINING EVALUATIONS

A critical component of Health and Safety training is assessing its effectiveness. This evaluation helps instructors, supervisors, and management identify the training's benefits and areas needing enhancement.

Envirocon distributes a standard evaluation form to participants after every internally developed training session. Computer-based training (CBT) courses request evaluations upon completion. Supervisors and Managers for Envirocon may provide course effectiveness feedback to the providers and the Director of EHS. The feedback will be used to evolve and improve the course content.

H. RECORDKEEPING

Training documentation, including employee certificates, will be maintained at both the project site and by the Corporate EHS Department. These records will include project-specific training, verified through training attendance sheets signed by the trainer and attendees. The Health and Safety Officer or the designated Safety Competent Person will hold copies of these project training records.

1. New Employees

- New employees will be required to provide documentation of prior health and safety training.

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- Training certificates from previous employers may be accepted to meet the corporate training program requirements.
- The H&S Administrator will evaluate training documentation to determine the degree to which such training meets the applicable requirements. The Director of EHS shall have final discretion on whether or not a previous training will be accepted.
- New employees may also be required to demonstrate competency in the topics included in the courses listed above before engaging in any field activities involving exposure to occupational health hazards.
- All new employees must receive training on the site Health and Safety Plan and other applicable programs before beginning work.

I. SUBCONTRACTOR HEALTH AND SAFETY REQUIREMENTS

Subcontractors are required to comply with the health and safety requirements set forth by each project, this EHS Program, and applicable regulatory requirements.

1. Project Subcontractor Training

a. *Prior to starting work on any Envirocon project, subcontractors are required to provide documentation of:*

- Physical exams / Medical Monitoring as needed
- Regulatory required training
- Respirator fit testing as needed
- Tool and equipment qualification upon request.

b. *Subcontractor employees will be required to be trained on the following subjects prior to beginning work at a project site:*

- Site-Specific Health And Safety Plan (HASP)
- Control of Work
- Incident Reporting
- Emergency response and evacuation procedures
- Site-Specific client requirements as per the HASP

c. *Additional training, based upon job requirements, may include but not be limited to:*

- Confined space entry training
- Cranes and rigging
- Lock-Out / Tag-Out
- Demolition safety
- Contaminant of concern awareness training such (but not limited to):
 - Lead
 - Arsenic
 - Asbestos

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2. Medical Monitoring

Subcontractor medical exams must be equivalent to, or exceed, those required under the Envirocon Corporate Medical Monitoring Program. The Director of EHS may grant exemptions to this requirement based on the unique circumstances of the project and the subcontractor's scope of work.

3. Records

Subcontractors will be required to submit records documenting the dates of medical exams and training completed by all personnel who will be present on a project site. This information will be submitted to the Project Management Team before the start of a project and will be maintained along with employee records.

The subcontractor will also be required to submit copies of employee training certificates and medical exam "Fit for Duty" as evidence of compliance with applicable standards.

J. RELATED DOCUMENTS

SOP 1403.005: Medical Monitoring Program

SOP 1403.017: Site Health and Safety Plan

K. ATTACHMENTS

1403.009.01 – Safety Competent Person Training Packet

1403.009.02 – Site Competent Person Designation Form



STANDARD OPERATING PROCEDURE

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to address health, safety, and environmental concerns with regard to the selection, procurement, handling, and use of hazardous chemicals on Envirocon project sites in compliance with state and federal agencies and sound industrial hygiene practices. This program addresses all aspects of hazardous material product use including inventory of potentially hazardous products, procurement of new products, procedures for safe handling and use of products, and worker health awareness through Hazard Communication

B. SCOPE

This SOP applies to all Envirocon employees at all project sites where hazardous chemicals are used. It shall apply to all subcontractors, vendors, and visitors who may be exposed to potentially hazardous products. Subcontractors shall be made aware of the provisions and requirements of this program prior to the initiation of on-site work. Subcontractors shall follow all provisions of this program if their work requires interaction with hazardous chemicals.

C. DEFINITIONS

1. Chemical Inventory List

A project-specific chemical inventory list will be developed for each project and maintained at the job site along with the appropriate SDSs. When new chemicals arrives at a project site, a copy will be made of the SDS will be added to the project SDSs folder. Any new chemicals will be added to the project's chemical inventory list as soon as possible, preferably before they arrive on-site and prior to being used by employees.

2. Subject Matter Expert

A subject-matter expert (SME) is a person who is an authority in a particular area or topic.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS is responsible for:

- The development and implementation of the Hazard Communication Program,
- The review and approval/denial of products used in any projects.
- Ensuring proper communication, training, and availability of the program to all employees, contractors, and visitors.

2. Project Management Team

The Project Management Team generally includes the project-specific Project Manager, Project Engineer and/or Coordinator, Construction Manager, and Supervisors. The Project Management Team is responsible for:

- Collaborating with the site-HSO/SCP to ensure this procedure is enforced.
- Making project employees available for training.
- Supporting completion of all corrective actions identified from this procedure in a timely manner.

3. EHS Department Personnel

EHS Department personnel generally includes the project-specific Health & Safety Manager, Health & Safety Officer(s), and any Safety Competent Persons (SCPs). Project Health and Safety personnel are responsible for:

- Implementation of this procedure.
- Providing guidance of this procedure to the management team.
- Serving as SMEs, taking an active role during project planning and execution of the fieldwork related to this procedure.
- Ensuring work is performed in accordance with the HASP, applicable regulations, and SOPs.

E. HAZARD COMMUNICATION PROGRAM

1. Program Components

a. The Envirocon Hazard Communication Program meets or exceeds all requirements outlined in OSHA 29 CFR 1910.1200 and 1926.59 or as mandated by applicable state and local laws. The key provisions of this program are:

- i. Chemical inventory lists;*
- ii. Proper labeling of hazardous chemicals;*

- iii. *Access to all relevant SDSs;*
- iv. *Employee training;*
- v. *Ensuring copies of the Hazard Communication Program and SDSs are available to all employees.*

2. Employee Rights

- a. **29 CFR 1910.1200 and applicable state standards contain specific employee rights/provisions, including the requirement that employees be informed of their rights under the standard. These rights include:**
 - i. *Receipt of effective information and training on hazardous chemicals in the work area at the time of initial assignment and whenever a new chemical hazard is introduced into the work area;*
 - ii. *The ability of their physician or bargaining unit to receive information regarding the substances to which the employee may be exposed;*
 - iii. *Protection against discharge or disciplinary action for exercising the rights provided to them;*
 - iv. *Receipt of information regarding the requirements of the standard;*
 - v. *Notification of operations in the work area where hazardous materials are present, and;*
 - vi. *Notification of the location and availability of this written program, including the required list(s) of hazardous chemicals and the SDSs required by the standard.*

F. CHEMICAL INVENTORY

1. **An initial inventory must be made of all chemicals used or stored at the work location (e.g., office, trailer, warehouse, mechanic truck, Conex box, etc.).**
2. **The chemical inventory must include any chemical that is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.**
3. **Chemicals which may be exempt from the requirements of this program include:**
 - a. ***Any hazardous waste subject to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act;***
 - b. ***Any hazardous substance subject to the Comprehensive Environmental Response, Compensation, and Liability Act when the hazardous substance is the focus of remedial or removal action;***
 - c. ***Tobacco or tobacco products;***
 - d. ***Wood or wood products, including lumber which will not be processed, where it can be established that the only hazard posed to employees is the potential for flammability or combustibility;***
 - e. ***Food or beverages that are sold, used, or prepared in a retail establishment and foods intended for personal consumption of employees while in the workplace;***

- f. Any drug, as defined in the Federal Food, Drug, and Cosmetic Act, when it is in solid, final form for direct administration to the patient (e.g., tablets or pills); drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs); and drugs intended for personal consumption of employees while in the workplace (e.g., first aid supplies); and/or*
- g. Any consumer product or hazardous substance as defined in the Consumer Product Safety Act and Federal Hazardous Substances Act where the employer can show that it is used in the workplace for the purpose intended by the manufacturer or importer of the product and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended (e.g., cleaning supplies).*

G. HAZARD DETERMINATION

Each chemical on the inventory list must be classified as hazardous or non-hazardous. The manufacturer, an Envirocon Certified Industrial Hygienist (CIH), and/or Envirocon's Director of EHS can make this determination.

1. Evaluation

Before any new product is procured or brought onsite, an evaluation will be performed to determine if:

- a. Another product currently in use is adequate for the intended application, and the acquisition of the product will enhance the efficiency of Bridger Steel operations;*
- b. The product in question will increase company liabilities in the areas of OSHA or EPA regulatory compliance and the health and safety of employees.*

2. Hazardous Material Review

- a. Product manufacturers are responsible for determining the potential hazards their products pose and conveying this information through SDS sheets and product labels.*
- b. Safety Data Sheets (SDS) sheets and product labels for products obtained from suppliers and manufacturers will be reviewed for completeness. If the information supplied by an SDS or label is deemed to be inadequate, the person determining the inadequacy will request an improved SDS and/or label from the supplier or manufacturer. If the manufacturer or supplier does not respond to the request, alternate sources for the product(s) should be sought.*
- c. The employee procuring the product will ensure that a copy of the manufacturer's SDS is immediately put on file prior to use. The Project HSO/SCP shall maintain a copy of the SDS.*
- d. Should a product be deemed unacceptable for use at an Envirocon project site, it shall be removed from use immediately and properly disposed of. The SDS will be removed from the master chemical list.*

3. Reference Sources

- a. ***In the absence of an SDS or other product manufacturer's information, other reference sources for consultation include:***
 - i. *29 CFR part 1910, Subpart Z, Toxic and Hazardous Substances;*
 - ii. *Applicable state or local hazardous substances list;*
 - iii. *Threshold Limit Values (TLVs) for Chemical Substances and Physical Agents in the Workplace, American Conference of Governmental Industrial Hygienists;*
 - iv. *Dangerous Properties of Industrial Materials, Sax; and*
 - v. *EPA criteria of corrosivity, toxicity, flammability, and reactivity.*
- b. ***Employers are not required to evaluate chemicals unless they choose not to rely on the evaluation performed and provided by the chemical manufacturer.***
- c. ***When evaluating mixtures, the regulation assumes the mixture has the same hazards as the components that comprise at least 1% of the mixture. A mixture is assumed to present a carcinogenic hazard if it contains at least 0.1% of a carcinogen.***

H. SAFETY DATA SHEETS

1. Safety Data Sheets (SDSs) Policy

- a. ***When purchasing or receiving hazardous chemicals, the purchaser/receiver shall request the SDS from the manufacturer or distributor. Once the SDS is received:***
 - i. *All employees who may use or who may be exposed to the hazardous chemical shall receive training on the proper handling, usage, and storage of the chemical;*
 - ii. *The hazardous chemical shall be added to the site chemical inventory, and the SDS shall be placed in the site SDS binder (where the SafePersonnelSDS online service is not used or the SDS is not available through the service); and*
 - iii. *Remove any prior versions of the SDS from the site.*

2. Specific Applications

- a. ***Specific applications at Envirocon offices and job sites require the Health and Safety Training Coordinator (typically the HSO/SCP) to be responsible for monitoring the SDS system, including establishing and monitoring the employee training and information program. Specific applications on job sites include:***
 - i. *When Envirocon employees may be exposed to hazardous chemicals other than those being used by Envirocon (e.g., spill response, remediation activities, exposure to hazardous chemicals used by others), the relevant SDSs must be requested from the entity responsible for the hazardous chemical (e.g., clients, subcontractors, other contractors). These SDSs shall be readily available to all employees for the duration of the job or potential exposure conditions. If necessary, submit copies of the SDS(s) to Health & Safety Document Control for inclusion in the company database.*

- ii. *An SDS binder shall be maintained at each job site for any hazardous chemicals used on the site.*
 - a. These binders should be identified with a printed cover sheet in a distinguishing color and labeled SDSs.
 - b. The Project Manager or designee shall ensure that the work areas, storage areas, and vehicles are inspected on a regular basis to ensure that all hazardous chemicals have been included in the chemical inventory and that SDSs are available.
- iii. *The Project Manager or designee shall periodically interview personnel to ensure they know the location of or understand how to access this written plan, the site chemical inventory, and relevant SDSs. The Project Manager or designee may also choose to review this information during safety meetings with all personnel periodically.*
- iv. *The Health & Safety Administrator shall ensure that affected employees are trained when new hazardous chemicals are procured for the work site.*

3. Alternative SDS Compliance Methods

- a. ***An alternative to maintaining a binder of SDSs on-site is to use Envirocon’s web-based inventory of SDSs, which is currently available on SafePersonnelSDS online, to access SDSs. This alternative may only be used if (a) all site employees can readily electronically access the website and (b) the project HSO/SCP has verified that all chemicals used on site are listed in the web-based inventory.***
- b. ***In the absence of an SDS, an equivalent document must be obtained. These are presented to employees and filed in the same manner as SDSs.***
- c. ***SDSs will be available for review to all employees during each work shift. Copies will be made available upon request.***
- d. ***When new information for a hazardous chemical becomes available, the SDS must be updated within 3 months of receipt of the new data. The manufacturer or distributor is not required to provide an updated SDS until subsequent purchases of the hazardous chemical are made.***

I. CONTAINER LABELING

1. Labeling Requirements

- a. ***Labels on shipped containers (i.e., the original container) shall include the following information:***
 - i. *Product Identifier – The name or number used for a hazardous chemical by which the user can identify the chemical;*
 - ii. *Signal Word – A word used to indicate the relative level of severity of the hazard. The signal words used are “Danger” (more severe) and “Warning” (less severe);*
 - iii. *Hazard Statement – A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of the hazard;*

- iv. *Pictogram(s) – A graphic intended to convey specific information about the hazards of a chemical;*
 - v. *Precautionary Statement – A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure or improper storage or handling and*
 - vi. *Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.*
- b. Workplace labels (i.e., those on secondary containers or those applied to original containers where the original label is missing, damaged, or illegible) shall include the following information:**
- i. *The information required for labels on shipped containers; or*
 - ii. *Product identifier and words, pictures, symbols, or a combination thereof that provide at least general information regarding the hazards of the chemical and that, in combination with other information available (e.g., SDS), will provide employees with specific information regarding the chemical's physical and health hazards.*
 - iii. *Label Verification and Handling*
- c. When a hazardous chemical is brought to the work site, the Envirocon Project Manager or designee is responsible for ensuring that the label on the container meets the above criteria.**
- d. The Project Manager or designee will verify that all shipped containers received for use are clearly labeled as to the contents, the appropriate hazard warning, and the name and address of the manufacturer.**
- e. The Project Manager or designee will ensure that all secondary containers are labeled with a copy of the original label or are labeled in accordance with the above section for workplace labeling.**
- f. If chemicals are transferred to other containers for immediate use by the person who transferred the material, there are no labeling requirements for the secondary container. However, if the person is no longer in control of the container for any reason (e.g., the employee needs to use the restroom or is called away from the immediate work area), a label must be affixed.**
- g. If the chemical is transferred for use by another employee or for use at a later time, then a label must be affixed to the secondary container.**

J. TRAINING

1. Training Topics

- a. Prior to working with hazardous materials, each new employee will attend a health and safety orientation that includes the following information and training:**
 - i. *An overview of the requirements of the Envirocon Hazard Communication Program.*
 - ii. *Hazardous chemicals present in the workplace.*

- iii. *Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.*
 - iv. *The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards of the chemicals in the work area, as well as hazards not otherwise classified.*
 - v. *The measures employees can take to protect themselves from these hazards, including specific procedures Envirocon has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and PPE to be used.*
 - vi. *The symptoms of overexposure.*
 - vii. *How to read labels and review SDSs and other sources of chemical information.*
 - viii. *Location of the SDS file and written Hazard Communication Program and*
 - ix. *Emergency response.*
- b. After attending the training, each employee shall sign a form indicating their understanding of the information listed above. This form shall be maintained in the employee's training record.**
- c. All affected employees shall be trained for hazards associated with non-routine tasks prior to beginning the task. This training may take place as part of the task briefing, safety meeting, or site orientation.**
- d. Accommodations shall be made for employees who are non-English speaking.**

2. Introduction of New Chemical Hazards

Prior to introducing a new hazardous chemical to the work site, all affected employees shall be provided with training for the safe handling, use, and storage of the chemical.

K. PURCHASING REQUIREMENTS

- 1. All chemicals purchased for use at project work sites and offices shall be obtained from the manufacturer or distributor. The SDSs must be maintained at the work site or office for reference by employees who use or could be exposed to the chemical.**
- 2. While SDSs are not required for materials purchased through normal consumer vendors such as hardware stores, the employer is still required to maintain a copy of the product at the job site/office unless utilizing the SafePersonnelSDS online service as outlined in Section H.2 above.**
- 3. If there is any difficulty in obtaining an SDS for a product, the HSO/SCP will contact the distributor/manufacturer to obtain the proper SDS. If necessary, there are provisions in the OSHA standard for additional action to obtain the information.**

L. INFORMING CONTRACTORS

- 1. The Health and Safety Officer or the Safety Competent Person is responsible for providing other contractors at the work site who may be affected by the use of hazardous chemicals with information about the hazardous chemicals their employees may be exposed to at the work site and protective measures that can be taken to prevent exposure.**

2. To satisfy this requirement, other contractors may be provided with a copy of the Site Health and Safety Plan and/or relevant SDSs.

M. SPECIFIC RESPONSIBILITIES AND PROGRAM LOCATIONS

1. The Project Management Team (e.g., Project Manager, Health & Safety Manager/Officer/Tech) is responsible for ordering chemicals, maintaining the chemical inventory and site SDSs, and container labeling requirements.
2. A copy of the Hazard Communication Program shall be made available at each office and job site location.
3. Location-specific SDSs are located at each office or job site unless there is a plan to access SDSs through Envirocon's online database, SafePersonnelSDS. A chemical inventory shall be maintained at each location, regardless of the use of the online database.
4. Questions regarding this program should be directed to the health and safety staff assigned to the location or to the Director of EHS.

N. RELATED DOCUMENTS

None.

O. ATTACHMENTS

None.



STANDARD OPERATING PROCEDURE

TITLE: Code of Safe Work Practices		PREPARED BY: Matthew Curran, CSP, CIH – Director of EHS
SOP NO: 1403.011	PAGE: 1 of 30	AUTHORIZED BY: Peter Joy – President
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A. PURPOSE

This Standard Operating Procedure (SOP) addresses various accident prevention program requirements as part of Envirocon’s Environment, Health, and Safety (EHS) Program.

B. SCOPE

This SOP applies to all Envirocon projects, offices, and activities. All Envirocon employees are required to follow these safe work practices at all times unless appropriately modified by task-specific hazard analysis as described in Section F (below).

The application of this SOP is not intended to replace or supersede any other EHS SOPs but rather to augment them. It is also not intended to replace site-specific procedures developed to meet the requirements of contract specifications or federal, state, or local regulations.

As written, Envirocon's Code of Safe Work Practices is not intended to meet the site-specific requirements of California's *Title 8 CCR*, as the name might imply. However, this procedure may be incorporated by reference, in whole or in part, in any future Envirocon site-specific procedures as appropriate.

C. DEFINITIONS

1. **Stop Work Authority:**

The right and responsibility of any employee to halt a task or operation when a hazardous condition is recognized or if there is a concern regarding the safety of the work being performed. This authority enables employees to prevent incidents by addressing risks proactively without fear of retribution.

2. **Competent Person:**

An individual designated by the employer who can identify existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

3. **Hazardous Atmospheres:**

Any atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness from one or more of the following causes: flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL); airborne combustible dust at a concentration that meets or exceeds its LFL; atmospheric oxygen concentration below 19.5% or above 23.5%; atmospheric concentration of any substance that exceeds its permissible exposure limit (PEL); or any other atmospheric condition that is immediately dangerous to life or health (IDLH).

4. **Red Tag:**

A safety tag is used to identify equipment, machinery, or power sources that are defective, damaged, or otherwise unsafe to use. This tag warns all personnel not to operate or use the tagged item until the identified hazards have been rectified and the tag is officially removed by authorized personnel.

5. **Management of Change (MOC):**

A formal process for managing safety, health, and environmental risks associated with changes to processes, materials, equipment, or personnel. MOC ensures that all changes are evaluated, authorized, and correctly implemented to maintain safety and operational integrity.

D. RESPONSIBILITIES

1. **Senior Leadership Team (President, Vice President, etc.)**

The Senior Leadership team is responsible for:

- a. ***Cultivating a culture where safety is a value, not just a priority, influencing behaviors and attitudes towards safety at all levels.***

- b. Ensures the provision of necessary resources (financial, human, and technological) to support effective EHS management.*
 - c. Ensures all departments throughout the organization are enforcing the EHS policies and programs outlined in this SOP.*
- 2. Director of EHS (Environmental, Health, and Safety)**

The Director of EHS is responsible for:

 - a. Leading the development, implementation, and continuous improvement of EHS policies and programs.*
 - b. Ensuring that all policies and programs comply with all applicable environmental, health, and safety regulations and standards.*
 - c. Ensuring that adequate resources to support EHS activities are available.*
- 3. Health & Safety Manager**

The Health & Safety Manager is responsible for:

 - a. Coordinating with project teams to develop Health and Safety Plans (HASPs) to specific project requirements with policies outlined in this SOP.*
 - b. Overseeing the training programs for health and safety, ensuring all site personnel are equipped with necessary knowledge and skills to work safely.*
 - c. Conducting regular health and safety audits, ensuring adherence to established policies and procedures outlined in this SOP.*
- 4. Health & Safety Officer**

The Health & Safety Officer is responsible for:

 - a. The on-site implementation and enforcement of health and safety policies and procedures as outlined in the HASP.*
 - b. Conducting daily health and safety inspections and monitoring, ensuring a safe working environment for all personnel.*
 - c. Leading incident investigations and recommending changes to policies or procedures when necessary.*
 - d. Updating site-specific policies and procedures in coordination with the Health and Safety Manager when necessary.*
- 5. Project Manager**

The Project Manager is responsible for:

 - a. Demonstrating a commitment to EHS in all project activities and being accountable for overall project safety performance.*
 - b. Ensuring EHS requirements are integrated into project planning and execution, including adherence to the site-specific HASP and client requirements.*
 - c. Works closely with the Health & Safety Manager and Officer to implement safety measures and respond to safety concerns.*

6. Employees

Employees are responsible for:

- a. Adhering to all safety policies, procedures, and training.*
- b. Actively participating in safety meetings, investigations, and training.*
- c. Identifying and reporting hazards or unsafe conditions to supervisors or health and safety personnel.*
- d. Initiating a stop work order in the event a hazard or other risk to safety is identified or if the scope of work is questioned..*

E. REGULATORY BASIS

The Code of Safe Work Practices is designed to be an encompassing document that integrates various health and safety policies and procedures relevant to Envirocon's operations. This SOP draws upon a wide range of regulatory requirements, ensuring both regulatory compliance and the use of safe work practices across all projects and activities. The foundation of this SOP is rooted in the regulations established in 29 CFR 1910 and 1926, alongside specific considerations from Cal-OSHA, MSHA, and other applicable state-run health and safety programs as necessary.

OSHA's 29 CFR 1926.20, "General Safety and Health Provisions," serves as a critical reference point for this SOP. It outlines employers' responsibilities in maintaining a safe work environment, emphasizing the need for accident prevention programs, regular inspections, and the correction of hazardous conditions.

In instances where additional federal, state, local, or consensus regulations or requirements are relevant to a project, those requirements will be integrated into the Site-Specific Health And Safety Plan (HASP). Where these additional requirements require more stringent procedures or policies than what is outlined in this SOP, Envirocon shall follow those requirements.

1. Alternative Compliance

It is Envirocon's intention to encourage employee participation in safe work planning and to encourage and address hazard controls through the use of task-specific hazard analysis and planning. In the event that the rules, procedures, or safe work practices required here conflict with task-specific controls, the task-specific alternative controls shall be submitted to the Director of EHS for review and approval. Task-specific alternative procedures approved in this manner shall supersede the requirements of this procedure.

F. GENERAL COMPLIANCE

Adherence to all policies outlined in all Standard Operating Procedures (SOP) is mandatory, regardless of the specific task being performed. This means that even if an existing policy is not explicitly mentioned within a particular section of this SOP but is stated elsewhere, it still applies. Therefore, employees must familiarize themselves with all applicable SOPs to understand and implement all applicable safety measures consistently across all tasks.

The following rules are considered to be general safe work practice requirements.

1. Hand Tool Safety

a. General Hand Tool Safety

- i. Employees shall be trained on basic hand tool safety prior to starting work.*
- ii. Where the manufacturer provides a manual or operating instructions, the operator must be familiar with it and follow all safe work practices and recommendations.*
- iii. All hand tools shall be inspected daily prior to use and maintained in safe condition. Unsafe, damaged, or defective tools must be removed from service. Hand tools may not be modified or altered unless expressly approved by the manufacturer.*
- iv. The operator shall ensure they have correct Personal Protective Equipment as per the job safety analysis (JSA) before beginning any task involving hand tools.*
- v. Nails, bolts, and/or other small hardware items shall not be held or placed in the mouth during assembly or use.*
- vi. Hand tools should only be used in a well-lit area that is free from clutter and debris.*
- vii. When not in use, hand tools should be stored in a manner that prevents damage or unnecessary wear and tear.*

b. Knives and Cutting Tools

- i. Knives and other cutting tools shall only be used in accordance with an established JSA.*
- ii. Folding and straight-blade pocket knives are generally considered not to be the right tool for the job. In lieu of personal pocket knives, a task-specific cutting tool should be used.*
 - a. Hook blades should be used for liner cutting or other similar fabrics.*
 - b. Dikes (diagonal pliers) should be used for cutting zip ties or similar.*
 - c. Auto-retracting utility knives should be used when available and practical.*
- iii. All cutting tools shall be well-maintained and sharp. Utility blades shall be changed out regularly.*
- iv. Cut-resistant gloves shall be worn when using a cutting tool.*
- v. When using a cutting tool, maintain a firm grip and cut away from the body.*
 - a. When holding the material to be cut, ensure that all fingers are out of the path of the cutting tool.*
- vi. Cutting tools may not be used as improvised tools. Extreme caution should be taken not to torque or twist the blade.*
- vii. Cutting tools should be adequately cleaned after cutting when necessary and stored in a manner that prevents excessive wear and tear.*

c. Power Tools

- i. Employees shall be trained on basic power tool safety prior to starting a task. Power tools must be operated according to the manufacturer's specifications, with all safety features, including guards, intact and unmodified.*

- ii. *Power tools shall be inspected before each use. Unsafe, damaged, or defective tools shall be removed from service.*
 - a. *Damage to the electrical cord or plug must be repaired by a qualified person and be restored to OEM or better condition.*
 - b. *Damaged or bulging batteries shall be taken out of service immediately and properly disposed of.*
- iii. *The employee shall ensure they have the correct Personal Protective Equipment as per the job safety analysis (JSA) before beginning any task involving hand tools.*
- iv. *Power tools shall not be manipulated, carried, or handled by the power cord.*
- v. *Power tools shall be disconnected from their power source when not in use, changing bits, blades, or other moving parts.*
- vi. *Only tools that are double insulated or with three-wire plug may be used.*
- vii. *For battery-operated power tools, the manufacturer recommended battery and charger shall be used.*
- viii. *Battery-operated power tools shall not be stored in a manner that exposes them to extreme hot or cold temperatures.*
- ix. *Batteries shall be charged and stored in accordance with manufacturer recommendations and the guidelines outlined in Section H.*
- x. *Power tools should be adequately cleaned after use as necessary and stored in a manner that prevents excessive wear and tear.*

d. Pneumatic Tools

- i. *Employees shall be trained on basic pneumatic tool safety before beginning a task. Pneumatic tools must be operated according to the manufacturer's specifications, with all safety features, including guards, intact and unmodified. Employees shall review the manufacturer's specifications regarding all safety features and precautions of air compressor equipment.*
- ii. *Pneumatic tools and attachments shall be inspected prior to use. Unsafe, damaged, or defective tools shall be removed from service.*
- iii. *Whip checks should be in place on high-pressure (greater than 30 PSI) or large-diameter hoses to prevent injury in the event of inadvertent disconnection of hoses.*
- iv. *The employee shall ensure they have the correct Personal Protective Equipment as per the job safety analysis (JSA) before beginning any task involving pneumatic tools.*
- v. *Before an employee uses a pneumatic tool, they should check:*
 - a. *Air hose connections*
 - b. *Air supply to ensure it is clean, dry, and free from contamination.*
 - c. *The pressure gauge to ensure the proper air pressure is being used.*

e. Powder-Actuated Hand Tools

- i. *Powder-actuate hand tools shall be operated in accordance with 29 CFR 1926.302(e).*

- ii. *Employees using powder-actuated hand tools shall be qualified in accordance with SOP 1401.019, Equipment Operator and Driver Qualification Procedures.*
- iii. *A site / task-specific JSA shall be created for the task involving the powder-actuated hand tool and be reviewed prior to beginning work.*

2. Guards

a. General Requirements

- i. *No guard, safety appliance, or device shall be removed or made ineffective unless immediate repairs or adjustments are required, and then only after the power has been shut off and proper lockout/tagout procedures (See SOP 1403.021) are implemented.*
- ii. *Guards and devices shall be replaced as soon as repairs and adjustments have been completed. Out-of-service equipment, vehicles, and heavy equipment will be removed from use by Red Tag procedures described in Section R.3 of this procedure.*

3. Fencing

- a. ***Employees shall not use knives for cutting zip ties or wire wrapping. A pair of wire cutters or dikes should be used for this task.***
- b. ***Employees shall not use hammers or sledgehammers to drive t-posts. Pneumatic post drivers or hand-held t-post drivers shall be used to install t-posts.***
 - i. *Hand-held post drivers should be at least 30 inches in height. Shorter post drivers may easily slip off the post during installation.*
 - ii. *Avoid lifting the post driver high overhead when starting a post. Place the post driver on the top of the post before lifting it up to the vertical position to begin pounding.*
 - iii. *When using pneumatic or internal combustion fence post drivers, follow the manufacturer's operating instructions.*
- c. ***Employees shall ensure they are using proper lifting techniques when handling fencing materials.***

4. Housekeeping

- a. ***All Envirocon employees are expected to pick up tools, trash, unused materials, and any other stray items before leaving a work area.***
- b. ***Items that do not belong to Envirocon or subcontractors must be left alone and reported to your supervisor as anomalies or non-Envirocon debris. Mark these to make them easier to find, but do not disturb them.***
- c. ***At the end of each work shift, all items belonging to Envirocon or to individual employees shall be removed from the work area and properly stored or secured.***
- d. ***All tools, equipment, materials, and personal items shall be stored in a manner that does not pose a slip/trip/fall hazard to others.***
- e. ***Maintain slippery surfaces as clean as possible. Identify spills or other slipping hazards and clean up spills promptly.***

5. Site Inspections

- a. **Before beginning work in a new area, the supervisor and/or HSO is responsible for conducting an initial inspection with the safety competent person and other crew members who should be familiar with identified hazards in that new area (e.g., excavator operators).**
 - i. *Ensure that hazards are clearly identified and control measures have been documented on the appropriate JSAs and are discussed with the crew.*
 - ii. *Other relevant Control of Work paperwork shall be updated when new hazards are identified during these inspections.*
- b. **The supervisor or the Health and Safety Officer (HSO) is required to conduct daily informal inspections to verify the crew is in compliance with OSHA, Envirocon, and client/site-specific requirements in accordance with 29 CFR 1926.20. These inspections should confirm the completion and accuracy of Control of Work documentation, identify any new hazards or changes in work conditions, and ensure that crew activities align with the project's scope of work as outlined in the Plan of the Day paperwork. Any deviations from Control of Work paperwork or non-compliance shall be corrected immediately.**
- c. **A monthly health and safety inspection should be conducted and documented in VectorEHS once per month.**

6. Manufacturer's Operating Manuals and Instructions

- a. **Heavy equipment, small equipment, and any other equipment for which the manufacturer has provided written manuals or instructions shall be used, operated, maintained, repaired, and/or modified in accordance with those instructions.**
- b. **If the manufacturer's manuals or instructions do not address the desired changes or operation, the manufacturer shall be contacted to determine (in writing) if the proposed change is approved.**
- c. **Parts and repairs are to be "in-kind" or modified in accordance with the manufacturer's instructions.**
 - i. *"In-kind" means that the parts/repairs are manufactured and intended to be used as replacements for the original components. This does not include fabricated parts or repairs, even if intended to replace "in-kind" parts/repairs.*
 - ii. *Manufacturer-approved modifications include parts/repairs that are not "in-kind" but which have been engineered, designed, and manufactured to replace original "in-kind" components/parts. In order to be approved by the manufacturer, written instructions must provide details of the method of replacement and list both the modified part(s)/component(s) and the equipment it is modifying to ensure that the modified components are being installed in the intended equipment and in the manner intended.*
 - iii. *Where parts and/or repairs do not meet the above requirements for "in-kind" or manufacturer-approved modifications, the repairs/modifications must be approved in accordance with Section F.7 of this procedure. This includes situations where*

equipment/component manufacturer's manuals or instructions cannot be found or do not address the repairs or modifications being considered.

- d. The assembly, repair, modifications, or disassembly of simple components which do not have written instructions (e.g., nails, screws, lumber) shall be in accordance with the individual component manufacturer's design intent.**
- e. Equipment operators must be familiar with the manufacturer's manuals, instructions, and/or requirements.**

7. Approval of Equipment Fabrication or Modifications

- a. Where equipment is being fabricated, modified, or repaired outside of the manufacturer's intended means or methods, that fabrication, modification, or repair must be approved as follows. The requirements of this section apply to all heavy, small, or any other equipment. This does not include situations where non-manufactured materials are being manipulated, such as excavations, and it does not include the demolition of structures or features.**
 - i. Equipment repairs and modifications are normally to be conducted in accordance with the requirements in Section G.10 of this procedure.*
 - ii. Repairs or modifications not in accordance with Section G.10 of this procedure, as well as fabrication of equipment, must be approved as described below.*
 - iii. Modification to any equipment, tool, or other machinery shall not be made without written authorization from the Director of EHS and the Equipment Department.*

8. Cellular Device Use Policy

The Envirocon Cellular Device Use Policy is covered in SOP 1406.003 – *Business Use of a Motor Vehicle*.

G. ELECTRICAL SAFETY

The requirements of 29 CFR 1926 Subpart K and the following apply to construction sites. This program addresses working on and near exposed de-energized electrical parts.

1. General Safety Requirements

- a. Only qualified personnel shall work on or repair electrical wiring or equipment. A licensed electrician shall be used for any permanent service wiring or temporary service wiring exceeding 50 volts.**
- b. When using power tools in a wet area, use only electrical wiring and equipment rated for that purpose or keep it clear of water.**
- c. All portable electric hand tools must be grounded or double insulated.**
- d. Never open any disconnecting switches or plugs unless the load has been isolated and dissipated.**
- e. When operating heavy equipment in proximity to overhead power lines, the minimum distances specified in Sections I.4 and I.5 shall be maintained.**
- f. Employees shall wear non-conductive clothing when working on or near energized components.**

- g. Electrical equipment shall be free from recognized hazards that are likely to cause death or serious physical harm to employees. Safety of equipment shall be determined on the basis of the following:**
- i. Equipment's suitability for an identified purpose or service shall be evidenced by listing, labeling, or certification for that identified purpose.*
 - ii. Mechanical strength and durability.*
 - iii. Electrical insulation.*
 - iv. Heating effects under conditions of use.*
 - v. Arcing effects.*
 - vi. Classification by type, size, voltage, current capacity, and specific use.*
 - vii. Other factors that contribute to the practical safeguarding of employees using or likely to come in contact with the equipment.*

2. Lockout-Tagout

- a. When working on/repairing electrical devices, employees must use a lockout procedure, as required by applicable regulations and the provisions of SOP 1403.021 - Electrical and Mechanical Lockout Procedure.**
- b. When working on or near exposed, de-energized parts, they shall be treated as live with the appropriate controls and work practices in place (see relevant JSAs).**

3. Electrical Cables, Extension Cords, and Power Strips

- a. All electrical cables and extension cords shall be inspected prior to use. If any defects or damage are identified, the cable or cord shall be removed from service and replaced or repaired.**
- b. Electrical cables and/or extension cords shall be protected from damage to wiring or insulation.**
- c. If electrical cables must be laid on the ground, designate crossings and provide protection, such as a cover or raceway.**
- d. Do not run wiring through doors, window pinch points, or other surfaces that could damage the cable or cords.**
- e. Extension cords shall be rated for the power needs of the device it will support. Do not overload a single extension cable with multiple tools or devices.**
- f. Do not plug multiple extension cords together, also known as "daisy chaining." Use a single cord that is long enough to reach the outlet without stretching.**
- g. Devices or tools should be unplugged from extension cords when not in use.**
- h. Only cables, cords, and power strips with intact grounding prongs may be used; grounding prongs may not be removed.**
- i. Significant electrical repairs or modifications, such as splicing, shall only be completed by a qualified electrician.**

4. Ground Fault Circuit Interrupters (GFCI)

- a. *GFCIs shall be used in outdoor locations or when wet conditions exist or have the potential to exist.*
- b. *GFCI shall be used with all extension cords and/or all portable generators (built-in or pigtail type).*
- c. *If a GFCI trips, it may only be reset after checking for and addressing any faults in the connected equipment or wiring.*

5. Lighting and Temporary Lighting

- a. *Adequate lighting shall be provided whenever work is being conducted on exposed energized (or de-energized) components.*
- b. *Temporary lights shall be equipped with guards to prevent accidental contact with the bulb.*
- c. *Temporary lights shall not be suspended by their electrical cord unless cords and lights are designed for this means of suspension.*

6. Conductive Materials

- a. *Conductive materials and equipment must be handled in a manner that prevents contact with exposed energized conductors or circuit parts. If long-dimensional conductive objects (such as ducts and pipes) must be handled in areas with exposed live parts, the following procedures must be followed:*
- b. *A Job Safety Analysis (JSA) will be prepared and reviewed with affected employees prior to beginning work in the subject area, which includes:*
 - i. *The proper use of insulating materials, guards, protective shields, and barriers. Conductive apparel will be rendered non-conductive by covering, wrapping, or other insulating means;*
 - ii. *Proper material handling and work techniques; and*
 - iii. *Site-specific emergency response procedures in the event of an accident.*

7. Employee Training

- a. *The basic training requirements for “unqualified” persons include, but are not limited to:*
 - i. *All employees who may be at risk of potential electric shock must be trained and be familiar with electrically related safety practices.*
 - ii. *Employees will be trained in and familiar with safety-related work practices that pertain to their respective job assignments.*
- b. **Electrical Equipment Permanent Installations**
 - i. *Covers shall be installed on all junction boxes, outlets, fittings, and switches to prevent accidental contact with live parts.*
 - ii. *Live panel boxes shall have a cover on them at all times.*
 - iii. *Access to electrical breakers or switches shall be unobstructed (a minimum of 3 feet clearance in front of breakers or switches).*

- iv. *Each disconnecting means, i.e., circuit breaker or fuse box, must be legibly marked to indicate its purpose.*
- v. *Only qualified persons shall operate disconnects or breakers above 600v.*

c. Limitations

- i. *Electrical equipment shall not be used unless:*
 - a. *The manufacturer's name, trademark, or other descriptive marking by which the organization responsible for the product may be identified is placed on the equipment, and*
 - b. *Other markings are provided, giving voltage, current, wattage, or other ratings as necessary.*

8. Minimum Clearance Distances

- a. ***Employees shall ensure equipment and conductive materials maintain minimum stances (as specified below) from overhead power lines unless a qualified electrician has verified it that the lines are de-energized and appropriately locked and tagged out or protective barriers or insulating materials have been applied to the line by owners the lines.***
- b. ***Equipment components or conductive materials shall not come any closer to energized overhead lines than the following distances:***
 - i. *Voltages to ground 50kV or below: 10 feet*
 - ii. *Voltages to ground over 50kV – 10 feet plus 4 inches for every 10kV over 50kV*
 - iii. *If the vehicle or equipment is in transit with its boom lowered, the clearance may be reduced to 4 ft.*
- c. ***If the voltage of a power line is unknown, it is safest to assume that the line is high voltage. This conservative approach typically means maintaining a clearance distance of at least 20 feet, which is the required clearance for high-voltage lines up to and possibly exceeding 350 kV.***
- d. ***When working near overhead utility lines, a spotter shall be used to ensure the minimum clearance distances are maintained.***

H. MANUAL LIFTING

1. General Requirements

- a. ***Prior to lifting any object manually, the following shall be considered:***
 - i. *Overall weight*
 - ii. *Distribution of weight*
 - iii. *Unwieldiness or awkwardness*
 - iv. *Distance to be carried*
 - v. *Obstacles to be negotiated, such as wet, uneven surfaces, slippery banks, and rocks*
 - vi. *Conditions such as wind, snow, ice, and slippery surfaces*

vii. Visibility

viii. Feasibility of using mechanical lifting equipment

- b. Complete a hazard assessment before starting manual lifting projects (e.g., Field Crew Activity Plan). If necessary, mechanical lifting equipment will be provided, or engineering controls will be implemented.**
- c. When the use of mechanical lifting is impractical, lifts greater than 40 pounds shall be performed using at least two employees.**

2. Preparing to Lift

a. Prior to manual lifting of objects, employees shall do the following:

- i. Inspect materials for splinters, jagged or sharp edges, burrs, and rough or slippery surfaces.*
- ii. Don appropriate work gloves for the task and grasp the object with a firm grip.*
- iii. When handling lumber, pipe, or other long objects, keep hands away from the ends to prevent them from being pinched.*
- iv. Wipe off greasy, wet, slippery, or dirty objects before trying to handle them.*
- v. Keep hands free of oil and grease.*

3. General Lifting Guidelines

- a. Heavy items shall be lifted by using the leg muscles rather than the back, stomach, or arm muscles.**
- b. Never bend at the waist when lifting.**
 - i. The back shall be kept straight and the arms nearly parallel with the body. The knees shall be bent to grasp the load.*
 - ii. Lifting shall be done by straightening the legs, with the back remaining in a nearly vertical position.*
 - iii. The procedure for setting down the load is the reverse of lifting the load.*
- c. If the object is too bulky or too heavy to be handled by one person, two or more people shall be assigned to the task.**
 - i. When two or more people carry one object, they shall adjust the load so that it rides level, and each person carries an equal part of the load. In addition, both people shall know the destination and path where the object is to be carried.*
- d. Never attempt lifting heavy or awkward/bulky objects from a seated position.**

4. Training

- a. Employees will receive training on proper lifting and avoidance of musculoskeletal injuries. Supervisors will periodically evaluate worker techniques and work areas. Injuries caused by improper lifting will be investigated and the results will be incorporated into work procedures.**

I. DRILLING OPERATIONS

In addition to the requirements outlined in this SOP, the requirements of the 1403.031 – Ground Disturbances SOP shall also be followed where applicable.

1. Site Preparation

- a. ***Drilling sites shall be properly prepared before mobilizing drilling equipment.***
 - i. *Properly mark the area with barricades, fencing, and/or flagging.*
 - ii. *Post warning and "No Smoking" signs conspicuously and enforce them.*
 - iii. *Fire extinguishers (at least one 20-pound ABC) must be on-site and readily accessible at all times.*
 - iv. *All drilling locations shall be verified and marked by an authorized person.*
 - v. *When drilling in active facilities, contact the area supervisor in advance to advise them of the activities.*
 - vi. *Locate emergency shut-off valves and switches and ensure all crew members know where they are and how to use them.*
 - vii. *When drilling near tanks, determine tank location, depth and product levels, and continue monitoring levels during drilling activities. The minimum distance to drill between tanks is 18 inches. Eight-inch augers shall be the maximum size for initial drilling. Hand excavation shall be done to a minimum of 4 feet or to tank-top depth.*

2. Utility Locates

- a. ***Prior to beginning any drilling operations, a site utility locate shall be conducted to identify all underground utilities.***
- b. ***The site survey shall also identify overhead utilities in the vicinity of where drilling operations will be performed.***
- c. ***All utility locations shall be marked to warn employees and equipment operators.***

3. General Requirements

- a. ***If an unknown material or substance is encountered during drilling, all operations will stop until the situation is evaluated. Augers shall be left in the ground, and cuttings and samples shall be containerized.***
- b. ***Cuttings shall be containerized or covered whenever feasible, and especially at the end of each workday.***
 - i. *Drums shall be labeled and placed in a secured area.*
 - ii. *Cuttings left to be aerated shall be bermed to prevent run-off in case of rain.*
- c. ***Drilling materials such as augers and grout shall be stored in a secured area.***
- d. ***The proper PPE shall be worn as per the site-specific JSA and 1403.015 – Personal Protective Equipment SOP.***
- e. ***All workers shall keep their hands clear of the auger and any other moving equipment part.***

- f. When airborne contaminants emanate from the borehole, employees shall keep their faces as far as possible from the hole. Based on air monitoring results, respiratory protection shall be worn.*
- g. Steam-cleaning of equipment shall be performed with the appropriate protective equipment, which shall always include eye and face protection. Never attempt to clean any body parts with pressure washers.*

J. WELDING AND CUTTING

Welding and cutting operations shall be performed in accordance with the requirements of this section, Subpart J (29 CFR 1926.350), and SOP 1403.012 - Fire Prevention and Protection SOP.

1. General Requirements

- a. Welding or cutting to repair equipment shall be limited to a designated area to the extent possible.*
- b. Gas cylinders shall be chained or otherwise secured in an upright position.*
- c. Employees shall avoid standing in front of regulators when opening gas cylinders.*
- d. OSHA requires anti-flashback devices on all oxygen-acetylene units. The anti-flashback devices shall be installed, at minimum, at the regulator.*
- e. Employees shall wear the proper PPE when welding and cutting (e.g., flame-resistant garments) as per the site-specific JSA and the 1403.015 – Personal Protective Equipment SOP.*
- f. All flammable and combustible materials are to be removed from the welding and cutting area or at a distance of 35 feet.*
- g. If any potential for fire exists, a fire watch shall be available during welding and cutting activities and for 30 minutes after they end.*
- h. An ABC fire extinguisher (minimum 10 lb.) shall be mounted on, or provided for, every welding and cutting unit.*
- i. First aid equipment shall be available at all times during welding and cutting operations.*

2. Hollow Structures and Hazardous Atmosphere Locations.

- a. Drums, containers, or other structures that may have contained toxic or flammable substances shall be filled with water, an inert gas, or thoroughly cleaned, ventilated, and tested before welding, cutting, or heating.*
- b. Before heat is applied to a drum, container, or hollow structure, a vent or opening shall be provided for the release of any built-up pressure during the application of heat.*

3. Inspections

- a. Prior to beginning any welding, cutting, or heating (or any work that may be considered “hot work”), a workplace inspection shall be performed to identify any hazards or combustible materials in the area. All hazards and combustible materials shall be removed or controlled prior to starting.*

- b. Employees shall inspect all welding setups prior to beginning with the following considerations in mind:**
 - i. Oxygen-acetylene units shall be inspected for leaks or irregularities.*
 - ii. Employees shall not allow oil to come in contact with oxygen regulators.*
 - iii. Always check for foreign objects in gas cylinder valves prior to connecting regulator and always "crack" the valve to remove any contamination.*
 - iv. OSHA requires the proper type of hose fitting. Hose clamps cannot be used on oxygen-acetylene hoses.*
- c. If any leaks or other defects are found, the gas and electrical sources shall be closed, and the unit shall be taken out of service.**

4. Equipment and Gas Cylinder Storage

- a. Except as permitted in DOT-regulated transportation, gas cylinders must always be stored, transported, and used in the upright position.**
- b. When storing welding equipment and gas cylinders, employees shall:**
 - i. Shut off the cylinder and bleed hoses prior to leaving the cutting unit for any length of time.*
 - ii. Not store oxygen and acetylene tanks together; they shall be separated by 25 feet or a non-combustible wall.*
 - iii. Ensure safety caps are in place prior to moving any cylinders unless it has a regulator and is attached and secured as a cutting unit. The regulator, if attached, must be protected to prevent it from being struck or broken.*

5. Welding Shade Values

Welding and cutting operations shall be performed in accordance with a site-specific JSA and/or hot work permit, which addresses personal protective equipment, including respiratory protection, fire retardant clothing, and eye protection with shading selected by the project health and safety manager in accordance with 29 CFR 1910, Subpart O and the Table located in 29 CFR 1910.252(b)(2)(ii)(H).

K. LADDER SAFETY

1. Ladder Selection

- a. A ladder meeting OSHA requirements will be provided to all routine points of personnel access where there is a break in elevation greater than 19 inches.**
- b. Prior to using a ladder, a hazard assessment or review of the JSA and/or FCAP shall be conducted to ensure a ladder is the proper tool for the task and that the proper ladder is selected.**
- c. Ladders shall not be loaded beyond the maximum intended load or beyond the manufacturer's rated capacity.**
- d. Only ladders made of fiberglass or other non-conductive materials are permitted for use. Ladders with metal components shall not be used around electrical equipment.**

2. Ladder Inspections

- a. Ladders will be inspected prior to use. Ladder inspection items include but are not limited to:**
- i. Check for cracks, bends, or splits in the rails.*
 - ii. Inspect for missing, loose, or damaged steps or rungs.*
 - iii. Ensure there are no sharp edges or corrosion.*
 - iv. Confirm all materials are free from excessive wear or damage.*
 - v. Verify that all feet are present and have non-slip pads intact.*
 - vi. Test the ladder to ensure it does not wobble or have unstable legs.*
 - vii. Check locks and spreaders to ensure they fully engage and are not broken.*
 - viii. Ensure that safety labels and warning stickers are visible and legible.*
 - ix. Ensure the ladder is free from oil, grease, or other slippery substances.*
 - x. Extension Ladder Specific:*
 - a. Inspect pulleys, ropes, and rung locks for wear and functionality.*
 - b. Verify that extension locks securely hold without slipping.*

3. Use of Ladders

- a. When working at heights, all alternatives (scissor lifts, man lifts, etc.) other than ladders must be evaluated before ladder use is authorized by management.**
- b. When a ladder (stepladder or extendable straight ladder) is being used, a second person trained in ladder use must be present to hold the ladder at all times during the work-on-ladder activity.**
- c. Tightly secured ladders may be used by a single person, but only to gain access to another location, not as a work platform. At a minimum, securing the ladder means tying off/clamping the top of the ladder to a support structure.**
- d. Ladder rungs, cleats, and steps must be level, parallel, and uniformly spaced.**
- e. Ladders must be maintained free of oils, grease, mud, and ice, or other slip hazards.**
- f. The areas around the top and bottom of the ladder shall be kept free of debris and other obstructions.**
- g. Place the ladder on a stable and level surface. Avoid slippery, soft, or uneven ground.**
- h. For extension ladders, ensure they are extended at least three feet above the landing platform and secured at the top, bottom, or both.**
- i. Set the ladder at the proper angle, following the 4-to-1 rule (for every four feet in height, the base of the ladder should be one foot away from the structure).**
- j. Face the ladder when climbing or descending. Maintain three points of contact (two hands and one foot or two feet and one hand) at all times.**

- k. Do not carry tools or materials in your hands while climbing. Use a tool belt or have materials hoisted up once you are stationary.*
- l. Keep your body centered between the rails of the ladder. Do not lean or overreach; descend and reposition the ladder instead.*
- m. Only one person at a time should be on the ladder unless it is specifically designed for more than one climber.*
- n. Ladders that are found to be damaged or defective shall not be used. Unless repairs are made immediately, they shall be tagged "Dangerous – Do Not Use". If the ladder is beyond repair, it shall be rendered unusable and discarded.*
- o. Ladders shall not be painted.*

4. Straight Ladders

- a. Straight ladders shall be equipped with safety feet.*
- b. Straight ladders shall be placed at an angle of inclination of one foot horizontal for each four-foot vertical rise.*
- c. Straight ladders shall extend at least 3 feet above the platform to be reached. Both side rails of the ladder must be resting on a support.*
- d. Sections of ladders will not be secured together to increase overall length.*

5. Step Ladders

- a. Planks shall not be used on the top of stepladders.*
- b. Stepladders shall not be used as straight ladders (leaning or resting a step ladder against support during use is prohibited).*
- c. c. When in use, a metal locking device or spreader shall hold the front and back sections in an open position.*
- d. Climbing above the second tread from the top of a step ladder is prohibited.*

6. Ladder Storage

- a. Ladders shall be secured and stored in a manner that minimizes the potential for damage and excessive wear and tear.*

7. Training

- a. All employees required to use ladders must receive training on proper ladder selection, inspection, setup, and safe use practices.*
- b. Retraining is required if an employee is involved in a fall or near-miss incident involving a ladder or if new types of ladders are introduced.*

L. STOP WORK AUTHORITY

1. Stop Work Authority General Requirements

- a. Envirocon employees are authorized and expected to stop work when they have a concern that an unsafe condition or behavior exists.*

- b. The Site Health and Safety Officer or the Safety Competent Person, in particular, is responsible for stopping work if there is a hazardous condition.**
- c. Employees will not be reprimanded for issuing a Stop Work.**

2. Types of Stop Works

- a. There are three types of Stop Work scenarios that Envirocon recognizes:**

- i. Formal Stop Work*
- ii. Time Outs*
- iii. Employee Challenges*

3. Formal Stop Works

- a. The following events shall trigger a Formal Stop Work. Depending on the severity, the stop work may apply to a specific site task or activity or to all work on the project:**

- i. Striking above or below grade utility.*
- ii. Injury that requires medical treatment.*
- iii. An event that required emergency services to respond to the project site.*
- iv. Employee or public exposure to hazardous substances above PEL.*
- v. Release of a hazardous substance above statutory reportable quantity.*
- vi. Regulatory citation or Notice of Violation.*
- vii. Heavy equipment, truck or vehicle damage that renders equipment unusable without substantial repair.*
- viii. Crane or rigging failure during lifting operations.*
- ix. Worker fall arrested by personal fall arrest system.*
- x. Project Manager or client-issued stop works.*
- xi. Other serious or potentially serious incidents as determined by the Senior Leadership Team.*
- xii. Under these specific stop-work circumstances, a return-to-work shall require approval from a level of management above the project, from both Health and Safety and Operations.*

4. Time Outs

- a. Envirocon encourages employee involvement in work planning to help ensure hazards and other risks are identified and controlled before they become a threat. Employee "time outs" help to identify changes in conditions or improper plans/procedures.**
- b. A "Time Out" is used as a proactive safety measure. Employees are encouraged to use a "Time Out" to address changes or unexpected conditions that have not yet resulted in an accident but could potentially lead to unsafe situations. This could include changes in weather, equipment, materials, or any deviations from the planned work that may affect safety. The intent of a "Time Out" is to pause**

the work, assess the situation, and make necessary adjustments before resuming activities to ensure continued safety.

c. *Examples of conditions when “Time Out” should be called include, but are not limited to:*

- i. Changes in weather*
- ii. Changes in soil types*
- iii. Changes in the equipment being used*
- iv. Changes in other work performed nearby*
- v. Changes in materials being used to do the work*
- vi. Changes in the toxicity of waste,*
- vii. Unexpected conditions are encountered*
- viii. Work deviates from plans or the plan is not clearly understood*
- ix. An unplanned event occurs that might lead to an accident*
- x. The work plan no longer seems safe*

d. *Time Out General Process*

- i. Identify that an unexpected or change in conditions has or is about to impact on plans or hazard controls.*
- ii. Communicate a concern to your supervisor or safety officer.*
- iii. The supervisor or safety officer evaluates the concern.*
- iv. An appropriate response is determined.*

5. *Employee Challenges*

a. *The “Employee Challenge” system is intended to encourage employees to take initiative in correcting unsafe conditions or behaviors. Where an unsafe condition or behavior poses an imminent threat that can be readily addressed, each employee is encouraged to challenge those responsible.*

b. *Examples of an Employee Challenge include:*

- i. An employee who is driving in the wrong direction or against the traffic plan.*
- ii. A visitor in the work area who has not signed in or is not accompanied by an Envirocon employee.*
- iii. An employee working at heights is not properly tied off.*
- iv. An employee is found not to be wearing the proper PPE as per the JSA or FCAP.*

c. *Employee Challenge General Process*

- i. Identify unsafe conditions or behavior.*
- ii. Challenge the unsafe action or condition by asking the involved employee(s) or subcontractors to stop working. Explain the concern over the unsafe condition or behavior.*

- iii. *Immediately report the challenge to the site supervisor, detailing the unsafe condition or behavior.*
- iv. *Discuss a resolution with the involved employee(s) or subcontractor(s) and supervisor(s) or other Project Management Team Members.*
- v. *Ensure that the corrective measures are implemented and monitor the situation to prevent recurrence.*

6. Resolution of Stop Work, Time Out, or Challenges

a. *It is anticipated that in most cases the employee exercising a stop work, time out, or challenge will be able to resolve the concern using known and documented controls in place for the work activity. Where the identified concern has not been addressed in existing plans and procedures for the activity, or where the personnel involved do not agree on the procedures and/or controls, the situation shall be resolved as follows.*

b. Supervisor and Competent Person Resolution

- i. *Where applicable, work plans and job safety analysis can be used to address the stop work, challenge, or time out to the satisfaction of all parties involved.*
- ii. *Where existing plans, controls, and procedures do not address the situation, work may not resume until the necessary changes have been implemented in coordination with the safety competent person and other affected personnel.*
- iii. *Where the supervisor and employee do not agree on the resolution or where changes to plans or procedures are required, the Site Health and Safety Officer or Safety Competent Person shall be consulted before resuming the activity in question.*
- iv. *If there is still a disagreement, the Project Manager and Project Health and Safety Manager shall be notified for resolution.*
- v. *If the employee initiating the challenge, time out, or stop work does not believe that an appropriate resolution of the concern has been implemented, the employee may contact the Envirocon Corporate EHS Department or Human Resources Department for assistance in resolving the concern at 406.523.1179.*
- vi. *When necessary, the incident that necessitated the stop work shall be reported and investigated as per the 1403.024 – Incident Reporting and Investigation SOP.*

c. Training and Documentation

- i. *All employees will receive Stop Work Authority training before their initial job assignment. The training will be documented with the HASP Acknowledgment Form. Project sites should have the 1403.011.01 – Stop Work Authority Poster posted.*
- ii. *All Stop Work interventions will be documented for lessons learned and corrective measures.*
- iii. *All Stop Work interventions will be followed-up to see that safety concerns have been addressed by all concerned.*

M. EQUIPMENT OPERATION

In accordance with 29 *CFR* 1926.20(b)(4), Envirocon employees shall not operate equipment unless/until they are properly qualified by training or experience and specifically authorized by Envirocon.

1. Operator Qualifications

- a. *SOP 1401.019 describes the procedure for qualifying equipment operators. Only operators qualified in accordance with that procedure may be allowed to operate heavy/construction equipment. Qualified operators are required to operate heavy/construction equipment as described in this section.***

2. Motor Vehicles and General Equipment Safe Work Practices

a. Authorization to Operate Envirocon Equipment on Public Roads

- i. Envirocon's Human Resources Department must authorize the operation of vehicles or equipment that require a driving license. This includes both Envirocon-owned and rented motor vehicles or equipment.*
- ii. If the vehicle or equipment is potentially regulated as a motor carrier under Federal Motor Carriers Safety Regulations (FMCSR) (49 CFR 300-399), refer to the additional requirements under Section P.3 below.*

b. Seat Belts

- i. Seats and seat belts are mandatory.*
- ii. When equipment is moving or otherwise being operated, personnel shall be seated in the manufacturer's provided seating and shall use the seat belts provided by the manufacturer in accordance with the operating manual.*
- iii. Seating without seat belts, standing, or other novel personnel configurations are only allowed with manufacturer approval and design.*

c. Backing

- i. All employees shall comply with the following procedures unless a site-specific hazard analysis or work plan that applies to the activity or project site. For purposes of this procedure, the term "vehicle" is used for pickups, automobiles, ATVs, or other light vehicles intended primarily for transportation of passengers not regulated by the Federal Motor Carriers Safety Administration.*
 - a. Walk around your vehicle immediately before getting in to drive.
 - b. Vehicle drivers must view the complete path of travel immediately before backing. This can be accomplished in a number of ways that include (but are not limited to):
 - c. Drive past the location that you intend to back into and assess backing hazards before backing in.
 - d. Get Out And Look (GOAL). If you are not exposed to traffic, pull over, set the brakes, put automatic transmissions in park; and turn on your flashers.
 - e. Check the blind spots in your path of travel when you perform the walk-around inspection before getting into your vehicle.
 - f. Use backing safety aids such as alarms or cameras if provided.

- g. Back out of traffic and pull into traffic.
- h. Back into parking spaces to avoid backing into parking lot traffic when you leave the space later. If possible, pull through parking spaces to avoid backing altogether.
- i. If you must back into traffic, use a spotter when available.

d. Distractions

- i. *Equipment operators and drivers shall not be unnecessarily distracted while operating.*
- ii. *Permitted and prohibited use of cellular devices is described in SOP 1406.003.*
- iii. *Two-way radios or push-to-talk cell phones are only authorized for operating equipment, vehicles, or trucks in work areas to conduct work communications to coordinate ongoing work or traffic.*

e. Heavy Equipment Traffic

- i. *Yield to heavy equipment traffic. Unless otherwise posted or promulgated in an approved traffic control plan, construction equipment always has the right-of-way over personal transportation vehicles, and loaded/burdened haul equipment has the right-of-way over empty vehicles.*

3. DOT Compliance

a. Personnel shall not operate trucks or motor vehicles regulated by Federal or State DOT without specific authorization from Envirocon Human Resources. Human Resources will coordinate qualifications with Envirocon's Equipment, Health & Safety, Legal, and Operations Departments to ensure appropriate qualifications under the FMCSR for the specific job description.

b. Supervisors needing to operate equipment potentially regulated by the DOT should contact the Equipment Division for an evaluation of their specific situation. If a DOT driver is required, Human Resources will evaluate the qualifications of candidates in accordance with FMCSR.

c. Regulated Equipment

Potential FMCSR (or state DOT equivalent) regulated equipment might include such things as:

- i. *Trucks or trailers exceeding 26,000 GVWR (the equipment's rated capacity). This includes plated AND/OR non-plated vehicles or equipment.*
- ii. *Trailers being towed by any equipment of vehicles (such as pickups) exceeding 10,000 GCWR (the COMBINED rated capacity of the trailer and the towing vehicle/equipment).*
- iii. *Any equipment hauling or carrying DOT hazardous materials requiring placarding.*
- iv. *Typical types of equipment that are a potential concern include: water trucks, service trucks, lube trucks, vac trucks/trailers, pickups pulling most trailers (empty or loaded), articulated haul trucks, and highway haul trucks.*

d. FMCSR Requirements

- i. *FMCSR potentially apply whether the vehicle/equipment is plated OR NOT (this is based on if the originally designed vehicle was built to run on the roadways but plates have been removed to stay on a project site the rules still apply strictly).*
- ii. *FMCSR applicability is based on capacity and NOT on the actual loading.*
- iii. *FMCSR applicability is based on public access to the road you are operating on, NOT on ownership. Roads that are private roads of clients or third parties may be regulated if public access is not controlled.*

4. ATV and UTV Use

a. ATVs and UTVs shall be used on-site under the following rules of use:

- i. *Operators shall be qualified in accordance with SOP 1401.019.*
- ii. *Only ATVs or UTVs equipped with roll cages or protected seating and seat belts shall be used on site.*
- iii. *ATVs or UTVs shall not be operated in excess of 20 mph.*
- iv. *Prior to operating an ATV or UTV at a project site, the supervisor and/or Health & Safety Officer shall conduct a site-wide inspection to identify and document areas that may require special handling or care when operating. These hazards or areas shall be documented on the site-specific JSA and be a part of the training.*

5. Operation of Heavy Equipment

a. General

- i. *Operators and driver shall conduct a walk around inspection of the equipment before entering the operator's cab.*
- ii. *Develop a written safe work plan based on a job safety analysis for equipment that makes frequent or routine backing maneuvers (such as loaders or dozers). Establish traffic patterns accordingly to minimize backing risks.*
- iii. *Operators are responsible for ensuring a clear path of travel. This can be done in several ways, including but not limited to:*
 - a. *Check the blind spots in your path of travel when you perform the walk around inspection before climbing into the cab.*
 - b. *View and assess the complete path of travel before backing by tracking or tramming past the location you are going to back into.*
 - c. *Get Out And Look (GOAL). If you are not exposed to traffic, get out and check or use a spotter.*
- iv. *Use backing safety aids such as alarms or cameras if provided. Exhausts from all equipment must be properly vented and located so as not to create a fire hazard, endanger workers (i.e., by inhalation of exhaust gases/fumes, or by burning), or obstruct the view of the operator.*
- v. *Platforms, catwalks, steps, and ladders used for access to equipment can present slipping and/or falling hazards.*
- vi. *Always maintain three (3) points of contact when climbing on or off equipment.*

- vii. *Inspect all equipment as described in Section R (below). Report all equipment malfunctions to your supervisor or the site mechanic.*
- viii. *Operate only the equipment you are qualified to operate; and which you have been authorized to operate in accordance with SOP 1401.019.*
 - a. Operate in accordance with the manufacturer's operating manual(s) as described in Section G.10.
 - b. Before operating obtain a copy of the operating manual and retain it on site until equipment is demobilized.
 - c. Familiarize yourself with the operating instructions in the operating manual.
 - d. Perform daily inspections as discussed in Section R.2 of this procedure as described in the operating manual(s) and in accordance with SOP 1406.004.
- ix. *Operators are required to be aware of their surroundings while operating equipment.*
 - a. Before starting or moving any equipment, walk all the way around it. Be sure all persons and equipment are clear.
 - b. Visually confirm a clear path before changing the direction of travel or use a spotter.
- x. *Unattended equipment and vehicles shall not be left running/idling.*

b. Housekeeping

- i. *Equipment cabs and walkways shall be kept clean and free from obstructions. Items brought into cabs (such as cleaning supplies or tools) must be properly secured to prevent injury or equipment damage in the event of sudden cab movement.*

c. Parking or Servicing

- i. *When parking or servicing equipment, ensure it is properly blocked to prevent movement.*
- ii. *Attachments or boxes must be at zero energy by lowering to the ground, blocking, or pinning to prevent movement. Do not rely on hydraulics for this purpose.*
- iii. *Tire equipment shall have wheel chocks, park in ditches if provided, or turn a wheel into a downhill berm or stop log.*
- iv. *When equipment is being started or run up, do not stand directly in front of or behind it.*

d. Approaching Heavy Equipment

- i. *Eye contact is the preferred method to contact the operator before approaching moving/operating machinery or equipment.*
- ii. *Eye contact must also be made before moving equipment into the operating area of another piece of equipment. Otherwise, maintain a safe distance and at least 25 ft. between all equipment operating in the same area at the same time.*
- iii. *Before allowing ground personnel to approach, the operator shall lower attachments to the ground (or another equivalent zero-energy resting position).*

- iv. *Before the operator notifies you it's safe to approach, they must bring equipment to idle, disengage the controls, and then signal ground personnel to approach.*
- v. *Whether on foot, in a vehicle, or in other equipment, approach heavy equipment with caution.*
- vi. *Stay out of the operating area of equipment. Maintain a safe distance of no less than 25-foot clearance.*
- vii. *Keep clear of heavy equipment that is being started.*
- viii. *Eye contact is the preferred method to contact equipment operators/drivers before approaching moving machinery or equipment.*
- ix. *If you cannot make eye contact with the operator or driver, contact them by radio to alert them that you need to approach the equipment.*
- x. *Wait for the operator/driver to visually or verbally acknowledge your request to approach.*
- xi. *Ground personnel shall not approach heavy equipment until the operator has lowered attachments to the ground or truck beds have been lowered, brought equipment to idle, disengaged the controls, and signaled ground personnel to approach.*
- xii. *After communicating with the operator/driver, notify them that you are out of the area and that they can resume work.*
- xiii. *Specific requirements for fueling and servicing equipment will be covered in a site-specific job safety analysis (JSA).*

e. Backing Heavy Equipment

- i. *Use pull-through parking spaces, organize traffic routes to avoid backing, or take another path that won't require backing.*
- ii. *For activities that involve repetitive backing operations, the hazards should be identified on the Crew Field Activity Plan (FCAP). Where a written plan and/or Job Safety Analysis (JSA) specifically addresses backing hazards and controls, those plans and controls shall be followed instead of the requirements in this section.*
- iii. *In lay down yards, when operating next to haul roads, or any time you are adjacent to traffic be sure to use a spotter or flagger to control traffic if you must back into the traffic pattern.*
- iv. *Use a spotter if the view is obstructed. Ensure clear and understood hand signals or use two-way radios.*
- v. *Always back slowly and keep your eyes and head moving to all windows and mirrors to be on the lookout for hazards. If you have any doubt about what's in a blind spot, get out or get a spotter to check.*
- vi. *Vehicles or equipment not equipped with a backup alarm must sound their horn before backing up and use a spotter as necessary.*
- vii. *When backing vehicles or other front-wheel steering equipment, the rear wheels always follow a path inside those of the front wheels. This means that when backing and turning, the front of the vehicle will often swing out in the direction opposite to which you are turning the steering wheel. Give objects outside of your turning radius extra room in these situations.*

N. COMPETENT PERSONS

A competent person is a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them. Competent persons are required in all Envirocon work areas as follows.

1. Construction Safety Competent Person

- a. 29 CFR 1926.20(b)(2) requires that “such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employer.”**
- b. The construction competent person shall conduct and document daily inspections of each construction work site.**
- c. Construction competent persons shall be trained and designated as described in the 1403.009 - Health and Safety Training SOP.**

2. HAZWOPER Site Safety and Health Supervisor (SSHS)

- a. 29 CFR 1926.65/1910.120(a)(3) defines site safety and health supervisor (or official) to mean “the individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.”**
- b. 29 CFR 1926.65/1910.120(b)(2)(i) requires as part of the site plans and programs that “The organizational structure part of the program shall establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It shall include, at a minimum, the following elements: A site safety and health supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.”**
- c. The HAZWOPER SSHS shall conduct and document daily inspections of each HAZWOPER-regulated work site.**
- d. The HAZWOPER SSHS shall be the site-Health and Safety Officer or a Project Management Team member who has completed the Safety Competent Person training outlined in the 1403.009- Health and Safety Training SOP.**

3. Excavation Competent Person

- a. 29 CFR 1926.651(k) requires that “a competent person shall make daily inspections of excavations, the adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions.”**
- b. The competent person shall conduct an inspection “prior to the start of work and as needed throughout the shift.”**
- c. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence.**
- d. Inspections are only required when employee exposure can be reasonably anticipated.**

- e. *Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.*
- f. *Excavation competent persons shall be trained and designated as described in the 1403.009 – Health and Safety Training SOP.*

4. Additional Competent or Qualified Persons

- a. *Additional competent or qualified persons may be required depending on the site-specific activities and shall be trained and designated in the same manner as described in the 1403.009 – Health and Safety Training SOP.*
- b. *Competent persons shall restrict their scope and activities to those conditions in which they know themselves to be competent. Under no circumstances shall a competent person conduct an inspection of or be required to inspect conditions which they are not qualified or familiar with.*

O. EMPLOYEE HYGIENE

1. Food and Beverages

- a. *No eating, drinking, chewing, or other forms of ingestion are permitted in work areas except in designated areas as described in site health and safety plans, or as posted.*
- b. *Use of illegal drugs or illegal use of prescription medications is strictly prohibited (Refer to SOP 1403.006 for substance abuse policies and procedures).*
- c. *No firearms are allowed in company work areas or in company vehicles.*
- d. *No horseplay is allowed in the course of performing company work.*

2. Smoking (and similar activities).

- a. *Smoking and similar activities, including but not limited to the use of vape pens and e-cigarettes, are not permitted in company-owned vehicles or equipment.*
- b. *Smoking and similar activities (as stated above) are not permitted in rented vehicles or equipment without the specific authorization of the vehicle or equipment's owner.*

P. UNSAFE, DAMAGED, OR DEFECTIVE EQUIPMENT

The following safe work practices apply to the inspection of equipment, restricted use of damaged equipment, and repair of damaged equipment in accordance with 29 CFR 1926.20(b).

1. General Requirements

- a. *All equipment, including heavy equipment, small equipment, hand tools, power tools, or other equipment, must be operated, maintained, and repaired in accordance with the manufacturer's manuals and instructions.*

- b. Equipment or parts replaced that are not in accordance with the manufacturer's specifications for "in kind" replacement or with written permission to make the modification shall not be modified unless approved by the Equipment or Maintenance Manager and the Director of EHS.**

2. Inspection Requirement

- a. Unless otherwise specified, all heavy and small equipment is required to be inspected before use in accordance with 29 CFR 1926.20(b)(2) and the following procedures.**
- b. Detailed service interval inspections of heavy/construction equipment shall be performed in accordance with SOP 1406.004 and manufacturers' recommendations.**
- c. Inspection findings shall be documented on the appropriate forms and turned in to the Project Management Team or on-site mechanic when available.**
- d. Deficiencies potentially affecting safety devices, controls, or which might otherwise affect the safe operation of the equipment shall be reported immediately to the supervisor, safety competent person, or mechanic for red tag evaluation before operating.**

3. Tagging Equipment

- a. If defects are identified on any equipment or tools, they must be immediately "red tagged" with a "Do Not Operate" tag.**
- b. The mechanic or Safety Competent Person on site is responsible for hanging the tag as appropriate.**
- c. Red tags shall document the general reason for restricting use, who placed the tag, the date the tag was hung, and the operating restriction or DO NOT OPERATE as appropriate.**
- d. Tag shall be hung in a location near the starting or operating controls to effectively warn anyone who might attempt to start or operate the equipment. For equipment without operating controls, tags shall be hung in an otherwise conspicuous location.**
- e. Removal or replacement of tags shall be coordinated between the safety competent person and the mechanic.**
- f. After hanging a tag on the equipment, it should be relocated to a designated area for repairs as soon as possible.**

4. Equipment Repair and Mechanic Safety

- a. All equipment is to be repaired according to the manufacturer's instructions or in accordance with the requirements of Sections G.10 and G.11 of this SOP.**
- b. Mechanics, oilers, or equipment operators making repairs on heavy/construction equipment shall follow small tools and small equipment procedures in this section and the following:**
 - i. Mechanics shall be qualified in accordance with SOP 1401.019 and applicable Equipment Division procedures.**

- ii. Maintain good housekeeping. Clean up the work area when the task is complete and/or at the end of the shift.*
- iii. Never place any part of the body beneath a suspended load, including elevated attachments.*
- iv. Compressed air shall not be used for cleaning clothing or parts of the body.*
- v. Lock-Out/Tag-Out procedures shall be followed in accordance with the 1403.021 SOP.*
- vi. Block all elevated items you may be working on that could fall and cause injury. Do not rely on hydraulics for this purpose.*
- vii. Check all the way around the piece of equipment before you start it or move it for a test run. Be sure all equipment and personnel are clear.*
- viii. Wear safety glasses or goggles when chipping, grinding, or when in a position that would allow dirt to fall in your eyes. A face shield may also be required for certain operations.*
- ix. Use punches or bars as line-up tools. Keep fingers away from pinch points.*
- x. Perform hot work in accordance with the 1403.012 SOP and Section M (above).*

Q. COMMUNICATION REQUIREMENTS

- 1. Employees shall be in effective communication with their supervisor and/or a "buddy."**
- 2. While working in controlled zones associated with hazardous waste sites, employees will perform their job assignments according to the "buddy" system requirements of that standard and maintain a line of sight with co-workers at all times.**
- 3. In addition to the above requirements, equipment operators or other personnel working in isolated or remote locations shall also have radio or emergency cell phone contact with their supervisor.**

R. RELATED DOCUMENTS

Envirocon EHS SOPs 1403.001 through 1403.032
SOP 1401.019: Equipment Operator and Driver Qualification Procedures
California Code of Regulations: Title 8 – Cal/OSHA
29 CFR 1926: Safety and Health Regulations for Construction
29 CFR 1910: Occupational Safety and Health Standards
49 CFR 300-339: Federal Motor Carriers Safety Regulations

S. ATTACHMENTS

1403.011.01 – Stop Work Authority Poster

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to protect Envirocon employees, equipment and work areas from the dangers of fire. Envirocon has developed a fire prevention and protection plan to reduce the risk of potential injuries, death and property damage by helping employees identify and eliminate potential hazards and ensure fire controls are in place and serviceable.

B. SCOPE

This SOP applies to all Envirocon projects, offices, and work activities. Envirocon employees, as well as subcontractors and vendors working on the Envirocon project, are required to follow this procedure at all times unless an appropriate modification has been made to the specific task and has been approved by the EHS Department.

C. DEFINITIONS

1. Fires are classified according to the type of fuel or material:

- a. Class A: Wood, paper, and cloth.*
- b. Class B: Flammable gases, liquids, and greases.*
- c. Class C: Fires in live electrical equipment or involving materials near electrically powered equipment.*

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- d. Class D: Combustible metals such as magnesium, zirconium, potassium, and sodium.*
- e. Class K: Fires involving cooking oils, grease, or animal fat can be extinguished using Purple K, the typical agent found in kitchen or galley extinguishers.*

2. Incipient Stage

A fire that is in the initial or beginning stage and can be controlled or extinguished by portable fire extinguishers, class II standpipes, **or small hose systems without the need for protective clothing or breathing apparatus.**

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS is responsible for:

- Ensure that fire-prevention procedures are established and enforced across all projects.
- Oversee the regular inspection and maintenance of fire suppression systems and equipment.
- Ensure that appropriate personnel, including project management and health and safety staff, are trained to use fire extinguishers for incipient fires.
- Ensure comprehensive training for employees on evacuation routes and procedures and on how to contact local fire support.

2. Project Health and Safety Manager

The Project Health and Safety Manager is responsible for:

- Collaborate with the Director of EHS to implement and maintain fire-prevention procedures.
- Coordinate the inspection and maintenance of fire suppression systems and equipment.
- Oversee the training of appropriate personnel in the use of fire extinguishers for incipient fires.

3. Health and Safety Officer

The Health and Safety Officer is responsible for:

- Assist in ensuring that fire-prevention procedures are followed on the project site.
- Participate in regular inspections and help maintain fire suppression systems and equipment.
- Train project personnel to use fire extinguishers for incipient fires and educate them on evacuation routes and emergency procedures.

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4. Project Manager

The Project Manager is responsible for:

- Ensure that the project adheres to established fire-prevention procedures.
- Support the H&S Manager and Health and Safety Officer in enforcing safety protocols, including fire suppression system maintenance and training.
- Facilitate training for project personnel on hot work permits, the approval process, and the safe storage, use, and handling of flammable materials.

5. Supervisor

The Supervisor is responsible for:

- Monitor the use of flammable materials on the project site.
- Train employees in the requirements for hot work permits and the approval process.
- Ensure the proper maintenance of storage areas for flammable materials.

6. Employees

Employees are responsible for:

- Follow company procedures for safe operations during hot work activities.
- Adhere to guidelines for the storage, use, and handling of flammable materials.
- Immediately report any spills or potential hazards that may cause a fire to supervisors or health and safety officers.

E. FIRE EXTINGUISHERS

1. General Fire Extinguisher Requirements

- Fire extinguishers will be readily available on-site. At a minimum, extinguishers will be placed as follows (extinguishers of greater size may be substituted):***
- Heavy Equipment will be equipped with a 5 lb capacity ABC fire extinguisher rated at 2A:10B:C.***
- Fuel depots and flammable liquid storage/handling areas:***
 - 20 lb capacity ABC fire extinguishers with a rating of 10A:120B:C will be provided within 50 feet of, but no closer than 25 feet to, all refueling depots and flammable storage areas.*
 - 10 lb capacity ABC fire extinguishers with a rating of 4A:80B:C will be provided within 50 feet of, but no closer than 25 feet to, all mobile fueling stations, flammable liquid transfer areas, and generators.*
- Trailers, buildings, and work areas:***
 - All trailers and work areas will have at least a 5lb ABC fire extinguisher rated at 2A:10B:C.*

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- ii. *Fire extinguishers in trailers will be mounted near a clear evacuation egress point (door).*
- e. *Pick-up trucks will be provided with a minimum 2.5lb ABC fire extinguisher rated at 1A:10B:C.*

2. Mounting Fire Extinguishers

- a. *Envirocon shall use heavy-duty mounting brackets to mount extinguishers for external mounting on trucks, heavy equipment, and pickup trucks. A standard mounting bracket may be used for in-cab mounting, provided the extinguisher can be placed where it will not be damaged, cause a tripping hazard, or interfere with the safe operation of the vehicle or equipment.*
- b. *Fire extinguishers shall be mounted in a readily accessible location, where the potential for damage from impact, temperature extremes, and/or petroleum products is minimized or eliminated. Access routes to fire extinguishers shall be kept clear at all times.*
- c. *Fire extinguishers shall not be staged on the ground (to include floors of buildings or trailers) except during temporary use (i.e., fire watch). All other fire extinguishers shall be mounted when in vehicles, equipment, buildings, or trailers.*
- d. *Fire extinguishers shall not be mounted in any location that may interfere with access to vehicle or equipment cabs or compartments (including toolboxes) or which may impede access/egress.*

3. Use of Fire Extinguisher

- a. *Employees shall be trained on the use and potential hazards associated with fire extinguisher use. This training shall be performed upon initial assignment and at least annually thereafter.*
- b. *Employees are authorized to use extinguishers during incipient stages only. With the exception of employees performing fire watch duties, there is no requirement or expectation that any employee attempt to extinguish a fire.*
- c. *If a fire is detected, the responding employee shall clear the area (e.g., using verbal warnings, radio communication, or by sounding an alarm) and shall assign another employee to notify the site supervisor and/or emergency services. If an employee is alone when a fire has been detected, he or she may attempt to control the fire if it is in incipient stages prior to notification to the supervisor if it is safe and practical to do so.*
- d. *Employees shall always ensure a safe evacuation route before attempting to extinguish a fire.*

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e. If the fire progresses beyond the incipient stage or available equipment is insufficient to extinguish the fire, the effort should be abandoned.

F. FIRE EXTINGUISHER INSPECTIONS

- 1. All fire extinguishers shall be inspected, at minimum, by the end-user monthly, by an authorized service provider annually, and by an authorized service provider once every six years (the six-year service typically includes testing of the cylinder beyond what is performed on an annual basis).**
- 2. Fire extinguishers shall be inspected if subjected to such conditions as submersion in water or mud, excessive heat or cold, impact, or any other condition that could compromise the functionality of the extinguisher.**
- 3. Fire extinguishers in vehicles, equipment, or those staged for temporary use shall be inspected each day to ensure full charge and no indication of damage. This daily inspection is a visual check only and does not require specific training to perform.**
- 4. Monthly Inspections**
 - a. Monthly inspections shall be conducted by authorized employees who have documented fire extinguisher inspection training, including viewing of Envirocon’s extinguisher inspection video and satisfactory completion of the associated quiz.***
 - b. Monthly inspections shall include:***
 - i. Ensuring the annual inspection is current, and the inspection tag is in place and legible.*
 - ii. Ensuring the internal inspection collar tag is in place and legible and, for some extinguishers, ensuring the hydrostatic test tag is in place and legible.*
 - iii. Ensuring all labels on the extinguisher are legible and in good condition.*
 - iv. Physical Inspection:*
 - a. When all tags and labels are verified, remove the extinguisher from its mounting bracket. Inspect the bracket to ensure that it is secure and that all closures are functional and in good condition. Inspect the extinguisher for signs of damage, including corrosion, cuts, gouges, dings, and dents.
 - b. Inspect the extinguisher for evidence of leaks or discharge (e.g., pressure gauge is in the red zone, extinguisher feels lighter than normal, pin seal is broken or pin is removed, or chemical powder is observed in the nozzle or on the ground). It is possible for pressure gauges to remain in the green zone even after loss of pressure. It is important to check for other evidence of discharge.

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- c. Inspect the hose for blockage. Extinguishers mounted or used outdoors are most at risk for hose blockage. If a blockage is found, remove the hose from the extinguisher. Clear the blockage and rinse the hose using water to ensure no residual material is in the hose.
- d. If an extinguisher is found to be damaged or defective, it shall be removed from service and replaced. To return the extinguisher to service, it must be inspected by an authorized service provider, including recharge and internal inspection (if the service provider deems it necessary).
- v. *Extinguisher inspections shall be documented on a durable tag affixed to the extinguisher. Only inks that will withstand usage conditions may be used. Inks that easily fade or may be washed away shall not be used to document inspections. If the extinguisher is removed from service as a result of the inspection, a separate out-of-service tag shall be affixed to the extinguisher.*

5. Annual Inspections

- a. ***It is a good practice to note the next annual inspection date on the monthly inspection tag. Some annual inspection tags are made from materials that are easily damaged, and where the annual inspection date cannot be verified, the extinguisher must be removed from service until a subsequent annual inspection is conducted.***
- b. ***Annual inspection shall be conducted by an authorized provider. If servicing is required, this must be conducted by an authorized service vendor.***

6. Six-Year Servicing

- a. ***Every six years fire extinguishers will undergo a full service by an authorized service vendor to include a full internal inspection, recharge, and maintenance.***

7. Authorized Service Vendor Requirements

- a. ***Both fixed facility and mobile fire extinguisher vendors that provide full internal inspection and maintenance services must meet the following minimum requirements:***
 - i. *Factory-trained and certified technicians, or*
 - ii. *Certification by an organization acceptable to the authority having jurisdiction, or*
 - iii. *Registration, licensure, or certification by a state or a local authority having jurisdiction.*
- b. ***Any vendor used for internal service or any service requiring replacement of dry chemical powder shall utilize a closed agent recovery system such as a Getz machine. If the local available vendor does not provide this service the fire***



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extinguisher must be taken out of service and replaced until it can be serviced by this method.

G. FACILITY SYSTEMS

1. Facility Managers

- a. Facility managers will be notified when any work is done in close proximity to facility systems or components, such as fixed fire suppression systems for buildings, or where excavations encroach on facility systems, such as fire hydrants or related piping.*
- b. Facility fire hydrants shall not be used without notification and permission of the facility manager or designated representative.*

2. Excavation or Demolition

- a. When excavating or performing demolition near active facility fire systems, the facility systems shall be uniquely marked to avoid damaging these systems.*
- b. Demolition of fire systems shall not be performed without notification to and written approval from the facility manager or designated representative.*

H. FLAMMABLE LIQUIDS, FUELS, AND FUELING

1. Protection of Fuel Depots

- a. Depots will be located in such a manner as to provide clear access for fire trucks.*
- b. Depots will be protected from vehicle or equipment damage using bollards, bails, curbs, or similar devices.*

2. Portable Containers

- a. All portable fuel cans shall be metal safety cans free of deformities that may compromise the integrity of the container.*
- b. Flammable liquids other than fuels shall be stored in the original container. For ease of dispensing, these liquids may be transferred to flammable storage cans with self-closing lids and flame arrestors (i.e., safety cans).*
- c. All flammable storage containers shall be labeled as to their contents and shall include a warning regarding flammable contents in accordance with the hazard communication requirements in procedure 1403.010. This labeling shall be in place regardless of whether the liquid is used immediately or is stored in the container.*



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3. Fueling Gasoline Engines

- a. Gasoline engines shall not be fueled while the engine is running.*
- b. Prior to fueling, engines will be allowed to cool down in accordance with the equipment manufacturer’s recommendations, typically for up to 15 minutes.*

4. Containments

- a. All equipment shall be fueled through funnels or spouts to prevent spillage.*
- b. NFPA flammables (e.g., gasoline) will not be stored in the same containment as NFPA combustibles (e.g., diesel fuel).*
- c. Containers and depot tanks with capacities greater than five (5) gallons shall be held or stored in containments designed to collect spillage. Covered containments must be capable of containing a volume equal to:

 - i. The capacity of the largest tank plus*
 - ii. The combined displaced volumes of all tanks and containers stored in the containment.**
- d. Uncovered containments must be capable of containing a volume equal to:

 - i. The capacity of the largest tank plus*
 - ii. The combined displaced volumes of all tanks and containers stored in the containment, plus*
 - iii. 25 percent excess capacity for rain collection.**
- e. Uncovered containments will be kept free of standing water.

 - i. Water in excess of 5% containment capacity shall be removed within a 48-hour period.*
 - ii. Water shall not be discharged onto the ground unless free of visible residues or films.**

5. Bonding and Grounding

- a. Any transfer of a flammable liquid from one container to another requires bonding.*
- b. All flammable fuel depot tanks set up on-site shall be grounded.*

6. Smoking, Fire and Hot Work

- a. Hot work permits shall be issued for all applicable hot work. If there are facility-specific requirements that are more stringent than the Envirocon requirements, permits shall be issued according to facility requirements.*

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- b. Smoking and hot work shall not be allowed within 50 feet of fuel depots or other flammable liquid storage and/or transfer areas. Smoking areas shall be designated at each project site.*
- c. Fuel depots and other flammable liquid storage and/or transfer areas shall be posted against smoking and open flames.*

7. Oily Rags

- a. Oily rags, trash and other combustible scrap materials shall be placed in closed receptacles separate from other trash.*
- b. Oily rags shall be stored in containers approved for this purpose and disposed of as required by federal, state, local and/or facility requirements.*

I. PERFORMANCE OF HOT WORK

1. General Hot Work Requirements

- a. All hot work shall be performed in accordance with Envirocon's 1403.011, Code of Safe Work Practices SOP and this procedure.*
- b. Hot work is considered to be any activity that generates a spark or open flame, including, but not limited to, welding, cutting, grinding, and brazing.*
- c. The 1403.012.01 - Hot Work Permit shall be completed prior to initiation of hot work activities and closed out when hot work activities are completed using form 1403.012a or a facility or client-required hot work form.*
- d. Any hot work activity that may produce hazardous fumes (e.g., cutting or grinding metals coated with lead-based paint, hard-facing equipment attachments) shall be assessed prior to the performance to ensure proper respiratory protective equipment has been selected and is available or that proper ventilation is sufficient to reduce the hazard below-established exposure limits. If no data is available that shows ventilation is adequate to control the hazard, respiratory protective equipment must be used.*
- e. Where client or facility requirements are more stringent than Envirocon requirements, hot work shall be performed following the more stringent requirements.*

2. Equipment Operation

- a. Welding equipment shall be used only for operations for which it is approved and as recommended by the manufacturer. Any defective equipment must be reported and taken out of service until it can be repaired or replaced.*



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b. Workers assigned to operate or maintain oxygen/fuel-gas supply equipment and resistance welding equipment shall be thoroughly instructed in the safe use of such equipment.

3. Personal Protective Equipment

a. Eye and Face Protection

- i. All employees performing hot work activities shall be provided with eye and face protection.*
- ii. Appropriately shaded shields shall be worn during welding and/or cutting operations.*
- iii. Helmets or face shields shall be used for arc welding/cutting, excluding submerged welding operations.*
 - a. Helmets, hand shields, or shaded face shields may be used for other cutting operations.
 - b. Standard non-shaded face shields may be used for grinding operations where there is no potential exposure to high-intensity light (such as that emitted during welding and cutting operations) but where face protection is still required.
- iv. Safety goggles or glasses with side shields shall be worn in addition to helmets, hand shields, or other face shields.*
 - a. The goggles or glasses may be either of clear or colored glass, depending upon the type of exposure during hot work operations.
 - b. Helpers or attendants shall wear proper eye protection equivalent to the level of protection worn by the person performing the hot work.
- v. Safety goggles or glasses with side shields and suitable filter lenses shall be permitted for use during gas welding operations on light work, torch brazing, or inspection.*
- vi. All operators and attendants on resistance welding or brazing equipment will use face shields or goggles, depending on the particular job.*
- vii. Shaded screens may be used to prevent exposure to high-intensity light, sparks, or slag to bystanders.*

b. Protective Clothing

- i. All welders/cutters shall wear fire and heat-resistant gauntlet gloves.*
- ii. Fire and heat-resistant protective clothing made of leather or other suitable fire-resistant material must be used to protect against radiant heat and sparks. The proper PPE will be determined on the JSA per task to be performed.*

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- iii. *Leather jackets shall be utilized if personnel are performing welding/cutting work above shoulder level.*
- iv. *Nylon and most synthetic-fiber clothing shall not be worn as the external garment during welding/cutting operations.*
- v. *All outer clothing, such as jumpers or overalls, shall be free from oil, grease, and other flammable or combustible material.*

c. Respiratory Protective Equipment

- i. *When respiratory protective equipment is required, the selection, training requirements, and use of such equipment shall be in accordance with Envirocon procedure 1403.016, Respiratory Protection Program.*

4. Gas Welding and Cutting Safety

- a. ***The fuel-gas hose and oxygen hose shall be readily distinguishable from each other.***
 - i. *The contrast is made by different colors or by surface characteristics readily distinguishable by touch.*
 - ii. *Oxygen and fuel-gas hoses shall not be interchangeable.*
 - iii. *A single hose with more than one gas passage shall not be used.*
- b. ***When parallel sections of oxygen and fuel-gas hose are taped together, tape shall cover not more than four (4) inches out of every twelve (12) inches of length.***
- c. ***All hoses in use shall be inspected at the beginning of each working shift. Damaged or defective hose shall be removed from service.***
- d. ***Hoses, cables, and other equipment shall be kept clear of walkways, doorways, ladders, and stairs.***
- e. ***Clogged torch tip openings shall be cleaned with approved cleaning wires, drills, or other devices designed for this purpose. If the tip cannot be cleaned, it shall be replaced prior to performing the task.***
- f. ***Torches to be used shall be inspected at the beginning of each working shift for leaking shutoff valves, damaged hose couplings, and clogged tip connections. Defective torches shall not be used.***
- g. ***Torches shall be ignited by friction lighters or other approved devices only. Matches, flame lighters, or other sources of flame shall not be used to ignite torches.***
- h. ***Oxygen and fuel-gas pressure regulators, including related gauges, shall be in proper working order.***

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- i. All oxygen cylinders and fittings shall be kept away from oil or grease. Cylinders, cylinder caps and valves, couplings, regulators, hoses, and apparatus shall be kept free from oil or greasy substances and shall not be handled with oily hands or gloves. Oxygen shall not be directed at oily surfaces or greasy clothes or used within a fuel oil or other storage tank or vessel.*
- j. Flash-back arrestors shall be installed on all oxygen and fuel-gas assemblies at the regulator at a minimum.*
- k. Torches and hoses shall be completely depressurized (bled) prior to storage or at the end of each shift.*
- l. Torches and hoses shall not be stored in enclosed areas (e.g., gang boxes, lockers) while connected to cylinders.*
- m. Do not hang hoses or torches from the regulators attached to the cylinder.*
- n. Release the hose pressure and close the cylinder valves when work is interrupted for an extended period (breaks, lunch).*
- o. Don't leave a pilot flame burning at the tip of the torch during interruption of operations.*
- p. Regulators must be removed and cylinder caps in place when hoses are removed for storage.*
- q. When working in an elevated position:*
 - i. Provide a screen to keep hot metal, electrode stubs, hot metal slag, etc. from falling below,*
 - ii. Provide toe boards when working from scaffolding under which workers may be passing or working and*
 - iii. Restrict access to the area below the work*
- r. A fire watch shall be required at the working level and at all lower levels that may be impacted by falling sparks or slag.*

5. Arc Welding and Cutting Safety

- a. Electrode holders shall be designed for arc welding/cutting and capable of safely handling the maximum rated current required.*
- b. Exposed current-carrying parts of electrode holders shall be insulated in a manner that provides full protection against electrical shock for operators of arc welders/cutters.*
- c. All arc welding/cutting cables must be completely insulated and flexible, capable of handling the maximum current requirements of the work.*



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- d. Cables shall be free from repair or splices for a minimum distance of 10 feet from the electrode holder. Cables with standard insulated connectors or splices with insulating quality that is equal to that of the cable may be permitted.*
- e. If it is necessary to splice lengths of cable, insulated connectors equivalent to those of the cable shall be used. If connections are made by cable lugs, they shall be securely fastened and provide good electrical contact. The exposed metal parts of the lugs must be completely insulated.*
- f. If electrode holders are left unattended, the electrodes shall be removed and the holders placed so that they cannot make electrical contact with employees or conducting objects.*
- g. Electrode holders shall not be dipped in water.*
- h. The power supply to the equipment shall be disconnected whenever the arc welder or cutter leaves work or stops work for any appreciable length of time or when the arc welding/cutting machine is to be moved.*
- i. Any damaged or defective equipment shall be reported to the supervisor and removed from of service until repaired.*
- j. All arc welding/cutting operations shall be shielded by noncombustible or flameproof screens, which will protect employees and other persons working in the vicinity from the direct rays of the arc or from arc flash.*
- k. The frames of all arc welding and cutting machines shall be grounded.*
- l. Never weld on any line or equipment until it has been connected to the ground connection of the welding machine.*
- m. Never pull or disconnect a ground line while the arc is in use.*
- n. Never let the live metal parts of the welding circuit touch damp skin or clothing.*
- o. All parts that are being cut must be supported in such a manner as to prevent them from falling during or at the completion of the cut.*

6. Storage and Handling of Compressed Gas Cylinders

- a. Compressed gas cylinders shall be legibly marked with either the gas's chemical or trade name. Such markings shall be stenciled, stamped, or labeled and not easily removable. The marking shall be located on the shoulder of the cylinder.*
- b. Compressed gas cylinders shall be equipped with approved connections.*
- c. Acetylene cylinders shall always be used and stored upright (valve end up) to prevent the acetone (a stabilizing agent) from draining into the valves or fittings. Acetylene should never be used at a hose pressure exceeding 15 psi. Above 15 psi, acetylene is extremely unstable, and an explosion is possible.*

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- d. Oxygen cylinders shall not be stored or used near oil or grease or other highly combustible/flammable materials.*
- e. Oxygen cylinders in storage shall be separated from fuel-gas cylinders by a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high and having a fire-resistance rating of at least 30 minutes.*
- f. Cylinders shall not be dropped, struck by objects, or permitted to strike against each other violently.*
- g. Cylinder valves shall be closed before moving cylinders, at the end of the shift, or when work is finished.*
- h. Valves of empty cylinders shall be closed.*
- i. Cylinders in use shall be staged away from the welding/cutting operation so that sparks, hot slag, or flames do not contact the cylinders. If it is not possible to stage cylinders at an adequate distance, cylinders may be protected from sparks, slag, or flames by fire-resistant covers.*
- j. Cylinder valves shall be opened slowly.*
- k. Acetylene cylinder valves shall not be opened more than one and one-half turns of the valve stem and preferably no more than three-fourths of a turn.*
- l. Where a special wrench is required, it shall be left in position on the stem of the valve while the cylinder is in use. In the case of manifold or coupled cylinders, at least one such wrench shall be available for immediate use.*
- m. Regulators shall be removed and cylinder valves closed with valve caps in place when cylinders are transported. All vehicles and equipment used to transport cylinders shall have a proper support rack installed. Cylinders shall be secured in the upright position prior to transport.*
- n. A suitable cylinder truck, chain, or other steadying device shall be used to prevent cylinders from being knocked over while in use or storage.*
- o. Cylinders shall not be placed where they may become part of an electric circuit. Tapping of an electrode against a cylinder to strike an arc is prohibited.*
- p. Cylinders shall be stored in shaded areas and secured in an upright position with valve caps in place.*
- q. Cylinders shall never be used as rollers or supports.*
- r. The valve protector cap must always be in place when moving the cylinder if moved by any other means than its normal use cart or if over terrain that makes movement on its cart unsafe.*
- s. A spontaneous explosion is likely to occur when oxygen comes in contact with hydrocarbons. Keep oxygen and hydrocarbons separated. Never lubricate or*



TITLE: Fire Prevention and Protection		PREPARED BY: Jerry Hipp
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EFFECTIVE DATE: 10/1999	REVISION DATE: 5/2024	

allow oil or grease to get on oxygen connections or use oxygen for compressed air or pressure.

7. Manifolding of Cylinders

- a. Cylinder manifolds shall be installed under the supervision of an experienced person(s) and must comply with proper practices in construction and use.*
- b. All manifolds and parts shall be appropriate for the gases for which they are approved.*
- c. When acetylene cylinders are manifolded, approved flash arrestors shall be installed between each cylinder and the coupler block. One flash arrestor installed between the coupler block and regulator is acceptable for outdoor use only if the number of cylinders coupled does not exceed three.*
- d. Each cylinder lead shall be provided with a backflow check valve.*

8. Welding/Cutting on Containers

- a. Used Containers: No welding, cutting, or other hot work shall be performed on empty drums, barrels, tanks, or other containers until they have been cleaned thoroughly to ensure that no flammable materials or substances such as greases, tars, acids, etc., are present, which may produce a fire or explosion hazard. Any connection to the drum or vessel shall be disconnected, blocked, or blanked.*
- b. Venting and Purging: All hollow spaces, cavities, or containers shall be ventilated to remove gases before preheating, cutting, or welding. Purging with inert gas is recommended.*
- c. All enclosed spaces where hot work is to be performed shall be checked for the presence of flammables (e.g., LEL) and oxygen content prior to beginning work.*

9. Fire Protection During Welding

- a. Objects to be welded, cut, or heated shall be moved to a designated safe location. If this is not possible, all flammable or combustible materials within 35 feet of the work area shall be removed or protected from heat, sparks, or slag.*
- b. Welding, cutting, or heating shall not be performed where the application of flammable paint, the presence of other flammable compounds, or heavy dust concentration creates a possible hazard.*
- c. Openings or cracks in floors, walls, ducts, tanks, etc., shall be closed. Where openings or cracks cannot be closed, additional precautions shall be taken to prevent sparks from penetrating the openings. The same precautions shall be taken in the presence of open doorways and open or broken windows.*

TITLE: Fire Prevention and Protection		PREPARED BY: Jerry Hipp
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- d. Approved fire extinguishing equipment shall be present in the immediate work area. At a minimum, one 10lb fire extinguisher shall be immediately available. This extinguisher must be in addition to permanently located extinguishers within the building or work site.*

10. Fire Watch

- a. It is Envirocon policy that a fire watch is required during any hot work activity unless specifically exempted by the HSO (see note below). A fire watch shall be maintained for the entire duration of the hot work activity and for at least 30 minutes after completion so that a possible smoldering fire can be detected and extinguished.*
- b. Fire watch personnel shall be instructed in the selection and use of appropriate fire extinguishers or other firefighting equipment.*
- c. Fire watch personnel shall be familiar with facilities and the procedures to be followed in the event of a fire.*
- d. The fire watch shall have no other duties or responsibilities for the duration of the assignment. If the assigned fire watch must leave the area, all work must stop until he/she returns or is replaced by another individual.*
- e. Note: The requirement for a fire watch may be waived when, after completion of the Hot Work Permit, the Site HSO determines that sparks, slag, hot material, etc., are not likely to come into contact with flammable or combustible solids, vapors, liquids, or residues. Client or facility-specific requirements may override this waiver.*

J. RELATED DOCUMENTS

NFPA 10: Standard for Portable Fire Extinguishers
29 CFR 1926 Subpart F: Fire Protection and Prevention
29 CFR 1926, Subpart J: Welding and Cutting

K. ATTACHMENTS

Form 1403.012.01: Hot Work Permit



TITLE: Hazard Identification and Correction Procedures		PREPARED BY: Tim Tierney
SOP NO: 1403.013	PAGE: 1 of 8	AUTHORIZED BY: Matthew Curran, CSP, CIH – Director of EHS
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A. PURPOSE

This procedure defines Envirocon’s accident prevention program elements related to hazard identification, as required by 29 CFR 1926.20, OSHA’s General Safety and Health Provisions, and establishes guidelines for correcting unsafe conditions and work practices. This procedure is intended to address various accident prevention program requirements to aid in identifying and eliminating hazards in our assigned work areas as part of Envirocon’s overall Health and Safety Program.

B. SCOPE

This procedure applies to all Envirocon employees, subcontractors, temporary and/or contract employees, vendors, and visitors at all Envirocon offices and project sites that are working under the Envirocon Health & Safety procedures.

C. DEFINITIONS

None

D. RESPONSIBILITIES

1. Environment, Health, and Safety Department

Responsibilities include:

- Ensuring all employees are properly trained to identify common hazards in the workplace environment.
- Ensuring the content of the training meets the needs of the project/job tasks.
- Ensuring all trainers are qualified to conduct the training applicable to the identified hazards.

2. Supervisors

Responsibilities include:

- Ensuring that their personnel are trained in accordance with the requirements of this SOP.
- Ensuring employees adhere to the job-specific training requirements in their project Health and Safety Plans (HASP) and Job Safety Analysis (JSA) documents.

3. Employees

Responsibilities include:

- Adhering to the requirements and behavior expectations outlined in the provided training.
- Understanding their responsibility to STOP work when a hazard may cause harm to personnel, equipment, or property.
- Alerting a supervisor, manager, or Health & Safety member of previously unidentified, undocumented, or uncontrolled hazards or risks identified in the field.

E. HAZARD IDENTIFICATION PROCESSES

The following table describes the various planning mechanisms that help ensure safe operations from project concept through program feedback.

Program Elements By Phase of Operation		
Program Elements	Phase of Work	Description
Health and Safety Program Manual (SOPs 1403.001 thru 1403.032)	Proposal Design and Planning	Establishes basic compliance program controls based on project histories and Federal Regulations
Site Health and Safety Plan (SOP 1403.017)	Project Development Phase (including submittals)	Incorporates client specifications, facility procedures, and state and local regulatory requirements.
Site-Specific Operations Work Plans		
Site-specific Procedures (typically attached to HASP but may be stand-alone plans)		
Site Safety Meetings SOPs – 1403.003	Operations Phase	These program elements allow the project management and health and safety officer to adapt procedures to changes in work scope, conditions, new information, and beneficial suggestions from personnel.
Behavior-Based Observations (SOP1403.003)		
Hazard Identifying and Correction (SOP 1403.013)		
Code of Safe Work Practices (SOP 1403.011)		
Job Safety Analysis (SOP 1403.003 and Form 1403.003.01)		
Incident Reporting and Investigation (SOP 1403.024 and Vector EHS Management System)		
Field Crew Activity Plan (FCAP) (SOP 1403.003)	Daily Job Task Phase	Employees, on a daily basis, assess their work to ensure changes in conditions are addressed in task plans and JSAs. Where work will begin in a new location, this process includes a “walk-down” of the new area to identify work area hazards.
Site Safety Meetings (SOP 1403.009 and 1403.003)		

Lessons Learned	Procedures and Program Review Phase	Lessons learned provide feedback for project and program procedure improvements.
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F. HAZARD ANALYSIS PROCEDURES

Envirocon embraces a site-specific approach to hazard assessment and control. Some acronyms, plans, or program names may be changed to match client requirements. However, the process shall remain unchanged.

1. Proposal and Planning Phase

This phase includes primarily estimating and proposal development.

- a. Consideration shall be given to applicable federal, state, and local regulations and Envirocon SOPs regarding hazard identification and controls. The appropriate resources to control identified hazards shall be identified and accounted for in the budget estimates.**
- b. Client and/or facility health and safety requirements shall be incorporated into the planning process to address all requirements beyond those outlined in Envirocon procedures adequately.**

2. Project Development Phase

Submittals and written compliance plans include:

- a. Project Work Plan**
- b. Envirocon Standard Operating Procedures**
- c. Health and Safety Plans (HASP)**
 - i. A site-specific Health and Safety Plan (HASP) presents a realistic approach to the anticipated hazards at the site. Site conditions are expected to vary throughout the project. The HASP should be considered a living document and revised as necessary to address significant changes in scope, conditions, or processes. HASP development is outlined in SOP 1403.017.*
 - ii. A site-specific Health and Safety Plan shall be developed for each project. The Health and Safety Program Manual documents the main compliance program elements of Envirocon’s Health and Safety Program. This program manual serves only as a starting point for the unique requirements associated with each new project. In accordance with Envirocon policies and procedures, the program that will be administered on-site shall incorporate the recognition, evaluation, and control of hazards through all phases of the project.*
 - iii. At minimum, the HASP shall include:*
 - A detailed scope of work and applicable contract specifications and
 - A risk assessment and identification of controls are to be developed in accordance with applicable Envirocon programs, client or facility programs, specifications, and scope of work. The risk assessment shall identify the hazards most likely to occur on the site and the probability of such occurrence.

3. Project Operations Phase

Before starting new tasks on a project, the Project Management Team will create work plans and identify potential hazards and safety controls for each activity through a Job

Safety Analysis (JSA). Workers must complete training on the JSA and sign an attached acknowledgment form.

a. Job Safety Analyses

- i. The JSA(s) should be incorporated by reference into the task plan.*
- ii. A single JSA may be used for multiple task plans if the general steps, hazards, and controls are all the same. A separate JSA should be created if there are significant differences or special hazards and controls that only apply to a specific task.*
- iii. When a JSA is revised, all applicable task signatories must be retrained on the changes and re-signed the JSA.*

b. JSA Continuous Improvement

Once developed, JSAs serve as the primary procedural tool for ongoing hazard assessment and controls based on the following:

- i. Employee suggestions;*
- ii. Inspection findings;*
- iii. Lessons learned from investigations;*
- iv. Modification of work/plans/procedures and/or*
- v. Newly identified hazards.*

c. Site Monitoring

- i. Project personnel, area, and environmental monitoring requirements shall be defined in the project HASP.*
- ii. Initial monitoring shall be conducted to verify and validate preliminary hazard assessments related to chemical, radiological, and flammable/explosive hazards at the project site.*
 - a. Air monitoring shall be documented on the 1403.013.01 – Air Monitoring Field Log.*
 - b. Air sampling equipment shall be calibrated before use according to the manufacturer's recommendations and documented on 1403.013.02 – Calibration Log.*
 - c. Employees shall be notified of their sample results within 30 days of receiving the results using the 1403.013.03 – Air Monitoring Exposure Results Form.*
- iii. Prior to receiving results, personnel who may be exposed to a contaminant above the established exposure limit shall perform all work utilizing appropriate PPE.*
- iv. Subsequent monitoring shall be conducted to verify the effectiveness of controls and to detect any changing conditions that may result in modifications to the HASP, task plans, and/or JSAs.*

d. Incident Reports and Investigations

- i. All incidents and near misses that occur on a project site will be reported and investigated according to the 1403.024 Incident Reporting and Investigation SOP.*

- ii. *Incident investigations may be used to correct at-risk behaviors, conditions, and/or existing procedures. When corrective actions include changing a JSA, work plan, etc., the associated Control of Work program documents shall be updated accordingly.*

e. Audit and Inspection Findings

- i. *Each project is required to complete at least one documented inspection per month using the inspection forms provided in the VectorEHS system. The Health and Safety Officer may use different inspection forms depending on the specific area of focus.*
- ii. *Inspections may be used to identify and correct hazardous conditions or non-compliance with regulatory requirements. When corrective actions include changing a JSA, work plan, etc., the associated Control of Work program documents shall be updated accordingly.*
- iii. *Corporate Site Audits*
 - (a) *The Envirocon Director of EHS will schedule an audit of all Envirocon jobs, including subcontractor responsibilities. All audit findings will be entered into VectorEHS, and a final report will be provided to the Senior Leadership Team and the Project Management Team. An initial report will be in a draft form and submitted to the Project Manager for review for accuracy of information. The final report will be inputted into VectorEHS and distributed to the project manager and senior management.*

f. Behavior-Based Safety Observations and Hazard Identifications

- i. *Behavior-Based Safety Observations (BBSO) are required to be conducted at each project site at a rate of 1 per 350 manhours worked as per the 1403.003 SOP.*
- ii. *The SOP describes both peer-on-peer and supervisory observations. While safe and exemplary behaviors should consistently be recognized, at-risk behaviors and conditions should be documented with direct feedback from the observer and/or supervisor and the observed employee to develop corrective actions.*
- iii. *Hazardous conditions identified in the field shall be reported to a Project Management Team member and tracked in the VectorEHS system. Each hazard will be categorized accordingly, and corrective actions will be taken to fix it.*
- iv. *BBSOs and Hazard Identifications may be used to identify and correct at-risk behaviors, hazardous conditions, or non-compliance with regulatory requirements. When corrective actions include the change of a JSA, work plan, etc., the associated Control of Work program documents shall be updated accordingly.*

4. Daily Job Task Phase

All employees (including subcontractors) must be vigilant in the hazard identification process for their work area(s), including identifying changes in condition each day.

- a. Employees shall develop an understanding of the expected conditions in the work area through training, Plan-of-the-Day (POD) meetings, and other forms of feedback.**
- b. Form 1403.003.02, Field Crew Activity Plan (FCAP) shall be completed for each task or work location before beginning work. Some work areas may require**

employees to review more than one FCAP when multiple tasks with varying hazards are being performed.

i. After the daily POD meeting, crews shall break up into their individual work teams and complete a CAP document. Each team should:

- Discuss and ensure everyone understands the applicable JSAs for the job task.
- Document the expected hazards and controls applicable to their task.
- If the work crew is performing a new task or there is a condition change, as described in procedure 1403.003, the crew must walk down the work area(s), and a new FCAP must be prepared prior to beginning work.

ii. A new work area walk-down includes:

- Familiarization of all employees with the new area;
- Identification of hazards; and
- Implementing hazard controls in accordance with the HASP, task plan, and/or applicable JSAs.

c. When a change in conditions or hazards is identified, it is expected that the work crew:

i. Stops all activity in the work area.

ii. Notifies the supervisor of the changed condition.

iii. Evaluate the condition or hazard and revise the task plan and supporting documents (e.g., HASP, JSA, CAP) as needed to ensure adequate controls are in place.

iv. Notifies affected employees and subcontractors of changes prior to resuming work.

G. CORRECTING UNSAFE CONDITIONS AND WORK PRACTICES

No supervisor shall knowingly allow a hazardous condition to exist that may result in injury or occupational illness. Although Envirocon intends to eliminate all at-risk behaviors and conditions as quickly as possible, some corrective actions require long implementation periods and/or significant capital expenditures. Because of this, it is necessary to evaluate the seriousness of hazards and focus on those with the greatest potential to cause injury, illness, or property damage.

1. Corrective Action Responsibilities

a. Employees

All employees should recommend workplace changes or practices that will improve job safety and performance. Recommendations to correct unsafe conditions should be directed to the employee's supervisor or site HSO/SCP. If the employee does not receive a timely response from these individuals, they are encouraged to call the Health and Safety Hotline at (800) 224-7389.

b. Supervisors

All supervisors are responsible for making changes in operations and work practices that improve the job performance and safety of the employees in their areas of responsibility. When such changes are beyond the supervisor's authority, expertise, and/or budget, he/she shall inform the next level of management of the nature of the hazard and proposed changes. Managers shall work with the project team, client, and/or subcontractors to ensure necessary changes are made.

- c. *Site Health and Safety Officers (HSOs) and Safety Competent Persons (SCPs)***
HSOs and SCPs report to the assigned Health and Safety Manager (HSM) and/or Director of EHS. As the personnel responsible for site health and safety, these individuals have the authority to stop all work if there is an immediate or unforeseen danger to life, health, or property. In all cases, the HSO or SCP shall ensure that the Project Manager and HSM are apprised of any operational decision.

2. Corrective Action Guidelines

Corrective actions for identified deficiencies shall follow the hierarchy of controls described below.

- a. *Elimination***

Remove the hazard completely.

- b. *Substitution***

Substitute a less hazardous material or process. For example, utilizing water-based paints rather than solvent-based paints minimizes flammable vapors and eliminates health concerns associated with solvent-based paints.

- c. *Engineering controls***

Engineering controls are physical changes to the work area or process that effectively minimize an employee's exposure to hazards. These controls include enclosure (such as enclosing noisy equipment), isolation (use of interlocks, guards, welding screens, etc.), removal or redirection (such as exhaust ventilation), or workplace/job redesign (such as changes to the work area to minimize ergonomic injuries).

- d. *Training***

Where deficiencies exist due to inadequate training, the HSO shall ensure that all affected employees receive the necessary training to eliminate the at-risk behavior(s) that contributed to the deficiencies.

- e. *Administrative Controls***

Administrative controls address employee exposure to hazards without physically changing the work environment and typically involve adjusting work tasks or schedules. Examples of administrative controls include limiting the time an employee is exposed to a hazard (such as work/rest regimens for temperature extremes), written operating procedures, established work practices, and safety and health rules (such as alarms, signs, and warnings; use of a buddy system; or stretching exercises and break policies).

- f. *Personal Protective Equipment (PPE)***

PPE shall be the last consideration to control and protect against a hazard and may only be used when hazards cannot be eliminated through engineering or administrative controls.

Changes to PPE requirements may be necessary to protect employees from identified hazards. It is important to note that PPE does not control hazards but is designed to minimize the potential impact on employees when exposed to hazards.

If PPE fails for reasons other than improper use or maintenance by an employee, the failure shall be reported to the assigned HSM and/or the Director of EHS so that all employees may be made aware of the potential for failure and an appropriate replacement product may be found.

H. RELATED DOCUMENTS

- 1403.003 – Control of Work
- 1403.009 – Health and Safety Training Program
- 1403.011 – Code of Safe Work Practices
- 1403.017 – Site Health and Safety Plan
- 1403.024 – Incident Reporting and Investigation
- 1403.027 – Standard Behavior-Based Observer Program

I. ATTACHMENTS

- 1403.013.01 – Air Monitoring Field Log
- 1403.013.02 – Calibration Log
- 1403.013.03 – Air Monitoring Exposure Results Form.



STANDARD OPERATING PROCEDURE

TITLE: Hoisting and Rigging		PREPARED BY: Jerry Hipp
SOP NO: 1403.014	PAGE: 1 of 18	AUTHORIZED BY: Matthew Curran, CSP, CIH – Director of EHS
EFFECTIVE DATE: 11/2015	REVISION DATE: 3/2024	

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A. PURPOSE

This Standard Operating Procedure (SOP) establishes the framework for conducting all hoisting and rigging operations within Envirocon. It mandates adherence to federal, state, and local regulations, alongside the guidelines provided by crane and hoist manufacturers, to ensure operational safety and compliance. Additionally, this SOP incorporates best practice recommendations for situations currently not covered by OSHA regulations, specifically the use of earth-moving equipment for lifting tasks. This inclusion demonstrates our commitment to safety beyond regulatory requirements, guiding the responsible execution of hoisting and rigging tasks.

B. SCOPE

This SOP applies to the operation of owned, rented, or subcontracted cranes and crane operations at Envirocon projects and facilities.

C. DEFINITIONS

1. Competent Person

One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective actions to eliminate them.

2. Crane

- a. *Articulating, crawler, floating, locomotive cranes, and cranes on barges;*
- b. *Mobile cranes, including wheel-mounted, all-terrain, truck-mounted, and boom truck cranes;*
- c. *Dedicated pile drivers or*
- d. *Other cranes, including tower, pedestal, overhead and gantry cranes, and derricks.*
 - Except for daily and annual inspection requirements, the OSHA crane and derrick standard does not apply to mechanics' trucks with hoisting devices when used in equipment maintenance and repair activities.

3. Dedicated Spotter

An individual who is in continuous contact with the equipment operator.

4. Fall Zone

The area in which it is reasonably foreseeable that partially or completely suspended materials could fall in the event of an accident.

5. Qualified Person

A person who, by possessing a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training, and experience, successfully demonstrates the ability to solve/resolve problems relating to the subject matter, the work, or the project.

D. RESPONSIBILITIES

1. Project Manager

The project manager is responsible for:

- Identifying and assigning personnel and subcontractors involved with crane and lifting operations, including the crane and critical lift coordinator.
- Being knowledgeable of the requirements of the lifting task and providing equipment of adequate capacity to perform the lift given the weight of the item to be lifted and the conditions at the site.
- Ensuring that the crane operator is certified, experienced, and competent to operate the particular crane to which they are assigned in the specific job involved and is both capable of and aware of the necessity of carrying out all his responsibilities.

2. Lift Supervisor

The lift supervisor is responsible for the following:

- Planning lifts and acting as the competent person.
- Identifying hazards associated with lifting operations.
- Suspending any unsafe lifting operation.

- Ensuring all personnel understand rigging use, selection, and inspection.
- Overseeing all crane work, ensuring operator and rigger competence.
- Reviewing crane load charts against lift conditions.
- Ensuring only necessary personnel are in the lift area.
- Ensuring the proper precautions are taken when lifting near power lines or obstructions.
- Coordinating with the crane operator, who has the final say on operation safety.
- Ensuring the signalman/spotter is competent for directing crane movements.

3. Crane and Critical Lift Coordinator (CLC)

The CLC must be qualified through training or experience and designated in writing. This person could be an engineer, a Senior EHS Professional, a Supervisor, or a Project Manager with specific knowledge relevant to the operation. The CLC is responsible for:

- Developing and approving a comprehensive lift plan that includes:
 - Details of the item(s) to be lifted, including weight, dimensions, center of gravity, and the presence of hazardous materials.
 - Crane selection based on type and capacity.
 - Detailed rigging arrangements, including the rated capacity of all equipment and factors affecting the lift, such as environmental conditions and site obstructions.
- Ensuring all personnel involved (operators, riggers, signal persons) have up-to-date certifications and training.
- Verifying that cranes and rigging equipment have passed required inspections.

4. Crane Operator

The crane operator must provide proof of formal crane operator training and certification, as well as sufficient crane operator experience for the type of lift. The crane operator must also meet the following qualifications:

- Meet the requirements of a competent rigger and signaler.
- Understand the predominant spoken language where the lift is taking place and standard hand signals for controlling crane operation.
- Basic knowledge and understanding of equipment operating characteristics, capabilities, and limitations, including equipment-rated capacity, safety features, and required operating procedures.
- Demonstrate skill in manipulations and control of equipment through all phases of operation.
- Have vision of at least 20/30 Snellen in one eye and 20/50 in the other, with or without corrective lenses.
- Be able to distinguish colors, regardless of the position of colors, if the color differential is required for operation.
- Have hearing, with or without a hearing aid, adequate for the safe operation of the equipment.
- Have sufficient strength, endurance, agility, coordination, and reaction speed to meet the demands of equipment operation.

The crane operator is responsible for the safety of the crane operation as soon as the load is lifted clear of the ground. Because of this responsibility, whenever there is reasonable cause to believe that the lift might be dangerous or unsafe, the operator must refuse to lift

until the concern has been reported to the Lift Supervisor, any hazards have been corrected, and safe conditions have been assured. Operators are also responsible for:

- Having significant knowledge of the crane they are operating, including its controls, limitations, load chart calculations, owner manual, and particular operating characteristics.
- Ensuring regular inspection and maintenance of the crane as prescribed by the manufacturer and OSHA regulations is being completed.
- Inform the Lift Supervisor of any problems, maintenance, or necessary repairs to the machine in writing, preferably in the machine's logbook.
- Checking that the site and utilities are adequately prepared for crane operations.
- Reviewing the lift plan requirements with the Lift Supervisor.
- Determining the load, rigging weight, and where the load should be placed.
- Determining the number of parts of the hoist line required.
- Checking the load chart to ensure the crane has sufficient net capacity for all planned lifts.
- Making the final selection of boom, jib, and crane configuration to suit the load, site, and lift conditions.
- Properly supervise the crane's assembly, set-up, and rig unless these tasks are delegated to other competent and qualified persons.
- Following the manufacturer's operating instructions in accordance with the load chart.
- Consider all factors that might reduce crane capacity and adjust the load weight to suit.
- Maintaining proper, pre-determined communication with the Signal/Spotter Person.
- Ensuring that tagline personnel are in a safe place during the lift.
- Operating in a smooth, controlled, and safe manner.
- Obeying a STOP signal at all times, no matter who gives the signal.
- Shutting down and securing the machine properly when leaving it unattended.

5. Riggers

Personnel who rig loads for crane and critical lifts shall be certified minimally at the NCCCO Rigger Level II level, or equivalent approved by the HSM. Riggers are responsible for:

- Having a basic knowledge of rigging and sling construction.
- Understanding the regulatory requirements concerning proper sling selection, use, and inspection.
- Being capable of determining that all slings and rigging components are of sufficient capacity to perform the lift safely.
- Understanding the effect of load angle on sling selection and capacity.
- Understanding the proper application of tag lines and their importance in safe lifting operations.
- Be familiar with the personal protection requirements for safe lift operations, including hard hats, gloves, and personal fall arrest equipment.
- Recognize the load's center of gravity and the importance of load balance.
- Have knowledge of proper rigging techniques to ensure a safe lift and to protect slings from unnecessary damage.

6. Signal Person

A signal person will always be required for crane and critical lifts when:

- The point of operation is not in full view of the operator or
- When the equipment is traveling, and the view in the direction of travel is obstructed or
- When the operator determines that a signal person is needed.

The signal person must be trained and qualified and must:

- Know and understand the communication signals used with the operator (as described in 29 CFR 1926.1419 through 1421).
- Have a basic understanding of equipment operations and limitations.
- Have demonstrated competencies through oral, written, and practical testing.

Only one designated signal person may give signals to the crane operator (though anyone aware of a safety problem must alert the signal person or operator by providing the stop or emergency stop signal).

E. LIFT PLANNING

1. Lift Plans involving rigging

- A comprehensive written lift plan shall be prepared for all crane and critical lifts using the Envirocon Crane and Critical Lift Plan form 1403.014. a or a subcontractor crane specialist planning form approved by the Director of EHS prior to the lift.***

2. Load Weights

- The item's weight to be lifted must be known or properly evaluated. A competent person may estimate the load for non-critical lifts. Critical lifts should be estimated by a PE, or a load cell should be used to determine load weight if unknown. The plan must include a lift diagram and address the following:***
 - Boom length, boom angle, and working radius,*
 - Crane and lifting gear capacities,*
 - Selection of hitch types, and*
 - Sling angle factors.*

3. Critical Lift Plan Criteria

- The Critical Lift Plan (1403.014.01) and process shall be used in the following circumstances:***
 - Lifting of personnel;*
 - Lifts with loads greater than 30,000 pounds;*
 - Lifts with loads greater than 75 percent of the crane capacity in the boom configurations potentially required;*
 - Lifts for which the path of load travel is at any point out of the view of the crane operator;*
 - Lifts with two or more cranes or lifting devices;*
 - Lifts involving non-routine or unusual rigging or oddly shaped or sized loads;*

- vii. *Lifts involving the potential for damage that would result in unacceptable delay to schedule or significant program impact;*
- viii. *Lifts involving the potential for a significant release of hazardous materials, radioactive materials, or other undesirable conditions;*
- ix. *Lifts involving the potential for unacceptable risk of personnel injury or significant adverse health impact (on-site or off-site) or*
- x. *Based on an internal risk assessment by the Project Management Team or client.*

b. Crane and Critical Lift Plan Approval

- i. *At a minimum, crane and critical lift plans shall be approved by:*
 - a. The Project Manager;
 - b. The Critical Lift Coordinator; and
 - c. The Lift Supervisor.
- ii. *Pre-Lift safety briefing.*
 - a. A pre-lift meeting involving participating personnel shall be conducted before the critical lift begins.
 - b. The critical lift plan shall be reviewed by all personnel involved with the lift, and questions shall be resolved.

4. Incidental (Non-Critical) Lifts

Lifts that fall outside the definition of “critical lift” present many of the hazards that critical lifts present and must be planned. Incidental lifts are often accomplished using rigging equipment attached to excavators, loaders, and similar earth-moving equipment.

All incident (non-critical) lifts shall:

- a. *Comply with equipment manufacturers’ requirements and specifications for lifting.***
- b. *Require a basic written Incidental Lift Plan Checklist (1403.014.02)***
- c. *Follow the Incidental Lift Best Practices presented in 1403.014.03.***

F. OPERATING NEAR POWER LINES AND TRANSMITTER TOWERS

1. OSHA Requirements

OSHA’s power line safety requirements around cranes are described in 29 CFR 1926.1407 through 1411.

- a. *Except where the electrical distribution and transmission lines have been de-energized and visibly grounded at the point of work or where insulating barriers, not a part of or an attachment to the crane, have been erected to prevent physical contact with the lines, cranes shall be assembled/disassembled or operated so that no part of the crane or load enters into the "danger zone," as outlined in the OSHA standard.***
- b. *Minimum clearance distances for equipment, load lines, and loads shall be maintained in accordance with Table A of 29 CFR 1926.1408.i.e.***

- c. **Caution shall be exercised when working near overhead lines having long spans as they tend to move laterally or vertically due to the wind, which could cause them to breach the "danger zone."**
- d. **A qualified signal person shall be assigned to observe the clearance and give a warning before approaching the above limits.**
- e. **Before commencing operations near electrical conductors, the Project Manager shall notify the line owners or their authorized representatives, provide them with all pertinent information, and request their cooperation.**
- f. **Any overhead conductor shall be considered energized unless and until the person owning such conductor or the electrical utility authorities verify that it is not energized.**
- g. **Durable signs should be installed at the operator's station and outside the crane, warning that electrocution or serious bodily injury may occur unless minimum clearance distances are maintained.**
- h. **Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized, or tests shall be made to determine if an electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages:**
 - **The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom.**
 - **Ground jumper cables shall be attached to materials being handled by boom equipment when an electrical charge is induced while working near energized transmitters. Crews shall be provided nonconductive poles with large alligator clips or similar protection to attach the ground cable to the load.**

2. Training

The following training shall be provided to each operator and crew member involved in assembly/disassembly and lifting activities, covering the procedures to be followed in the event of electrical contact with a power line:

- a. **The danger of electrocution of the operator simultaneously touching the equipment and the ground.**
- b. **The importance of the operator's safety in remaining inside the cab except where there is an imminent danger of fire, explosion, or other emergency.**
- c. **The safest means of evacuating from equipment that may be energized.**
- d. **The danger of the potentially energized zone around the equipment.**
- e. **The need for the crew in the area to avoid approaching or touching the equipment or the load.**
- f. **Safe clearance distances from power lines.**
- g. **Power lines are presumed to be energized unless the utility owner confirms that the power line has been and continues to be de-energized and visibly grounded at the worksite.**

G. CRANE INSPECTIONS AND TRAINING

1. General

- a. Because of the inherent dangers associated with crane operations, it is imperative that all cranes and other hoisting equipment be inspected monthly and annually before they are used.*
- b. Equipment must operate smoothly and regularly without hesitation, abnormal vibration, binding, gross shimmy, or irregularity.*
- c. There must be no apparent damage, excessive wear, or deformation of any equipment part.*
- d. All safety devices, load indicators, boom angle and radius indicators, controls, and other operating parts of the equipment shall be checked during each inspection and in good working order.*
- e. If any deficiency detected during daily, monthly, or annual inspections is determined by a competent person or qualified person to be a safety hazard, the equipment must be taken out of service until corrected.*
- f. Parts found to be defective due to any inspection or nondestructive examination shall be replaced or repaired as directed by the project/facility manager or a designated alternate.*
- g. When equipment is taken out of service, a tag must be placed in the cab stating that the equipment is out of service and not to be used.*

2. Post Assembly Inspections

Upon completion of the assembly, the crane must be inspected by a qualified person to ensure that it is configured in accordance with manufacturer equipment criteria and in accordance with 29 CFR 1926.1412(c).

3. Pre-lift/Daily Inspections

- a. Only cranes and other hoisting equipment in safe working order may be used.*
- b. All crane equipment will be visually inspected daily or prior to any lift for smooth operational performance and proper functioning of all critical safety devices in accordance with the crane manufacturer's specifications and the requirements of 29 CFR 1926.1412(d).*
- c. A competent person shall perform this inspection with documentation of inspection noted in a logbook or similar.*

4. Monthly Inspections

- a. Each month the equipment is in service, a documented inspection must be carried out by the competent person in the same manner as the daily inspection, but with detailed documentation of items inspected and deficiencies noted.*
- b. This documentation must be maintained for a minimum of three months.*

5. Annual Comprehensive Inspections

- a. *OSHA requires an annual inspection for all cranes. A qualified person shall perform this annual inspection in accordance with the requirements of 29 CFR 1926.1412(f).*
- b. *Envirocon shall maintain a record of the dates and results of annual inspections for each owned, leased, or subcontracted crane or boom truck for a minimum of 12 months.*

H. GROUND CONDITIONS

1. **“Ground conditions” mean the ground's ability to support the equipment (including slope, compaction, and firmness).**
2. **The lifting equipment must not be assembled or used unless ground conditions are firm, drained, and graded so that, in conjunction with supporting materials such as mats, cribbing, and the like, the equipment manufacturer’s specifications for adequate support and degree of level of the equipment are met.**
3. **The Lift Supervisor shall:**
 - a. *Ensure that ground preparations are conducted.*
 - b. *Inform the operator of the location of hazards beneath the set-up and use areas (e.g., voids, tanks, utilities).*

I. ASSEMBLY/DISASSEMBLY

1. **The requirements for Assembly and Disassembly of cranes are described in 29 CFR 1926.1403 through 1406. These regulations include:**
 - a. *Crane assembly/disassembly must be conducted by a person who meets the criteria for both a competent person and a qualified person or by a competent person whom one or more qualified persons assist.*
 - b. *Before commencing assembly/disassembly operations, the qualified/competent person must ensure that crew members understand their tasks and their associated hazards.*
 - c. *For assembly/disassembly work, workers must wear fall protection equipment when on walking/working surfaces with an unprotected side or edge more than 15ft. above a lower level. For all other activities, workers must be protected from fall hazards of 6ft. or more in accordance with the 1403.019 - Fall Protection SOP.*

J. CRANE SAFETY DEVICES

1. **The following safety devices are required on all cranes:**
 - a. *Crane level indicator (except for cranes on barges and other vessels),*
 - b. *Boom stops (except for derricks and hydraulic booms),*
 - c. *Equipment with foot pedals must have locks,*
 - d. *Hydraulic outrigger jacks and stabilizer jacks must have an integral holding device/check valve,*

e. Horn.

- 2. All safety devices must be in proper working order. If not, the equipment must be taken out of service and tagged.**

K. CRANE OPERATING PRACTICES

Crane operations shall be according to the manufacturer's directions and established construction safe work practices. The Lift Supervisor shall not permit crane operations to be conducted outside of the design specifications of the unit or other safety requirements. The following safety policies will be enforced at all times during crane operations.

1. Ground Personnel

- a. The safety of personnel and equipment shall be the first priority.**
- b. Accessible areas within the swing radius will be barricaded to prevent employee injury. Barricade the swing radius of the counterweight. If the potential exists for people to move into the area of the lift, assign a person to control access to the area.**
- c. Suspended loads, regardless of the size and weight, shall not be hoisted over people.**
- d. While the operator is not moving a suspended load, essential employees may enter the fall zone to engage in hooking or unhooking loads, so long as the materials being hoisted are:**
 - i. Rigged to prevent unintentional displacement,**
 - ii. Hooks with self-closing latches are used, and**
 - iii. Materials are rigged by a qualified rigger.**
- e. Ground personnel shall be trained to recognize struck-by and pinch/crush hazards associated with crane activities.**

2. Tag Lines

Ground personnel who are using tag lines to control a load shall adhere to the following:

- a. Tag lines are used primarily to control load rotation.**
- b. Tag line handlers must not attempt to move the load.**
- c. When using two taglines, each tagline should control either the clockwise or counterclockwise rotation of the load.**
- d. Do not shift a tagline to "assist" the other tagline. (This risks the possibility of the load shifting rotation without a tagline to check the shift.)**
- e. If a tagline cannot control the rotation in that direction, add more personnel to the tagline or add a third line.**
- f. Tag lines must be free of knots.**
- g. Personnel handling taglines shall always wear suitable gloves.**
- h. Never wrap tag lines around hands, arms, or any part of their body.**

- i. Avoid placing hands on loads. Where there is no alternative but to physically guide loads into place by hand, implement precautions to minimize exposure to personnel.*

3. Crane Operation Safety Precautions

a. Crane Operators should know the weight of the load to be lifted and the crane's lifting capacity in the configuration needed to make the lift.

- i. Know the radius of the load (measured from the center of rotation, not from the boom foot pins).*
- ii. Always operate within the rated capacity of the machine.*
- iii. Load chart ratings are based on operating the machine on firm, level ground. Outriggers shall be fully extended and lowered so that all wheels are clear of the ground. Otherwise, "on rubber" load charts shall be used.*
- iv. Avoid rapid changes in velocity while hoisting, swinging, or lowering the load; these can cause overloads when operating at or near the crane's capacity.*

b. Wind Loading

- i. Wind loading can be critical depending on boom length, boom angle, balkiness of the load, wind direction, and wind velocity.*
- ii. In the absence of the crane manufacturer's instructions regarding maximum wind speeds for operation, 25-30 mph shall be used as the range to consider stopping crane operations.*

c. Always use the shortest boom possible and observe these precautions with any boom length:

- i. Make only vertical lifts (i.e., do not pull the load sideways).*
- ii. Allow maximum clearance between the hook block and head sheaves.*
- iii. Keep near-capacity loads as close to the ground as possible.*

d. Load Attachment

- i. The hoist rope shall be free from kinks or twists and not be wrapped around the load.*
- ii. The load shall be attached to the load-block hook using slings or other approved devices.*
- iii. Care shall be taken to ensure the sling clears all obstacles.*

4. Directing and Supervising the Crane Operations

a. Signal Persons / Spotters

- i. Only one individual (the trained and qualified Signal Person) shall issue operational hand or other signals to the crane operator unless it is established that relay hand signaling for blind situations is required.*
- ii. If the operator cannot see the load at all times, the operator must keep a signaler in full view.*

- iii. *If the operator's visibility is impaired by dust, darkness, snow, fog, or rain, strict operation supervision must be exercised. If necessary, the lift supervisor will suspend the operation until conditions are normal.*

5. Load Movement

a. To ensure the safe movement of a load with a crane, the crane operator should consider the following requirements and best practices:

- i. *Before moving the load, the operator and ground personnel shall ensure it is well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.*
- ii. *The crane operation shall not let the load strike the boom or outriggers and never allow a crane boom to hit or touch any structure.*
 - c. *A stop work shall be called if the load strikes anything (person or property) that it is not supposed to.*
 - d. *Boom contact could dent, bow, or slightly bend the lower boom chords and may cause a total boom collapse.*
 - e. *Boom contact with any object requires an engineering evaluation before putting the crane back in service.*
 - f. *Damage to the crane during operation requires a re-inspection and load test after repairs.*
- iii. *The crane operator should rotate cranes slowly to avoid an outward swing of the load.*
- iv. *Before starting to hoist, note the following conditions:*
 - a. *Test stability before lifting heavy loads.*
 - b. *Check outrigger footing.*
 - c. *Lift load slightly off the ground and stop.*
 - d. *Check the machine for movement and ensure the brakes hold with the load elevated.*
 - e. *Never use the machine's stability to determine capacity. If there are any indications of tipping, the machine is already overloaded for that working radius.*
- v. *The operator shall not move loads over people.*
- vi. *The operator shall test the brakes each time a load approaching the rated capacity is handled by raising the load a few inches and applying the brakes.*
 - a. *The operator shall raise all loads a few inches and hold temporarily to check the machine's stability in its current set-up.*
 - b. *Any irregularity must be corrected before the lift can proceed.*
- vii. *The operator shall not leave the controls while the load is suspended unless required by an approved emergency procedure.*

6. Crane Movement

- a. **When moving the crane on the project site, the crane operator should consider the following:**
 - i. *Secure the boom and hook block.*
 - ii. *Check clearances under overpasses, overhead lines, or any overhead obstruction.*
 - iii. *When side clearances are tight, post a dedicated spotter, and be sure there is clearance for tail swing.*
 - iv. *A dedicated spotter must be provided when backing the crane.*
 - v. *Never travel a rubber-tired unit with a load over the side.*
 - vi. *Always set swing brakes when the unit is idle or holding loads for some time, especially on slopes. If swinging during travel is necessary, engage the swing-jaw clutch before releasing the brakes.*
 - vii. *Never back up until everyone is clear of the machine.*
 - viii. *For long moves, position the boom in the direction of travel specified by the manufacturer.*
 - ix. *Lock the turntable before traveling on a highway. Use a house lock or swing brake and lower the boom into the rack to prevent swing.*
 - x. *Mobile cranes shall operate with the outriggers fully extended and set whenever possible. If outriggers cannot be fully deployed and set, the crane capacity shall be determined by the "On Rubber" load capacity chart.*

L. RIGGING

The Occupational Safety and Health Administration (OSHA) has established regulations for the safe rigging and movement of equipment in the construction and general industries. Envirocon will follow the requirements established in 29 CFR 1910.184 and 29 CFR 1926.251 at all Envirocon project sites and facilities.

1. Rigger Qualifications

- a. ***Envirocon employees or subcontractors conducting rigging activities shall have received documented minimum NCCCO Level 1 rigger training, or equivalent approved by the HSM.***
- b. ***Envirocon or subcontractor employees directing or supervising rigging activities and workers conducting rigging for cranes or critical lifts shall have received at least NCCCO Level 2 rigger training or an equivalent approved by the HSM.***

2. Rigging Selection

- a. ***Proper selection of slings and other rigging tackle is critical when planning a lift. Items that must be considered when selecting slings, rigging accessories, and rigging techniques should include but are not limited to the following:***
 - i. *Never rig a load if you do not know how much it weighs. If the weight of an item is not known, the lift supervisor or critical lift coordinator must calculate the weight and ensure that a sling with more than adequate rated capacity is used.*

- ii. *Always rig a load so the center of gravity is directly below the crane hook.*
- iii. *Always ensure that all components used to rig a load are of adequate capacity to lift the load safely.*
- b. *To minimize loss of capacity due to excessive load angle factors, the longest sling available with adequate capacity should be chosen. The most extended sling will provide the smallest spread angle between legs, for minimum stress on the sling.***
- c. *You must use a vertical, basket, or choker hitch to accommodate the load's shape and size as well as its weight.***
 - i. *Possible physical damage to the load must be considered, as must providing a positive attachment.*
 - ii. *The hitch you choose may affect your sling construction and material choice.*
- d. *Be sure the lifting device has sufficient headroom to pick up the load and handle it when the sling length is added to the hook.***
- e. *Use Rated Capacity Chart—After double-checking the sling length, type and diameter, and rigged angle, refer to 29 CFR 1910.184, the sling capacity tag, or another approved capacity chart to determine that the sling will accommodate the load you will be lifting.***
- f. *When lifting loads, take up the slack slowly to minimize shock loading.***
- g. *Use chafing gear to protect the sling from damage when it sits on sharp corners or edges.***
- h. *Calculating sling loads using sling angle factors and credit sling legs according to the hitch (See Attachment A).***
 - i. *The sling angle formed by a leg and the horizontal has a definite effect on the sling's rated capacity. As the angle decreases from the vertical (straight pull), the amount of sling lifting capacity decreases.*
 - ii. *The tension in each leg increases without an increase in the load weight lifted. Because of the increased stresses on the slings, sling angles of less than 45 degrees should be avoided.*
 - iii. *When selecting the sling(s) to be used, visualize the horizontal angle formed by the sling and the load. Divide the total weight by the number of sling legs, then multiply by the sling angle factor. This number must be compared to the sling's capacity.*

3. Rigging Inspections

- a. *All slings shall be visually inspected each day by a competent person prior to use. Any deterioration that could result in an appreciable loss of original strength shall be carefully noted, and it shall be determined whether further use of the sling would constitute a safety hazard.***
- b. *Damaged or defective slings shall be immediately removed from service and either "red-tagged" or destroyed.***
- c. *Wire Rope Slings***

Conditions such as the following shall be sufficient reasons for questioning sling safety and removing the sling from service:

- i. Ten (10) randomly distributed broken wires in one rope lay or five (5) broken wires in one strand in one rope lay.*
- ii. Evidence of any broken wires next to an end fitting.*
- iii. Wear or scrape one-third of the original diameter of outside individual wires.*
- iv. Kinking, crushing, bird-caging, or any other damage resulting in distortion of the rope structure.*
- v. Evidence of heat damage.*
- vi. End attachments that are cracked, deformed, or worn.*
- vii. Hooks that have been opened more than 15 percent of the standard throat opening measured at the narrowest point or twisted more than 10 degrees from the plane of the unbent hook.*
- viii. Severe corrosion of the rope or end attachments.*

d. Synthetic Web Slings

A synthetic web sling shall be removed from service if any defects, such as the following, are visible:

- i. Evidence of the "Red Thread" showing anywhere along the sling body or in the sling's eyes.*
- ii. Missing or non-legible sling capacity tag.*
- iii. Acid or caustic burns.*
- iv. Melting or charring of any part of the surface.*
- v. Snags, punctures, tears, or cuts.*
- vi. Significant number of broken stitches, especially where the eyes are formed on the sling.*
- vii. Distortion of metal end fittings.*
- viii. Other apparent defects which cause doubt as to the strength of the sling.*

e. Alloy Steel Chain Slings

- i. Only Grade 8 Alloy or other approved Alloy chains with a capacity tag permanently attached may be used for lifting operations.*
- ii. All alloy steel chain slings shall be visually inspected each day before use. The following are the recommended inspection guidelines for Alloy chain slings.*
 - a. Locate the Alloy chain sling capacity tag. If the tag is missing or illegible, the sling must be removed from service and re-rated by a certified chain sling rating agency.*
 - b. Conduct a link-by-link inspection for the following defects: bent links, stretched links, cracks in any section of the link, scores, abrasions, or markings tending to weaken the rings or hooks. Remove from service if discovered.*

- c. Check rings and hooks for distortion, cracks in weld areas, corrosion, scores, or markings that weaken the ring or hooks. Remove from service if discovered.
 - d. Inspection shall be made on an individual link basis. The assembly shall be removed from service if any link does not hinge freely with the adjoining link.
 - e. Sling assemblies with deformed master or coupling links shall be removed from service.
 - f. Sling assemblies shall be removed from service if hooks are cracked, have been opened more than 15 percent of the standard throat opening measured at the narrowest point, or twisted more than 10 degrees from the plane of the unbent hook.
 - g. Deformed hooks or other attachments shall not be straightened on the job. The manufacturer shall recondition assemblies with such defects.
- iii. *Alloy steel chain slings shall be thoroughly inspected at least annually or more frequently, depending on the frequency and severity of use.*
- a. Envirocon shall maintain a record of each steel chain sling's most recent comprehensive inspection.

f. Rigging Accessories

- i. *Inspect all rigging equipment and accessories to identify counterfeit material. Remove or destroy all Chinese-made equipment and accessories from the site.*
- ii. *Rigging hardware must have a capacity equal to or greater than the sling's. If there is any difference between the rating of slings and hardware, lifting capacity is determined by whichever has the lower capacity.*
- iii. *Shackles, rings, eyebolts, lifting beams, rigging assemblies, and hooks shall be inspected at the beginning of each shift in which they are to be used.*
- iv. *Shackles, rings, and similar items shall be inspected for wear, corrosion, spreading, and deformation and replaced if deformation exceeds 15 percent of their new condition. Shackle pins shall be replaced if they show any sign of failure in shear.*
- v. *Lifting beams and spreaders shall be inspected for signs of failure in bending and replaced if they are permanently bent more than 2 inches in 10 feet or twisted more than 5 degrees out of the original plane. Hook attachment welds shall be examined for cracks and signs of failure in tension.*
- vi. *Hooks having any of the following deficiencies shall be removed from service:*
 - a. Crack(s)
 - b. Wear exceeding 10 percent of the original dimension.
 - c. A bend or twist exceeding 10 degrees from the plane of the unbent hook.
 - d. Increase in throat opening exceeding 15 percent from the new condition.
 - e. If a latch is provided, and it becomes inoperative because of wear or deformation, or fails to bridge the throat opening fully, the hook shall be removed from service until the device has been repaired or replaced.

- f. If hooks are painted, a visual inspection should consider the coating. Surface variations can disclose evidence of heavy or severe service. In such instances, the surface condition may call for stripping the paint.

M. FLOATING CRANES/DERRICKS AND LAND CRANES/DERRICKS ON BARGES

29 CFR1926.1437 contains supplementary requirements for floating cranes/derricks on barges and other vessels.

1. In addition to the safety devices described in Section J of this procedure, cranes on vessels must have:

- a. *A flotation list and trim device,*
- b. *Positive equipment house lock, and*
- c. *Wind speed/direction indicator, if the wind is a factor that needs to be considered.*

2. In addition to the inspections required in Section G of this procedure, the following inspections shall be conducted:

a. Daily:

- i. *The means to secure the crane to the vessel is in proper condition (wear, corrosion, lost or missing fasteners, defective welds, insufficient tension).*

b. Monthly:

- i. *Same as daily.*
- ii. *The vessel is not taking on water.*
- iii. *The deck load is adequately secured.*
- iv. *The vessel is watertight based on the condition of the chain lockers, storage, fuel compartments, and hatches.*
- v. *The firefighting and lifesaving equipment is in place and functional.*
- vi. *Daily and monthly inspections shall be conducted by a competent person.*

c. If the competent person determines that any deficiency identified during daily or monthly inspections constitutes a hazard, the vessel must be removed from service until the deficiency is corrected.

3. Annual Inspection of External Vessel

a. A qualified person must inspect the external portion of the barge or other vessel to include the following:

- i. *The items included in daily and monthly inspections.*
- ii. *Cleats, bits, chocks, fenders, capstans, ladders, and stanchions for significant corrosion, wear, deterioration, or deformation that could impact the function of these items.*
- iii. *External evidence of leaks and structural damage.*
- iv. *Four-corner draft readings.*
- v. *Firefighting equipment.*

vi. Rescue skiffs, lifelines, personal flotation devices, and ring buoys.

b. If the qualified person determines that any deficiency identified during the annual inspection constitutes a hazard, the vessel must be removed from service until the deficiency is corrected.

c. If the deficiency is not determined to be a hazard, it must be monitored during subsequent monthly inspections.

4. Four-year Internal Vessel Inspection

i. Must be conducted by a marine engineer, marine architect, licensed surveyor, or other qualified person.

ii. If the qualified person determines that any deficiency identified during the 4-year inspection constitutes a hazard, the vessel must be removed from service until the deficiency is corrected.

iii. If the deficiency is not determined to be a hazard, it must be monitored during subsequent monthly or annual inspections, as appropriate.

5. Monthly, annual, and four-year inspections must be documented and retained for at least four years.

N. RELATED DOCUMENTS

29 CFR 1926 Subpart CC - Cranes and Derricks in Construction

29 CFR 1926.251 - Rigging Equipment for Material Handling

29 CFR 1910.184 - Slings

O. ATTACHMENTS

1403.014.01 - Crane and Critical Lift Planning Form

1403.014.02 - Incidental Lift Pre-Lift Checklist

1403.014.03 - Incidental Lift Best Practices



STANDARD OPERATING PROCEDURE

TITLE: Personal Protective Equipment (PPE)		PREPARED BY: Jerry Hipp
SOP NO: 1403.015	PAGE: 1 of 11	AUTHORIZED BY: Matthew Curran, CSP, CIH – Director of EHS
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A. PURPOSE

The purpose of this procedure is to establish the responsibilities and requirements for the use of Personal Protective Equipment (PPE), and to ensure compliance with the requirements of American National Standards Institute (ANSI), the Occupational Safety and Health Administration (OSHA), and applicable state regulations (Cal/OSHA, WISHA, OROSHA, etc.).

B. SCOPE

This procedure applies to all Envirocon and subcontractor personnel performing work at Envirocon job sites. This procedure also applies to any vendors, visitors, or members of the public who may be exposed to hazards requiring the use of PPE while on a job site.

C. DEFINITIONS

None

D. RESPONSIBILITIES

1. Director of Environment, Health, and Safety (EHS)

The Director of EHS is responsible for:

- Develop and implement comprehensive PPE policies and procedures across all projects and departments to ensure compliance with regulatory standards and best practices.
- Conduct regular audits and assessments to ensure the effectiveness of PPE programs and identify areas for improvement.

- Oversee the evaluation and selection of PPE, ensuring that all equipment meets or exceeds safety standards and is suitable for specific job tasks.

2. Site Health & Safety Manager and Officer

The Site Health & Safety Manager (HSM) and Site Health & Safety Officer (HSO) are responsible for:

- Implement and enforce the PPE policies and procedures at the project level, ensuring all workers adhere to the requirements outlined in the HASP.
- Conduct project-specific hazard assessments to determine necessary PPE requirements and ensure all workers are adequately equipped.
- Manage the distribution and inventory of PPE on-site, ensuring that all equipment is properly maintained and readily available.
- Investigate PPE-related incidents or non-compliance issues and take corrective actions to prevent future occurrences.
- Collaborate with suppliers to ensure the timely procurement and availability of PPE for all employees.
- Monitor daily PPE compliance among workers, ensuring everyone uses the appropriate equipment for their tasks.
- Provide guidance and correction to workers not complying with PPE requirements.

3. Project Manager

Project Managers are responsible for the following:

- Ensure that PPE requirements are integrated into project planning and operations phases, prioritizing worker safety at all times.
- Allocate budget and resources for the procurement and maintenance of PPE.
- Support H&S management in implementing PPE policies and training programs.
- Reinforce the importance of PPE and address any concerns or suggestions from the workforce.

4. Supervisors

Site Supervisors are responsible for the following:

- Directly oversee the correct use of PPE by workers under their supervision, ensuring compliance with the site HASP.
- Conduct regular inspections of PPE to ensure it is in good condition and suitable for use.
- Promptly address any unsafe behaviors or conditions related to PPE.

5. Employees

Employees are responsible for the following:

- Properly use and maintain assigned PPE as trained and instructed.
- Participate in PPE training and demonstrate understanding through correct usage.
- Inspect PPE before use and report any damages, wear, or issues to supervisors immediately.
- Actively adhere to PPE requirements and encourage others to do the same.

E. PPE PROGRAM GENERAL REQUIREMENTS

1. Providing PPE

- a. ***Envirocon is required to provide adequate PPE for all employees and visitors at no cost. OSHA has interpreted its general PPE standard, as well as specific standards, to require employers to provide and to pay for personal protective equipment required by the company for the worker to do his or her job safely and in compliance with OSHA standards.***
- b. ***Where PPE is personal in nature and is usable by workers off the job, Envirocon is not obligated to purchase the item(s). However, such PPE may be purchased by the company at the discretion of project management.***
 - i. *Examples of personal PPE that are personal in nature and often used away from the worksite include non-specialty safety glasses, safety shoes, and cold-weather outerwear of the type worn by construction workers.*
 - ii. *Envirocon shall pay for footwear or outerwear that is subject to contamination by carcinogens or other toxic or hazardous substances and cannot be safely worn off-site.*

2. Ensuring proper PPE fit, storage, and maintenance

- a. ***The Project Management Team shall ensure that PPE is properly fitted, sized, maintained, and used in sanitary and reliable conditions.***
- b. ***Any defective PPE will be taken out of service and discarded.***

3. Training

- a. ***Ensuring that workers are trained on the proper use, limitations, maintenance, and disposal of PPE is crucial. Workers should understand how to correctly wear PPE, how to check for wear and tear, and when to replace it. Training should cover the following:***
 - i. *Providing training to employees and visitors on topics such as:*
 - ii. *How to don, doff, and adjust specific PPE;*
 - iii. *Limitations of PPE; and*
 - iv. *Proper care, maintenance, useful life and disposal of PPE.*
- b. ***All PPE training for employees shall be documented.***
 - i. *Level D PPE shall be discussed during HASP training. The signing of the HASP Acknowledgement form will serve as documentation that training has been delivered.*
 - ii. *Level C PPE may be included during HASP training or a separate training session may be held. Respiratory Protection training will be documented via the 1403.016.a Respirator Fit Test Record Form and the 1403.016.b Respirator Training Form. See the 1403.016 Respiratory Protection Program SOP for additional respiratory protection information.*
 - iii. *Visitors' PPE training shall be documented for any specialized equipment used while on site, such as respiratory protective equipment. Documentation is not*

required for visitor usage of basic PPE such as hard hats, safety glasses, and high-visibility garments.

c. Employee shall be retrained on PPE for the following situations:

- i. Workplace changes, making prior training obsolete;
- ii. PPE type (including brand/style/etc) changes;
- iii. Employee demonstrating improper use, lack of use, or insufficient skill or understanding.

4. Client Requirements

Where applicable by contract, Envirocon personnel shall comply with client and/or facility safety practices in addition to applicable Envirocon requirements relating to PPE when visiting or performing work in such locations.

F. SELECTION OF PPE

1. Basis of PPE Selection

- a. ***PPE requirements will be developed based on the hazard(s) present at the project site. This is accomplished by conducting a hazard analysis based on the scope of work, means and methods, previous site surveys, and regulatory guidelines. Based on this evaluation, specific PPE requirements shall be developed for each task.***
- b. ***For specialized tasks or in situations where exposures may change during the performance of work, a contingency plan shall be developed that defines when and if PPE should be upgraded or downgraded. For any task that may require a PPE upgrade, more protective equipment should be available on-site prior to beginning the task, or all work on the task must stop until adequate PPE is available.***
- c. ***When potential high-risk exposures exist, the PPE selection will be reviewed and approved by the Director of EHS or his designee.***
- d. ***These requirements are subject to change at any time based on:***
 - i. *Task performance;*
 - ii. *Sampling and/or monitoring results;*
 - iii. *Visual observations; or*
 - iv. *Other changes in work or site conditions*
- e. ***The required items of protective equipment are summarized in the Site-Specific HASP and/or task-specific documents including JSAs or Crew Activity Plans (CAPs).***
- f. ***Four levels of protection and associated PPE are identified by OSHA for hazardous waste sites: Levels D, C, B, and A. Level D provides the lowest level of protection. Protection increases progressively through Levels C, B and A. All personnel entering an exclusion zone will be required to be in the level of protection as specified for the task.***

2. Evaluating Hazards

a. Prior to mobilization and start of the project, the proposal team (which shall include at a minimum one Health & Safety Department member) will evaluate hazards and identify the PPE necessary to protect employees at the project. These requirements shall be outlined in the Site-Specific Health and Safety Plan (HASP).

b. The hazard analysis will include some (but will not be limited to) of the following basic considerations:

i. Identification of Hazards

This includes the identification of the specific contaminants of concern (COCs) present at the project site and understanding the properties, forms (solid, liquid, gas), and potential health effects of them.

ii. Exposure Assessment

This involves evaluating how much of the identified COCs are present, how they are disturbed, handled, and disposed of, and the risk to workers. Factors such as the concentration of the COCs, duration of exposure, frequency of tasks, and existing control measures (e.g., dust suppression, vapor suppression, work practices) are considered to determine the level of potential exposure.

iii. Route of Exposure

The routes through which workers might be exposed to identified COCs, including inhalation, skin contact, ingestion, or injection, shall be a primary consideration in the hazard analysis. This will be a primary consideration for the type of PPE needed. For example, respiratory protection may be required for airborne contaminants, while gloves and protective clothing may be necessary for materials that pose a risk of skin contact.

iv. Regulatory Requirements and Best Practices

The applicable regulatory standards and regulations regarding hazardous waste operations and emergency response (HAZWOPER), as outlined by OSHA, EPA (Environmental Protection Agency), and other relevant organizations, shall be adhered to when conducting the hazard analysis. PPE selection recommendations or requirements may be taken from the following resources which include but are not limited to:

- a. EPA levels of protection as defined in Standard Operating Safety Guides;
- b. NIOSH Publication 85-115, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities;
- c. Envirocon Procedure 1403.016, Respiratory Protection Program;
- d. Applicable ANSI or other consensus standards; and
- e. OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) Standards, 29 CFR 1910.120 and 29 CFR 1926.65;

Note: In the event of conflicting requirements, the most stringent requirement(s) shall apply.

v. *Hierarchy of Controls and Selection of PPE*

PPE is the last line of defense against a hazardous condition and is designed to reduce the severity of exposure. PPE shall not be used as a substitute for engineering and administrative controls. The required PPE shall be documented in the project's controlling document(s), including (but not limited to):

- a. Job Safety Analyses (JSAs);
- b. Site-Specific HASP;
- c. Confined Space Entry Procedure;
- d. Hot Work Procedure/Permit; and.
- e. Fall Protection Procedure

3. Respiratory Protection

- a. ***The selection of respiratory protective equipment shall be in accordance with the Envirocon Respiratory Protection Program, SOP 1403.016.***
- b. ***The selection of respiratory protective equipment shall be based upon the known or suspected air contaminants and/or actual or potential oxygen deficiency. Contaminant and oxygen levels shall be determined through sampling and/or monitoring or shall be estimated based upon prior work under similar conditions.***
- c. ***Level B will always be specified in the HASP when:***
 - i. *Contaminants are known to exceed the IDLH;*
 - ii. *The type of contaminant present is unknown;*
 - iii. *Air-purifying respirators do not provide adequate protection from the contaminant and/or*
 - iv. *There is an actual or potential oxygen deficiency.*
- d. ***A higher level of respiratory protection will be required when:***
 - i. *Air monitoring results are not available; or*
 - ii. *Conditions may change quickly over time.*

G. DOWNGRADING AND UPGRADING PPE BASED ON MONITORING RESULTS

Unless different criteria are included that dictate how and when air monitoring results can be used to upgrade/downgrade levels of PPE, the following guidelines shall be followed.

1. Characterization and Confirmation

a. Characterization

- i. *Collect a minimum of three Time-Weighted Average (TWA) personal exposure samples matched against three TWA area exposure samples from the work area(s).*
 - a. These samples shall be taken on different days.
 - b. Each sample shall reflect a full shift of activities and exposures.

- c. Samples must be collected within the breathing zone of the exposure group employee(s) without prior written approval by a qualified Industrial Hygienist.
 - d. These samples shall be compared to applicable direct reading monitoring results.
 - e. Additional samples may be collected to assess the effectiveness of control measures.
 - f. Until sample results are received, employees performing work shall wear the most protective level of PPE for the suspected concentration of contaminants.
- ii. *When the three most recently collected TWA samples demonstrate consistent results, the work site, work area, and/or work task may be considered characterized if it is reasonable to assume that no other factors may affect the contaminant levels to which employees may be exposed. It is the responsibility of the safety professional assigned to the project to make the determination that the site has been characterized. Consistent results include:*
- a. Three consecutive samples below the action level;
 - b. Three consecutive samples at or below the protection factor of Level C half-face respirators;
 - c. Three consecutive samples at or below the protection factor of Level C full-face respirators; or
 - d. Three consecutive samples at or below the protection factor of Level B respirators.
- iii. *Characterization must be repeated or confirmed whenever a change in conditions is identified. Indications of a change in condition may include the following:*
- a. New materials are encountered that introduce new contaminants or additional materials are encountered that may cause an increase in previously established contaminant levels;
 - b. Odors have changed significantly;
 - c. Operational methods have changed in a way that could result in exposure above established limits or in excess of the protection factor of the selected PPE;
 - d. Direct reading instrument results are no longer consistent with the characterization sample results (e.g., increased VOCs, increased dust, etc.).
- iv. *When wipe samples are collected during characterization, these samples shall be collected prior to beginning any work that may disturb contaminants found on surfaces within the work area and, if applicable, adjacent areas. Wipe samples shall be collected from worst-case surfaces, those known or highly suspected to have been in contact with contaminated materials, or, in the case of surfaces*

exposed to dusts, mist, or other contaminated aerosols, a horizontal surface that is unlikely to be disturbed by the activities going on at that location (e.g., the top of a door frame or locker).

b. Confirmation

- i. Subsequent sample results (i.e., TWA samples for personal and/or area, wipe samples) and/or monitoring results (i.e., those obtained from the direct reading instrument) that are consistent with previously obtained results shall be considered a confirmation of the effectiveness of the selected PPE and other implemented controls. Results shall be considered consistent if they are at the same or are at lower levels than previous sampling and/or monitoring results.*
- ii. Subsequent sample results (e.g., TWA samples for personal and/or area, wipe samples) and/or monitoring results (e.g., those obtained from the direct reading instrument) that are not consistent with previously obtained results (e.g., higher levels) shall be considered a changed condition.*
 - a. At any time that a confirmatory sample is inconsistent with the latest characterization, controls must be re-evaluated and upgraded as necessary (e.g., higher level of respiratory protection, additional engineering controls). Subsequent work must be conducted using these additional measures until such time that additional sampling or monitoring results show a reduction in contaminant levels that are consistent with initial characterization results.
 - b. In order to downgrade PPE or reduce other control measures, a minimum of three consecutive TWA (personal and/or area) samples must be obtained, and the results must be consistent with or at lower levels than the initial characterization results.
 - c. In order to continue using downgraded control measures, results from direct reading instruments must be consistent with the most recent sampling results.
- iii. Further confirmatory sampling (TWA) and monitoring (direct reading) shall be performed in accordance with the site HASP and/or OSHA regulations. Such sampling and monitoring shall be conducted regardless of evidence of changed conditions.*
- iv. Confirmation wipe samples shall be collected from the same location, if possible, and over the same surface area as initial characterization samples.*
- v. Any changes to PPE, including respiratory protection, shall be approved by the Director of EHS or Project H&S Manager with input from the Project Management Team.*

H. TYPES OF PPE

1. Chemical Protective Clothing

- a. *The type of fabric/elastomer used to form protective outer garments, gloves, and boots becomes more critical as the potential for prolonged direct contact with site contaminants increases. The degree of protection needed varies considerably between operations where PPE is being worn for low-probability splash protection and those where the employee will be in direct contact with the contaminant over a prolonged period of time.*
- b. *A material with a good or excellent ability to prevent permeation is desired for operations where workers will have prolonged contact, such as tank cleaning operations.*
- c. *The site HASP will utilize standard chemical compatibility charts and product selection guides to specify the exact type of polymer required for the contaminants and type of contact.*
- d. *If the most desirable material is not available, the HASP will dictate the inspection requirements, length of service periods, and decontamination requirements necessary for using alternative types of PPE.*
- e. *Conductive jewelry or clothing shall be removed or covered to reduce the risk of injury.*
- f. *Employees shall inspect their chemical protective clothing before donning it each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

2. Foot Protection

- a. *Chemically resistant (e.g. Nitrile, PVC) safety-toed boots will be specified for projects involving exposure to liquid contaminants. In lieu of chemically resistant boots, approved chemically resistant overshoes may be worn when approved by the safety professional assigned to the project.*
- b. *Substantial safety-toed footwear (meeting the requirements of ASTM F2413), made of quality materials, shall be worn by all employees in any occupation in which there is a danger of injury to the feet and no danger of chemical exposure.*
- c. *All footwear worn on project sites must provide ankle protection and have a minimum of 6" uppers.*
- d. *Tennis shoes, thin or soft-soled athletic shoes, open-toed sandals, slippers, or similar shoes shall not be worn, regardless of whether the footwear has a safety toe.*
- e. *Employees shall inspect their foot protection before donning it each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

3. Hand Protection

- a. *Envirocon shall provide protective equipment for the hands of employees when required.*

- b. The type of material (e.g., leather, polymer, Kevlar) will be based upon the job task and associated hazards and specified in the site HASP or task-specific documents (e.g., JSAs, CAPs). Hand protection will always be required when handling materials unless the Health and Safety Manager authorizes specific exemptions.*
- c. The wearing of rings and watches during the performance of work is discouraged, even when gloves are worn over such items.*
- d. Employees shall inspect their hand protection prior to donning each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

4. Head Protection

- a. In general, all persons working in, visiting, or passing through work areas shall be required to wear non-metallic hard hats. Such protection shall also be required in areas that are typically exempt (e.g., parking lots) when work is performed in such areas.*
- b. All hard hats worn on site must meet the ANSI Z89.1 standard and be marked with proof.*
- c. Hard hats that are defective (i.e., cracked, punctured, altered, etc.) or visibly contaminated shall be removed from service.*
- d. Hard hats may not be painted or have any material placed on them that has the potential to degrade the material prematurely.*
- e. Employees shall inspect their head protection before donning it each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

5. Eye and Face Protection

- a. Eye protection meeting the requirements of ANSI Z87.1 shall be worn by all personnel working in, visiting, or passing through work areas. Such protection shall also be required in areas that are typically exempt (e.g., parking lots) when work is performed in such areas. Safety eyewear must be stamped with the ANSI Z87.1 marking.*
- b. Safety glasses must be equipped with side shields. Additional eye and face protection (goggles, face shields, etc.) may be required for certain work activities as specified in the site HASP and/or task-specific documents (e.g., JSAs, CAPs).*
- c. Wearers of prescription glasses that do not meet the specifications of ANSI Z87.1 will be required to wear goggles or other ANSI-approved eyewear over their prescription glasses. Envirocon shall provide prescription glasses needed for use with full-face respirators.*
- d. Employees shall inspect their eye and face protection prior to donning each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

6. Hearing Protection

- a. Envirocon personnel exposed to noise levels of 85 dBA or above shall use hearing protection in accordance with SOP 1403.008, Hearing Conservation Program.*
- b. Employees shall inspect their hearing protection prior to donning each day and regularly thereafter. If any defects are discovered, the PPE will be discarded and replaced.*

I. RELATED DOCUMENTS

- 1403.008 - Hearing Conservation Program
- 1403.016 - Respiratory Protection Program
- 1403.017 - Site Specific Health And Safety Plan

J. ATTACHMENTS

None.



TITLE: Respiratory Protection Program		PREPARED BY: M. Curran, CSP, CIH – Director of EHS
SOP NO: 1403.016	PAGE: 1 of 15	AUTHORIZED BY: Pete Joy – President
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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish guidelines and procedures designed to ensure the health and safety of all employees who may be exposed to respiratory hazards during their work activities. It ensures compliance with 29 CFR 1910.134 and other applicable health and safety regulations.

B. SCOPE

This SOP applies to all Envirocon employees and subcontractors working at a project site that has known airborne contaminants of concern that could pose an inhalation health hazard.

C. DEFINITIONS

1. Air-Purifying Respirator

A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

2. Assigned Protection Factor (APF)

The workplace level of respiratory protection that a respirator or class of respirators is expected to provide when the employer implements a continuing and effective respiratory protection program.

3. Atmosphere-Supplying Respirator

A respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

4. Emergency Situation

Any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

5. Employee Exposure

Exposure to a concentration of an airborne contaminant would occur if the employee were not using respiratory protection.

6. Filtering Facepiece (dust mask)

A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire facepiece composed of the filtering medium.

7. Fit Factor

A quantitative estimate of the fit of a particular respirator to a specific individual and typically estimates the ratio of the concentration of the substance in ambient air to its concentration inside the respirator when worn.

8. High Efficiency Particulate Air (HEPA) filter

A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent National Institute of Occupational Safety and Health (NIOSH) 42 CFR 84 particulate filters are N100, R100 and P100 filters.

9. Immediately Dangerous to Life or Health (IDLH)

An atmosphere that poses an immediate threat to life would cause irreversible adverse health effects or would impair an individual's ability to escape from a dangerous atmosphere.

10. Maximum Use Concentration (MUC)

The maximum atmospheric concentration of a hazardous substance from which a worker can be expected to be protected when wearing a respirator and is determined by multiplying the assigned protection factor (APF) specified for a respirator by the Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL), short-term exposure limit, or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, Envirocon will determine an MUC on the basis of relevant available information and informed professional judgment.

11. Physician or other Licensed Health-Care Professional (PLHCP)

An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by 29 CFR 1910.134(e).

12. Powered Air-Purifying Respirator (PAPR)

An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

13. Self-Contained Breathing Apparatus (SCBA)

An atmosphere-supplying respirator which the breathing air source is designed to be carried by the user.

14. Supplied-Air Respirator (SAR) or Airline Respirator

An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

15. User Seal Check

An action is conducted by the respirator user to determine if the respirator is properly seated to the face.

16. Worker

A worker may be an employee, contractor, vendor, or visitor.

D. RESPONSIBILITIES

1. Envirocon Director of Environment, Health, and Safety (EHS)

The Director of EHS shall serve as the Program Administrator responsible for the development and implementation of the Respiratory Protection Program.

2. Project Health and Safety Manager (HSM) and Health and Safety Officer (HSO)

The Project HSM and Site-Specific HSO shall serve as the assistant program administrator and be responsible for the development of the site-specific program and its implementation with consultation from the Director of EHS. The HSM and HSO are responsible for:

- Acting as the Assistant Program Administrator.
- Continuously monitoring the work environment for new hazards or changes to known, existing hazards that may require a change in respiratory protection.
- Providing training on respirators to employees and contractors.
- Ensuring each employee or contractor receiving a respirator has a medical clearance.
- Conduct fit tests and maintain the applicable records.
- Ensuring employees and contractors are inspecting, maintaining, and storing their respirators in accordance with OSHA regulations and this SOP.
- Ensuring employees and contractors are wearing the required respirators when necessary.
- Conducting daily site inspections, including special inspections described in the inspections section of this procedure.

3. Medical Review Officer (MRO)

The MRO shall make the appropriate recommendations for the medical clearance of employees assigned to wear respiratory protection. The Medical Review Officer (MRO) is any qualified physician at WorkCare, Inc. (WorkCare) who has the authority to do so. WorkCare will maintain all medical history and qualification records.

4. Project Managers and Supervisors

Project Managers and supervisors are responsible for ensuring employees and contractors are wearing the appropriate respiratory protection as outlined in the Site-

Specific Health and Safety Plan (HASP) and are in compliance with the provisions outlined in OSHA regulations and this SOP.

5. Employees and Contractors (Workers)

Workers are responsible for the following:

- Wearing their respirators as instructed by the HSM/HSO or a Project Management Team member and as outlined in the HASP.
- Cleaning, maintaining, and storing respirators properly.
- Changing filters or cartridges according to the change schedule (or earlier if signs of leakage are detected).
- Shaving facial hair regularly to that the face seal is not compromised.
- Conducting pre-job seal checks before entering the area where respirators are required.

E. GENERAL PROGRAM REQUIREMENTS

1. Site-specific Procedures

Each project site requiring the use of respiratory protection shall also have a site-specific Respiratory Protection Plan. This plan may be developed as a job safety analysis, as part of a site-specific HASP, or as a separate site-wide procedure to address respiratory protection for that project's contaminants of concern (COCs).

2. Continuing Respirator Effectiveness

a. As part of the daily site inspection, the HSM/HSO and Project Management Team shall evaluate workplace conditions, especially in areas requiring respiratory protection. The following conditions shall be assessed:

- i. Potential changes in contaminant concentration
- ii. Changes in employee exposure or stress
- iii. Respirator effectiveness

b. Workers are required to leave the respirator use area in the following circumstances:

- i. To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation.
- ii. If they detect vapor or gas breakthrough, changes in breathing resistance, or facepiece leakage.
 - a. If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, the cartridges must be replaced, or the respirator must be repaired or replaced before the employee may return to the work area.
- iii. To replace the respirator or the filter, cartridge, or canister elements.

3. Program Evaluation

Evaluations of the workplace will be conducted as necessary to ensure the program has been properly implemented and continues to be effective.

Employees required to use respirators will be consulted regularly to assess the employees' views on program effectiveness and identify any problems. Any problems that are identified will be corrected. Factors to be assessed include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance)
- Appropriate respirator selection for the hazards to which the employee is exposed
- Proper respirator use under the workplace conditions the employee encounters
- Proper respirator maintenance

4. Training

a. *New Employee Respirator Training*

Employees will be trained on respiratory protection and the specific respirator they will be wearing prior to beginning work. Respirator training may be included as part of larger training requirements such as the 40-hour HAZWOPER initial, Site-Specific HASP Training, or MSHA New Miner Training / Annual Refresher Training. Training must recur at least annually. Respirator training for workers shall include the following:

i. Respiratory Protection Program

Employees should understand the purpose, importance, and specific provisions of the Respiratory Protection Program (both this SOP and the Site-Specific Plan), including their roles and responsibilities within the program.

ii. Respiratory Hazards

Training must include information on respiratory hazards employees are exposed to during routine and emergency situations, including the nature of the hazards, the extent of the risks, and the symptoms of overexposure.

iii. Selection of Respirators

Employees should learn about the types of respirators available, the basis for respirator selection, and the limitations and capabilities of different types of respiratory protection. This includes understanding why the specific respirator they are provided with is suitable for the hazards they face.

iv. Proper Respirator Use

Instruction on how to correctly don (put on), doff (take off), adjust, and wear the respirator. This also includes training on performing seal checks each time the respirator is worn to ensure an effective seal.

v. Maintenance and Care of Respirators

Detailed guidance on the proper maintenance, cleaning, inspection, and storage of respirators to maintain their effectiveness. Employees should know how to inspect the respirator before use and how to recognize signs of wear and tear that could compromise its integrity.

vi. Medical Evaluation

Information on the medical evaluation process emphasizes the necessity of such evaluations to ensure employees' health and ability to wear a respirator safely.

vii. Fit Testing

Explanation of the fit testing procedure, its importance for ensuring the effectiveness of the respirator, and the requirement for annual fit testing or whenever a different respirator facepiece size, style, model, or make is used.

viii. Emergency Respirator Use

Instructions on how to use the respirator in emergency situations, including how to operate escape-only respirators if they are part of the workplace's plan.

ix. Health Effects

Information on the potential health effects of not adhering to the respiratory protection program or not using the respirator properly. This includes understanding the implications of exposure to the identified hazards.

b. Annual Training / Retraining

Workers shall be retrained annually or if one of the following situations occurs:

- i. Changes in the type of respirator make the previous training obsolete;*
- ii. Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill and*
- iii. Any other situation arises in which retraining appears necessary to ensure safe respirator use*

c. Voluntary Use of Respirators

- i. The program administrator or assistant program administrator shall approve the voluntary use of respirators by employees (e.g., to control odors or nuisance dust).*
- ii. Voluntary use of respirators is only allowed in areas characterized as not requiring respiratory protection.*
- iii. The program administrator or assistant program administrator must approve the specific type of respirator and conditions of use.*
- iv. Voluntary use of respirators must meet all provisions in this SOP and OSHA regulations.*
- v. Employees voluntarily using respirators must be trained in the information provided in Appendix D to 29 CFR 1910.134 "Information for Employees Using Respirators When Not Required under the Standard."*

d. Recordkeeping

When a worker is trained on a respirator that will be issued to them, the training shall be recorded on the 1403.016.02 Respirator Training Form.

F. MEDICAL QUALIFICATIONS

1. Medical Evaluations

Medical evaluations are conducted by a Physician or Licensed Health Care Professional (LHCP). Medical evaluations shall be conducted prior to fit testing.

a. Additional medical evaluations may be necessary when:

- i. An employee reports medical signs or symptoms that are related to their ability to use a respirator;*
- ii. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation or*

- iii. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may substantially increase an employee's physiological burden.*
- b. Medical evaluations shall include the use of the OSHA Respirator Questionnaire. A medical examination is provided as part of an employee's new hire or annual physical that the Physician or Licensed Health Care Provider (PLHCP) can use to make a final determination.***
- c. A written recommendation regarding the employee's ability to use the respirator is provided by the PLHCP, typically in the form of a Work Status Report from WorkCare, Inc. This document is stored at the worksite and contains information on:***
 - i. Any limitations on respirator use related to the medical condition of the employee or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;*
 - ii. The need, if any, for follow-up medical evaluations; and*
 - iii. The LHCP will provide the employer with a statement, which will be available to the employee upon request.*
- d. If there are limitations in the medical determination, these limitations must be adhered to.***

G. FIT TESTING

Before an employee uses any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used.

1. Fit Test Types

- a. The preferred fit test method shall be a Quantitative Fit Test (QNFT) using an OSHA-approved protocol.***
- b. A Qualitative (QLFT) may be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less (i.e., half-mask and full-face air-purifying respirators).***

2. Tight-fitting Atmosphere-supplying and Powered Air-purifying Respirators

- a. Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing the quantitative fit test in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.***
- b. A QNFT of these respirators shall be accomplished by modifying the facepiece to allow sampling inside the facepiece in the user's breathing zone, midway between the nose and mouth. This is done by installing a permanent sampling probe onto a surrogate facepiece or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.***
- c. Any modifications to the respirator face piece for fit testing shall be completely removed and the face piece restored to an NIOSH-approved configuration before it can be used in the workplace. Workers may not use respirators permanently modified for fit test use in the field.***

3. Loose-Fitting Respirators

Loose fitting respirators such as PAPRs, in which the hood or helmet are designed to form only a partial seal with the wearer's face, or hoods that fit loosely around the wearer's neck and shoulders, do not require a fit test but use does require medical evaluation.

4. Fit Test Recordkeeping

a. *Fit Test Time Frames*

Fit test results are good for one year but may be voided whenever the employee, a supervisor, a safety officer, the PLHCP, or a program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to:

- i. *Facial scarring,*
- ii. *Dental changes,*
- iii. *Cosmetic surgery, or*
- iv. *Any significant increase or decrease in body weight.*

b. If an employee is assigned a different respirator (size, style, model or make), a new fit test must be completed.

c. Each employee's fit test number will be recorded on the 1403.016.01 Fit Test Record Form.

H. USE OF RESPIRATORS

Respirators shall be used in accordance with the following procedures.

1. Facepiece Seal Protection

Employees are not allowed to use respirators with tight-fitting face pieces with:

a. Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function; or

b. Any condition that interferes with the face-to-facepiece seal or valve function.

- i. *If an employee wears corrective glasses, Envirocon will obtain the appropriate spectacle kit and have it fitted with prescription lenses.*
- ii. *Employees are required to perform a user seal check (fit check) when donning all tight-fitting respirators.*

2. Respirator Inspection and Repairs

a. *Inspection requirements*

- i. *All respirators shall be inspected before each use and during cleaning.*
- ii. *All respirators maintained for use in emergencies shall be inspected at least monthly and per the manufacturer's recommendations. They shall be checked for proper function before and after each use.*
- iii. *Emergency escape-only respirators shall be inspected before being carried into the workplace for use.*
- iv. *Air-supplying respirator systems and SCBAs shall be inspected monthly.*

b. Repairs

- i. Respirators that fail an inspection or are otherwise found to be defective shall be removed from service and discarded, repaired, or adjusted in accordance with these procedures:*
- ii. Repairs or adjustments to respirators are to be made only by a qualified person.*
- iii. Repairs shall be made using the respirator manufacturer's NIOSH-approved parts designed for the respirator.*
- iv. Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.*
- v. Reducing and adjusting valves, regulators, and alarms shall only be done by the manufacturer.*

c. Inspections

Employees shall inspect their respirators carefully and pay particular attention to:

- i. Inhalation and exhalation valve(s);*
- ii. Tightness of components;*
- iii. Elasticity of components;*
- iv. Missing respirator components;*
- v. Damaged respirator components;*
- vi. Missing or damaged cartridge, canister, or filter components;*
- vii. Ensuring that all filters, cartridges, and canisters used are labeled and color-coded with the NIOSH approval label and that the label is not removed and remains legible.*
- viii. For supplied air respirator systems, the following should also be inspected:*
- ix. Proper functioning of regulators*
- x. Final regulator pressures not exceeding 125 psi*
- xi. Air lines (low pressure) not exceeding 300 feet in length*
- xii. Grade D certification of breathing air*

3. Respirator Cartridges Changes

Respirator cartridges shall be changed:

- a. In accordance with the manufacturer's recommendations, and**
- b. As prescribed by a written site-specific procedure or Job Safety Analysis (JSA).**
- c. Cartridges shall also be changed if the worker detects:**
 - i. Vapor or gas breakthrough*
 - ii. Changes in breathing resistance*
 - iii. Leakage of the face piece*

4. Cleaning and Disinfecting

a. Cleaning

- i. *Whenever respirators are removed (doffed), workers shall wash their faces and respirator face pieces in order to prevent eye or skin irritation.*
- ii. *Workers shall regularly clean their respirators using soap and water or equivalent cleaning solutions.*

b. Disinfecting requirements

- i. *Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals.*
- ii. *Respirators maintained for emergency use shall be cleaned and disinfected after each use.*
- iii. *Respirators used in fit testing and training shall be cleaned and disinfected after each use.*
- iv. *Respirators used by a single individual shall be disinfected at least weekly.*

5. Storage

a. All respirators shall be:

- i. *Stored in a manner that protects them from damage, contamination (dust, vapors, etc), sunlight, extreme temperatures, excessive moisture, and damaging chemicals.*
- ii. *Packed or stored to prevent deformation of the face piece and exhalation valve.*

b. Emergency respirators shall be:

- i. *Easily accessible to the work area,*
- ii. *Stored in compartments or in covers that are clearly marked as containing emergency respirators and*
- iii. *Stored in accordance with applicable manufacturer instructions.*

6. Immediately Dangerous to Life or Health (IDLH) Atmospheres

a. The Respiratory Protection Program Administrator must approve use of respirators in IDLH atmospheres. The administrator will approve the entry by reviewing and signing off on the Job Safety Analysis (JSA) for the entry. A JSA shall be written for each IDLH entry. The JSA will include:

- i. *The type of respirators to be used,*
- ii. *Area monitoring requirements,*
- iii. *Escape provisions, and*
- iv. *Rescue provisions.*

b. At least one employee shall serve as an attendant.

- i. *Attendants will remain outside the IDLH atmosphere.*
- ii. *The attendant shall maintain visual, voice, or signal line communication with the employee(s) in the IDLH atmosphere.*
- iii. *Attendants and rescue personnel will be trained in the approved JSA for the entry.*

- iv. *Attendants shall not attempt a rescue until provisions have been made for someone else to assume attendant responsibilities*

I. RESPIRATOR SELECTION

1. General

- a. ***Envirocon will select and provide an appropriate respirator based on:***
 - i. *Respiratory hazard(s) to which the worker is exposed,*
 - ii. *Workplace and user factors that affect respirator performance and reliability,*
 - iii. *The assigned protection factor (APF) for the particular type of respirator and*
 - iv. *The MUC assigned to the particular type of respirator and contaminant(s).*
- b. ***Envirocon will provide NIOSH-certified respirators, training, and medical evaluations at no cost to the employee.***
- c. ***Envirocon will provide NIOSH-approved filters, cartridges, and/or canisters for the specific make and model of respirator.***
- d. ***Respiratory hazards will be identified and evaluated for all individual work sites. The respiratory hazard evaluation will include:***
 - i. *A reasonable estimate of the employee exposure to respiratory hazards, and*
 - ii. *An identification of the contaminant's chemical state and physical form.*
- e. ***Where the potential employee exposure cannot be identified or reasonably estimated, the atmosphere will be considered IDLH.***
- f. ***Envirocon shall make various makes and models of respirators available to workers to ensure a proper fit can be found..***

2. Respirators for IDLH Atmospheres

- a. ***Employees performing work in IDLH atmospheres will be provided with one of the following:***
 - i. *Full-face piece pressure demand SCBA designed for a minimum service life of thirty (30) minutes or*
 - ii. *A combination full facepiece pressure-demand supplied air respirator with an auxiliary self-contained air supply is needed.*
 - iii. *Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used. Respirators for non-IDLH Atmospheres*
- b. ***Action Levels***
 - i. *Respiratory protection must be worn when workers are exposed to contaminant levels at or exceeding OSHA Permissible Exposure Limits (PELs) during any 8-hour work shift of a 40-hour week or OSHA-established short-term exposure or ceiling limits.*
 - ii. *As best practice, Envirocon's Action Levels should be 50% of lowest of the available OELs (OSHA PEL, ACGIH Threshold Limit Value (TLV), or NIOSH Recommended Exposure Limit (REL)) for a contaminant.*

- iii. If the calculated best practice Action Level is below the established accredited industrial hygiene laboratory limit of detection for the contaminant, then the Action Level will be the laboratory detection limit.

c. Assigned Protection Factors

- i. The APFs listed below shall be used to select a respirator that meets or exceeds the required level of worker protection.

Assigned Protection Factors				
Type of Respirator	Half Mask	Full Facepiece	Helmet/Hood	Loose-Fitting Facepiece
Air-Purifying Respirator (APR)	101	50		
Powered Air-Purifying Respirator (PAPR)	50	1000	25/1,000 ²	25
Supplied-Air Respirator (SAR)				
<i>Demand mode</i>	10	50		
<i>Continuous flow mode</i>	50	1000	25/1,000 ²	25
<i>Pressure-demand or other positive-pressure mode</i>	50	1000		
Self-Contained Breathing Apparatus				
<i>Demand mode</i>	10	50	50	
<i>Pressure-demand or other positive-pressure mode</i>		10000	10000	
Notes: 1. This APF category also includes filtering facepieces (dust masks). 2. The manufacturer must provide documentary evidence that the respirator meets this standard for an APF of 1,000. Otherwise, all other PAPRs and SARs with helmets/hoods receive an APF of 25.				

d. Maximum Use Concentration

- i. For OSHA compliance, Maximum Use Concentrations (MUCs) are determined by multiplying the respirator APF by the PEL for the contaminant.
- ii. As best practice, Envirocon will establish MUCs by multiplying the respirator APF by the Action Level.
- iii. When the calculated MUC exceeds the IDLH level for a hazardous substance or the manufacturers' performance limits for the cartridge or canister, the IDLH value will be used as the MUC.

e. For protection against gases and vapors, the employee will be provided:

- i. An atmosphere-supplying respirator, or
- ii. An air-purifying respirator, provided that:

- iii. *The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant or*
- iv. *If no ESLI is appropriate for specific work site conditions, canisters and cartridges will be changed per the site-specific change schedule.*
- f. **For protection against particulates, the employee will be provided:**
 - i. *An atmosphere-supplying respirator; or*
 - ii. *An air-purifying respirator equipped with a NIOSH-approved P100/HEPA filter or cartridge.*

J. RESPIRATOR PROGRAM INSPECTIONS

1. Program Inspections

- a. ***The Assistant Program Administrator is responsible for conducting daily inspections to ensure the compliance and effectiveness of the program.***
- b. ***Daily inspections shall include evaluation of workplace conditions and in particular, following conditions:***
 - i. *Potential changes in contaminant concentration,*
 - ii. *Changes in employee exposure or stress, and*
 - iii. *Respirator effectiveness.*

2. Inspections of Sites Using Levels A and/or B equipment

Projects that utilize level A and/or B equipment are required to conduct weekly inspections that include the following:

a. Air and Oxygen Sources

- i. *Ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:*
- ii. *Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and*
- iii. *Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:*
 - a. *Oxygen content (v/v) of 19.5-23.5%;*
 - b. *Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;*
 - c. *Carbon monoxide (CO) content of 10 ppm or less;*
 - d. *Carbon dioxide (CO₂) content of 1,000 ppm or less; and*
 - e. *Lack of noticeable odor.*
- iv. *Ensure that breathing gas containers are marked in accordance with the NIOSH respirator certification standard, 42 CFR 84.*

b. Equipment

- i. *Ensure all respiratory protection system equipment shall be inspected by ensuring:*

- The proper functioning of regulators.
- Final regulator pressures do not exceed 125 psi.
- Air lines (low pressure) do not exceed 300 feet in length (or the maximum certified length).
- Compressed oxygen is not used in atmosphere-supplying respirators that have previously used compressed air.
- Oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- Breathing air couplings are incompatible with outlets for non-respirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

c. Cylinders

- i. *Ensure that cylinders used to supply breathing air to respirators meet the following requirements:*
- ii. *Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR 173 and 49 CFR 178).*
 - Three-year hydro for fiberglass/ composite cylinders
 - Five-year hydro interval for steel cylinders
 - Ten-year hydro for specially certified tall bottles
- iii. *Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1--Grade D breathing air.*
- iv. *The cylinder's moisture content does not exceed a dew point of -50 deg. F (45.6 deg. C) at one atmosphere pressure.*

d. Compressors

Ensure that compressors used to supply breathing air to respirators are set up to:

- i. *Prevent entry of contaminated air into the air-supply system;*
- ii. *Minimize moisture content so that the dew point at one-atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;*
- iii. *To further ensure breathing air quality, suitable in-line air-purifying sorbent beds and filters shall be installed. Sorbent beds and filters shall be maintained and replaced or refurbished periodically, following the manufacturer's instructions.*
- iv. *A tag containing the most recent change date and the signature of the person authorized to perform the change shall be maintained at the compressor.*
- v. *For compressors that are not oil-lubricated, ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.*
- vi. *Oil-lubricated compressors shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.*

3. SCBA Inspections

- a. Where SCBAs are used, Level A/B Inspections should include the following additional inspection items.**
 - i. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level.*
 - ii. Ensure that regulators and warning devices function properly.*

4. Emergency Use Respirator Inspections

- a. Where the site maintains respirators for emergency use, the following additional inspection items should be included on a monthly basis.**
- b. Certify the respirator by documenting the inspection date, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.**
- c. Provide this information on a tag or label that is attached to the respirator's storage compartment, kept with the respirator, or included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.**

K. RELATED DOCUMENTS

ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989
29 CFR 1910.134: Respiratory Protection
42 CFR 84: Approval of Respiratory Protective Devices
SOP 1403.005: Medical Monitoring

L. ATTACHMENTS

Form 1403.016.01: Respirator Fit Test Record
Form 1403.016.02: Respirator Training



**STANDARD OPERATING
PROCEDURE**

TITLE: Site-Specific Health & Safety Plan (HASP)		PREPARED BY: Jerry Hipp
SOP NO: 1403.017	PAGE: 1 of 13	AUTHORIZED BY: Matthew Curran, CSP, CIH – Director of EHS
EFFECTIVE DATE: 10/1999	REVISION DATE: 5/2021	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide guidelines for compliance with the site-specific planning requirements of 29 CFR 1926.65 (and/or 29 CFR 1910.120), OSHA's Hazardous Waste Operations and Emergency Response Standard, as well as the development of the Site-Specific Health and Safety Plan (HASP).

B. SCOPE

This SOP applies to all operational aspects and project phases undertaken by Envirocon, regardless of location or operational complexity. This plan applies to all employees, contractors, subcontractors, consultants, and visitors involved directly or indirectly with Envirocon projects.

C. DEFINITIONS

1. Competent Person

An individual is recognized as capable of identifying existing and predictable hazards in the surroundings or working conditions.

2. Stop Work Authority

A policy empowering employees to stop work activities if they identify unsafe conditions or behaviors.

D. RESPONSIBILITIES

1. Director of EHS (Environmental, Health, and Safety):

The Director of EHS is responsible for:

- Developing, implementing, and overseeing the company-wide EHS strategy, ensuring compliance with local, state, federal, and international regulations.
- Providing final approval and periodic review of the Site-Specific Health and Safety Plan (HASP) to ensure it remains relevant and effective.
- Guiding the continuous improvement of EHS practices, integrating new regulations, technologies, and best practices.

2. Project Health & Safety Manager:

The Project Health & Safety Manager (HSM) is responsible for:

- The implementation and management of the HASP at the project level.
- Conducting risk assessments and hazard analyses and developing site-specific safety protocols.
- Overseeing training programs for site personnel, including specialized training for site-specific hazards.
- Coordinating with the Project Manager and Director of EHS to ensure safety measures are integrated into project planning and execution.

3. Project Health & Safety Officer:

The Project Health & Safety Officer (HSO) is responsible for:

- Acting as the onsite EHS representative, conducting regular site inspections and monitoring compliance with the HASP.
- Facilitating the development and implementation of Job Safety Analyses (JSAs) with the project team.
- Leading incident investigations and reports findings to the Project Health & Safety Manager and Project Manager.

- Manage the site emergency response plan and ensure readiness for emergencies.

4. Project Manager:

The Project Manager is responsible for:

- Ensuring the integration of EHS considerations into all project phases from planning through execution.
- Collaborating with the Project Health & Safety Manager to allocate resources effectively for safety measures.
- Holding ultimate responsibility for the project's compliance with the Site-Specific HASP.
- Acting as the Site-SERP Coordinator.

5. Supervisor:

The Supervisor is responsible for:

- Enforcing daily safety requirements outlined in the HASP among team members, ensuring a safe working environment.
- Conducting daily inspections and providing coaching or feedback to employees.
- Reporting incidents, near misses, and hazards promptly to the Project Health & Safety Officer.
- Engaging with workers to gather feedback on safety measures and suggesting improvements to the management team.
- Acting as the Alternate Site-SERP Coordinator.

6. Employees:

Employees are responsible for:

- Complying with all safety requirements outlined in the site-specific HASP.
- Participating in safety training sessions and emergency drills.
- Reporting any unsafe conditions, incidents, or near misses to their supervisor or the Project Health & Safety Officer immediately.
- Contributing to a culture of safety by adopting best practices and supporting coworkers in safe work practices.

E. OVERVIEW

The development of a site-specific Safety and Health Plan (HASP) is one of the first priorities after being notified of a project award. The HASP will be developed in conjunction with the project work plan to ensure that all planned work procedures are performed in accordance with applicable company policies and procedures and applicable federal, state, and local regulations. The project scope of work shall be evaluated by phase to analyze the risk to employees, the environment, and the public and ensure appropriate control measures are in place before beginning work.

The following objectives shall be met when developing the site-specific HASP:

- 1. Ensure compliance with all relevant and applicable federal, state, and local regulations.**
- 2. Ensure that all administrative policies, work procedures, physical facilities, and equipment utilized comply with applicable regulations and company policies and procedures.**

3. The following policies, procedures, and supporting documents should be utilized during HASP development:
 - a. *Environment, Health, and Safety Program Manual, which contains all EHS Standard Operating Procedures*
 - b. *Site-specific Procedures which are intended to support site-specific planning*
 - c. *Form 1403.017.01 - Envirocon HASP Template*
 - d. *Form 1403.017.02 - Master Hazard and Risk Assessment Worksheet*

F. REGULATORY BASIS

The development of the site-specific HASP is governed by 1926.65 and/or 1910.120 Hazardous Waste Operations and Emergency Response. These two sets of regulations are identical, but because Envirocon's primary focus of operations is construction-related (i.e., excavation, demolition, etc.), this procedure will refer to the construction standards in 1926.65.

The health and safety program requirements are specified in Article 29 CFR 1926.65(b). The requirements for standard operating procedures associated with this program are described in paragraph 29 CFR 1926.65(b)(1)(ii)(F).

If the project is outside of OSHA's jurisdiction, the site-specific HASP will be developed to meet the requirements of the presiding regulatory body, such as the Mine Safety and Health Administration (MSHA).

1. Site-specific Health and Safety Plans (HASP)

Paragraph 29 CFR 1926.65(b)(1)(ii)(C) requires a site-specific safety and health plan (SSHP) which need not repeat the employer's standard operating procedures required in paragraph 29 CFR 1926.65(b)(1)(ii)(F) of the standard.

2. Site-specific Work Plans

Paragraph (b)(1)(ii)(B) of the standard requires a comprehensive work plan for each site. The Project Manager normally develops these plans.

G. SITE DESCRIPTION AND SCOPE OF WORK

These sections of the HASP provide a brief description of the project site from a physical and historical perspective, detail remediation conducted to date, and list the major aspects of the work to be completed.

H. PROJECT TEAM ORGANIZATION AND RESPONSIBILITIES

1. Project Management Team

a. *This section of the HASP provides an overview of the entire Project Management Team in place at the project. The overview will include the names, roles, and contact information of all relevant Project Management Team Members.*

2. Competent Person

a. *This section of the HASP will detail the necessary competent persons required for the project. The competent persons listed in the HASP may include but are necessarily limited to:*

- i. *Safety Competent Person*

The Safety Competent Persons (SCP) serve as the OSHA “site safety and health supervisor” as defined in the HAZWOPER standard 29 CFR 1910.120/1926.65(b).

ii. Excavation Competent Person

The Excavation Competent Person (ECP) is an individual who Envirocon has designated as qualified to oversee and ensure safety during excavation work as per the requirements of 29 CFR 1926.651

iii. Demolition Competent Person

This individual will have direct supervisory control of all demolition activities per 29 CFR 1926.850 through 860

3. Short Service Employees and Subcontractors

a. This section details the site-specific requirements of the Short Service Employee Program as defined in the 1403.003 SOP.

b. This section provides an overview of the subcontractor work that will be performed on the project. The overview shall include, at a minimum, the subcontractor's name and scope of work.

I. EMPLOYEE PARTICIPATION

This section briefly explains Envirocon’s expectations of employees working at the project site.

1. Stop Work Authority

This section outlines Envirocon’s Stop Work Authority SOP as outlined in the 1403.011 SOP.

2. Behavior-Based Safety Observations

This section provides a brief overview of the Behavior-Based Safety Requirements outlined in the 1403.027 SOP.

3. Other Employee Participation Requirements

This section also provides site-specific information on the following:

- Management of Change
- The Hazwoper Buddy System Requirement
- Safety Meeting Requirements

J. TRAINING REQUIREMENTS

1. This section outlines the requirements for on-site training of site personnel, which may include but are not limited to:

a. Required regulatory training

i. This may include training such as:

- a. Hazwoper initial or refresher training
- b. MSHA New Miner or Annual Refresher Training,
- c. Hazcom training
- d. Applicable DOT training requirement.

b. Site-specific training

This will include, at a minimum, the site-specific HASP training orientation for new employees or visitors. Other site-specific training may include:

- i. Lead/Asbestos/Arsenic awareness training*
- ii. MSHA site hazard training*
- iii. Client process or site training*

c. Task-specific training

This section includes relevant task training on equipment, tools, or processes/procedures as per the 1401.031 Equipment Operator Training and Competency SOP.

d. Visitor training requirement

This section provides details on what training is required for site visitors.

e. Site and HASP orientation requirements

This section outlines the various site-specific components of site and HASP training.

2. All employees, subcontractors, and visitors desiring access to a hazardous waste site will first undergo a preliminary site briefing. This briefing includes:

- A review of the site-specific HASP,
- Potential hazards and JSAs (as applicable),
- Site safety rules and the
- Site Emergency Response Plan.

K. MEDICAL MONITORING REQUIREMENTS

This section outlines the medical monitoring requirements for the project that meet regulatory requirements and the 1403.005, Medical Monitoring Program, 1403.006, Substance Abuse Policy and Program, 1403.007, Blood-borne Pathogens, and 1403.008, Hearing Conservation SOPs.

This section also details the specific medical monitoring tests needed for each type of worker and details the Envirocon Substance Abuse Procedures. If any client requirements differ from the Envirocon SOP, it shall be outlined in this section.

L. HAZARD ANALYSIS PROCESS

This section details Envirocon's compliance with OSHA regulations requiring a hazard analysis for work performed on the project site.

1. Accident Prevention Program

OSHA regulations outlined in 29 CFR 1926.20 require Envirocon to implement an Accident Prevention Program. To meet this requirement, the site-specific HASP and EHS SOP Manual (which comprises all updated Envirocon EHS SOPs available) will be used.

2. Job Safety Analyses and Field Crew Activity Plans

a. Nomenclature

The general process of the Job Safety Analysis can have several names, such as Job Safety Analysis (JSA), Job Hazard Analysis (JHA), Activity Hazard Analysis (AHA), and Hazard or Risk Assessment (HA / RA). Envirocon considers all of these names equal but will default to **Job Safety Analysis** unless explicitly required by the client.

- b. The JSA and FCAP process is outlined in the 1403.003 – Control of Work SOP.*
- c. Prior to beginning work on the project, each primary task shall be analyzed for potential hazards. Job Safety Analyses (JSAs) shall be developed for all significant work tasks associated with the project. JSAs are based on the initial hazard review conducted by the HSM and Project Management Team, as well as applicable company procedures and federal, state, and local regulations.*
- d. JSAs should be developed by the project team, including supervisors, crew members, and the assigned safety professional and be in line with the requirements outlined in the Control of Work SOP. Following the identification of the hazards associated with the steps of the job task, control measures are evaluated and implemented.*
- e. JSAs shall be treated as “living documents” and reviewed regularly by Project Management Team members as well as the craft employees. JSA shall be updated accordingly when new hazards are identified, the scope of work or environment changes, or if steps or controls are added.*
- f. Field Crew Activity Plans (FCAPs) shall be a standard daily hazard analysis process implemented at the project site. An alternate process may be used with approval from the Director of EHS.*

3. High Hazard Permits

This section will outline all high-hazard permits that will be used or have the potential to be used at the site. These high-hazard permits and processes shall be in compliance with the corresponding Envirocon SOP and regulatory requirements. Examples of high-hazard permits include but are not limited to:

- a. Hot work Permits*
- b. Ground Disturbance Permits*
- c. Confined Space Permits.*

M. SITE HAZARDS AND CONTROLS

1. Contaminants of Concern

This section will outline the contaminants of concern and any other health hazards defined by the site characterization specifications. The relevant Occupational Exposure Limits (OELs) shall be provided, which may include the OSHA Permissible Exposure Limit (PEL), ACGIH Threshold Limit Value (TLV), and NIOSH Recommended Exposure Limit (REL). Immediately Dangerous to Life and Health (IDLH) values may also be provided when applicable.

2. Site-Specific Hazards

This section details general and site-specific hazards that may be present at the project site and the controls or safe work practices necessary to mitigate the risk. The hazards listed in this section shall also be a general part or supplement to the hazards and controls listed in each JSA.

3. Additional Assessments

As the project progresses, the nature of the site hazards and necessary controls may change. When significant scopes of work change or new ones are started, the HASP shall

be reviewed for completeness concerning site hazards and controls. Control of Work documents and other sections of the HASP will be updated accordingly.

N. PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. PPE Summary

This section summarizes general PPE requirements for the different types of workers or tasks at the project. PPE listed in the site-specific HASP shall be as specific as practical (e.g., nitrile gloves rather than chemical-resistant gloves).

2. PPE Selection

PPE shall be selected based on the Site-Specific Hazard Analysis and Job Safety Analyses and be in compliance with the 1403.015 PPE SOP and any applicable OSHA, ANSI, or another regulatory guideline as appropriate.

O. RESPIRATORY PROTECTION SELECTION

1. PPE Summary

This section shall provide a summary of the respiratory protective equipment required for the project. The table shall be modified as needed to meet project requirements.

2. Respiratory Protection Selection and Management

a. Respiratory protection requirements shall be based on the type of contaminants present and their concentration (or possible concentration) in the air. The expected contaminant levels will be estimated based on concentrations reported in site survey documents and Envirocon's past experience in similar work situations.

b. Respiratory protection selection and subsequent management shall be in compliance with the 1403.016 Respiratory Protection Program SOP and any applicable regulatory requirements.

P. SITE MONITORING

Monitoring on the project site may include direct-reading exposure monitoring (e.g., chemical and physical hazards), integrated personal air sampling, and area air sampling. All sampling and monitoring requirements shall be included in the HASP.

1. Monitoring requirements for the project will be based on several factors including, but not limited to,

a. The type of chemical hazards present on site;

b. The type of physical hazards on site;

c. The expected employee exposure to the hazard(s), including the frequency, duration, and concentration of contaminants in the work area; and

d. There is potential for members of the public to be exposed to hazards present on the work site.

2. Monitoring Frequency

a. The type and frequency of monitoring shall be determined based on company procedures, federal, state, and local regulations, and client requirements. All

projects should perform initial site characterization to determine the adequacy of PPE and other hazard control measures.

- b. Actual site conditions must be evaluated to determine what instrumentation or monitoring is appropriate or practical. These factors include weather conditions, soil wetness, chemical properties of site contaminants, and the proximity of site operations to the public.**

3. Site Monitoring Plan

- a. The site monitoring plan shall include the following:**

- i. A list of activities requiring monitoring and/or sampling;*
- ii. Chemical hazards present;*
- iii. Physical hazards present;*
- iv. The instrument(s) to be used for monitoring or sampling;*
- v. Action levels;*
- vi. Corrective measures if monitoring or sampling results exceed action levels;*
- vii. Frequency and duration of monitoring or sampling;*
- viii. Applicable sampling methodologies; and*
- ix. Equipment maintenance and/or calibration requirements.*

- b. Depending on the site's geographic location, area, and community, monitoring may not be applicable. If the operation requires a local air quality agency permit outlining community air monitoring criteria, provide a copy of the permit as an appendix.**

- c. Chain-of-custody procedures will be followed, and field sampling and calibration logs will be kept.**

Q. SITE CONTROL AND SECURITY

This section shall detail the project's site access, security, and traffic control measures.

1. Work Zone Identification

- a. Specific work zones shall be delineated and described such as:**

- i. Establish Exclusion Zones (EZ)*
- ii. Contamination Reduction Zones (CRZ)*
- iii. Support Zones for each potentially contaminated area*
- iv. Other hazardous work zones, such as demolition areas*

2. Work Zone Controls

- a. This section shall describe the various control measures taken to delineate and control the different work zones identified, such as signage, barricades, training/briefing, sign-in/sign-out logs, etc.**

- b. A site map showing the location of specific work zones (contaminated or non-contaminated), parking areas, laydown areas, and traffic patterns should be developed and included in this section.*
- c. A log may be used to document entry and exit from an exclusion zone. Form 1403.017.04 Entry-Exit Log may be used.*

3. Site Traffic Control Plan:

The site traffic control plan shall be included in the project work plan. This plan shall be updated and reviewed during Plan-of-the-Day briefings as needed.

4. Site Security

The section shall describe the security measures at the site, including any client access requirements. This may include physical or administrative control measures.

R. DECONTAMINATION

1. HASP Decontamination requirements

- a. Decontamination requirements for personnel and equipment will be based on the degree of contamination expected and the nature of the contaminants.*
- b. Cost benefits of decontaminating PPE for reuse versus disposal and replacement with new equipment and its ability to be reused after decontamination will be evaluated.*
- c. Arrangements will be made to ensure that the site has adequate water services to support decontamination operations.*
- d. The need to perform any special analysis of equipment or personnel to ensure the adequacy of decontamination will be evaluated.*
- e. The site-specific HASP will include specific requirements for the use/reuse of PPE, hygiene facilities, location of the decontamination areas, and the actual decontamination sequence.*
- f. When necessary, a log may be kept to document decontamination efforts using form 1403.017.03 – Decontamination Log.*

S. COMMUNICATION

This section of the HASP will outline what communication methods are available, with emphasis on communication with emergency services. This section will also detail site-specific or client-specific details concerning available communication.

T. REQUIRED FACILITIES

- 1. This section of the HASP will detail the facilities and equipment required for the project. This may include but is not limited to:**
 - a. Portable restrooms*
 - b. Illumination*
 - c. Potable water*
 - d. Emergency eyewash stations*

- e. First aid supplies*
- f. Fire extinguishers*
- g. Flammable storage areas*
- h. Spill containment and clean up supplies*

2. This section shall detail additional site—or client-specific facilities or equipment that will be used at the project.

U. SITE EMERGENCY RESPONSE PLAN

The Site Emergency Response Plan shall be included in the HASP. When a more comprehensive plan is required, it may be presented as a separate document.

1. Site Emergency Response Plan Requirements

- a. Emergency contact list, which defines roles and responsibilities of each person.*
- b. Reasonably anticipated emergencies to occur on the site.*
- c. High-hazard emergency scenarios such as confined space rescue, fall protection, etc.*
- d. Specific response actions for each emergency.*
- e. Response actions for off-site emergencies, non-emergency medical incidents, and evacuations.*

2. Site Emergency Response Plan Management

The following items shall be considered when developing and implementing the site emergency response plan:

- a. A list of first aid/CPR-trained personnel shall be posted in the site office.*
- b. All equipment needed to respond to site emergencies shall be in place prior to beginning work.*
 - i. This equipment may include fire extinguishers, first aid kits, an AED, eye wash station(s), and emergency decontamination supplies.*
- c. Arrangements will be made with local medical facilities and clinics to be used in the event of employee injury.*
 - i. Local emergency response authorities will be contacted, and site operations and any unique hazards to emergency responders will be reviewed.*
 - ii. It may be pertinent to provide site tours to local emergency responders (police, fire, EMS) where such agencies may need to respond to high-hazard situations such as demolition, confined spaces, or work at heights.*
- d. Medical and emergency services to be used, including a list of emergency contact telephone numbers and the route to the nearest emergency room.*
- e. Personnel with current CPR/first aid training.*
- f. Decontamination requirements for personnel injured or exposed in the work zone.*
- g. Personnel roles, lines of authority, training, and communication.*

- h. Emergency recognition and prevention.*
- i. Site security and control as outlined in Section R.*
- j. Safe distances and places of refuge.*
- k. Evacuation routes and procedures.*
- l. Emergency alerting and response procedures.*

V. WASTE MANAGEMENT

This section will outline any hazardous waste management requirements for the project.

W. SITE-SPECIFIC PROCEDURES

As part of developing the project work plans and HASP, the scope of work and site shall be evaluated to determine if any special hazard exists. High-risk hazards or activities, especially ones with significant regulatory requirements, may require a separate site-specific procedure. These site-specific procedures will supplement the HASP and be listed in the Site Hazards and Controls Section as per Section N of this SOP.

X. ADDITIONAL REQUIREMENTS

1. Client-specific or additional safe work practices

- a. If additional client-specific work requirements exist, especially ones concerning worker safety, they shall be documented in the HASP. The most stringent requirement will be used when competing requirements exist between regulatory authorities, clients, or Envirocon.*
- b. Other applicable or relevant safe work practices may be added to the HASP at the discretion of the Director of EHS, HSM, HSO, or a Project Management Team member.*

2. Modifications to the Site Health and Safety Plan

- a. Certain circumstances may necessitate a revision to the HASP, including:
 - i. Change in key site personnel.*
 - ii. Change in site conditions, hazards, or controls.*
 - iii. Change in scope of work or beginning or ending certain job phases.*
 - iv. Receipt of new data on chemical hazards.*
 - v. Personnel sampling results.**
- b. When necessary, the appropriate changes shall be made as soon as practical, and a new copy of the HASP will be made available to employees.*
- c. Any changes to the HASP will be in written format, approved by a Health and Safety Manager, and acknowledged by all site personnel.*

Y. RELATED DOCUMENTS

- 1403.005 - Medical Monitoring SOP
- 1403.006 - Substance Abuse Policy
- 1403.009 - Health and Safety Training Program
- 1403.011 - Code of Safe Work Practices

- 1403.013 - Hazard Identification and Correction
- 1403.015 - Personal Protective Equipment
- 1403.016 - Respiratory Protection Program

Z. ATTACHMENTS

- 1403.017.01 – Envirocon HASP Template
- 1403.017.02 – Hazard and Risk Assessment Worksheet
- 1403.017.03 – Decontamination Log
- 1403.017.04 – Zone Entry/Exit Log

TITLE: Radiation Protection Procedures		PREPARED BY: M Lockridge
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A. PURPOSE

The purpose of the radiation protection program is to ensure employees are protected from radiation exposure on worksites by following the ALARA principles.

B. SCOPE

This procedure applies to all Envirocon employees actively working on a job site who may be exposed to radioactive contaminants from particulates and gaseous emissions.

C. DEFINITIONS
1. ALARA

“As Low As Reasonably Achievable.” The ALARA radiation Safety principle is based on the minimization of radiation doses and limiting the release of radioactive materials into the environment by employing all “reasonable methods.”

2. mR

The measurement of energy produced by Gamma or X-Ray **radiation** in a cubic centimeter of air. One milliroentgen, abbreviated "**mR**" is one-thousandth of a roentgen.

3. Rem

A unit of radiation dosage (such as from X rays) applied to humans. Derived from the phrase **Roentgen equivalent man**, the rem is now defined as the dosage in rads that will cause the same amount of biological injury as one rad of X rays or gamma rays.

4. Decontamination or "Decon"

The removal of hazardous material from areas where it is not wanted. Decontamination is utilized to reduce the dose that worker may receive from a component or surface, to reduce the potential for airborne Chemical, biological, radiological, and nuclear (CBRN) agents, or to reduce the disposal cost associated with the component or the material.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS's responsibilities are to:

- Oversee the development and implementation of the site-specific Radiation Safety Program, ensuring it aligns with applicable laws, regulations, and industry best practices.
- Approve and periodically review the radiation safety policies and procedures to ensure their effectiveness and compliance with regulatory requirements.
- Ensure that resources are available for radiation safety training, monitoring equipment, and personal protective equipment (PPE).

2. Health & Safety Manager

The Health & Safety Manager's responsibilities are to:

- Coordinate with the Director of EHS or other subject matter experts to develop and update site-specific radiation safety policies and procedures.
- Organize and oversee radiation safety training programs for all affected employees, ensuring that they understand their roles and responsibilities related to radiation safety.
- Conduct periodic audits and inspections of radiation work areas to ensure compliance with the radiation safety program and identify areas for improvement.
- Manage the radiation monitoring program, including the distribution, collection, and analysis of dosimetry badges, and ensure timely communication of results to employees.

3. Health & Safety Officer

The Health & Safety Officer's responsibilities are to:

- Conduct routine radiation safety inspections and assessments to identify potential radiation hazards and ensure compliance with safety procedures.
- Serve as a point of contact for employees regarding radiation safety concerns and questions.
- Assist in the investigation of radiation incidents or overexposures, including the documentation and implementation of corrective actions.

- Ensure proper maintenance and calibration of radiation monitoring and detection equipment.

4. Project Manager

The Project Manager's responsibilities are to:

- Integrate radiation safety practices into project planning, ensuring that all project activities comply with this Radiation Safety Program SOP.
- Collaborate with the Health & Safety Manager to ensure that all project personnel have received appropriate radiation safety training and PPE.
- Monitor project activities for compliance with radiation safety procedures and take corrective action when necessary.
- Communicate effectively with the project team regarding any changes in radiation safety procedures or the discovery of new radiation hazards.

5. Supervisor

The Supervisor's responsibilities are to:

- Enforce radiation safety procedures among team members, ensuring that all work activities are performed in accordance with established protocols.
- Monitor the use of PPE and radiation monitoring devices among team members to ensure proper use and functionality.
- Promptly report any radiation safety incidents or concerns to the Health & Safety Officer and Project Manager.

6. Employees

The employees is responsibilities are to:

- Comply with all radiation safety procedures and training requirements.
- Wear assigned PPE and radiation monitoring devices as required and report any damage or malfunctions.
- Participate in radiation safety training and refreshers to maintain awareness of radiation hazards and protection measures.
- Immediately report any unsafe conditions or deviations from radiation safety procedures to their supervisor or the Health & Safety Officer.

E. GENERAL APPROACH

Envirocon is committed to performing all projects in a safe manner. This will be accomplished by minimizing the risk to the radiological hazards present through training programs, work procedures, safety meetings, and by adhering to ALARA principles.

The site-specific Safety Plan will address all relevant worker training and medical surveillance as required by OSHA, state, and applicable installation requirements. Included are the procedures that Envirocon will utilize for the identification of occupational health hazards and the protection methods that will be implemented for the radiological hazards encountered on site.

F. RADIOLOGICAL HAZARDS

Envirocon recognizes that radioactive contamination may include decayed products in particulate and gas forms which pose the possibility of internal exposure (primary hazard) and, to a much lesser degree, external whole-body radiation exposure to workers.

Internal radioactive exposure exists as contaminated particulates and radioactive gases are airborne and pose inhalation and ingestion risks. Each HASP will identify these hazards.

G. PREVENTIVE MEASURES TO REDUCE WORKER RISKS

Envirocon will prevent internal exposure to particulate and gaseous radiation by using a combination of air-purifying and air-supplied respirators. The task-specific requirements outlined in the HASP will be closely followed.

The effects of external Beta radiation will be minimized through use of coveralls and eye protection. It is understood that protective clothing and other worn PPE will not prevent whole-body exposure to Gamma radiation. Avoidance techniques using distance from known radioactive sources will be the primary control technique when Gamma sources are encountered or suspected. Areas where Gamma radiation is present will be identified using radiation area banner guarding.

Envirocon understands the risks and required procedures for working with external radiation. To ensure that whole-body exposure is not in excess of allowable levels, Envirocon will rely heavily on health physicists' real-time monitoring of all areas and containers.

Control of the spread of radioactive material during the decontamination process for personnel and equipment is critical. Experience has shown that a well-thought-out process of protecting areas and equipment that are not easily washed (seats of equipment, delicate equipment, etc.) using plastic and other covers is the first step in the decontamination process.

The first step is to locate the hot line beyond which no radioactive material will pass. Utilizing a systematic approach to personnel decon where likely areas of contamination on personnel are monitored with a monitoring instrument (both inside and outside the PPE), will confirm whether radioactive material is initially present and how effective personnel are in keeping measurable amounts off their body.

Envirocon is prepared to equip personnel decon stations with HEPA vacuums to remove accumulated dust on protective outer ware prior to its removal. In addition, if necessary, wash stations can be set up such that personnel can rinse/wash at the decon station if body monitoring indicates contamination in excess of established thresholds. Provisions would be made for the collection of any waters/solutions considered radioactive waste.

H. PERSONNEL MONITORING DEVICES

The following procedures will be followed unless specified differently in a site-specific procedure.

1. TLD

- a. Personnel will be monitored for radiation exposure by using Thermoluminescent (TLD) Badges. Badges will be worn at all times during the workday when in the Exclusion Zone.***
- b. Badges will be worn above the employee's waist.***

2. Pocket dosimeters

- a. Personnel will be monitored using 100 mR pocket dosimeters.***
- b. The dosimeters will be kept at the access point to the Exclusion Zone.***

c. Each person will be assigned a dosimeter with its own specific identification number.

d. Daily readings will be taken and documented.

3. Exposure and action levels

Envirocon will use the guidelines of 1200 mRem/quarter including the internal dose for an exposure limit.

I. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Unless specified differently in a site-specific procedure, PPE will consist of Level C (full-face air purifying with HEPA filter), saranex suits, nitrile disposable booties, surgical inner gloves, nitrile outer gloves, and duct tape over all PPE termination points.

J. PERSONNEL DECONTAMINATION

Personnel contamination surveys will be conducted on each individual as they leave the Exclusion Zone with a Model 19 Micro R Meter or equivalent appropriate survey instrument.

All personnel will process through a standard gross/sequential decontamination line.

Personnel will be re-monitored after decontamination is completed. Any personnel readings above background will cause re-decontamination and re-monitoring of that individual.

K. EQUIPMENT DECONTAMINATION

All equipment will be wiped with Trisodium Phosphate wash solution, wiped with rinse water, wiped dry, and monitored with the Micro R meter.

L. SAFE WORK PROCEDURES

On-site areas with radioactive readings above background survey readings will be designated as a restricted area and avoided by all site personnel.

Restricted area(s) will be posted and blocked off.

M. RADIOLOGICAL CONTROL AND ALARA POLICY

1. Policy

Envirocon holds the Project Manager and site supervisors responsible for strictly adhering to the following policy and operating philosophy. The Project Managers and other senior leadership members are expected to support the ALARA Program by both works and actions. The fundamental principle underlying this Policy is:

a. There should not be any occupational exposure of workers to ionizing radiation without the expectation of an overall benefit from the activity causing the exposure (52 FR 2822);

b. ALARA - personal radiation exposure shall be maintained as low as reasonably achievable (ALARA);

c. Radiation exposure of the workforce and public shall be controlled such that radiation exposures are well below regulatory limits and that there is no radiation exposure without commensurate benefit;

- d. **OWNERSHIP** - each person involved in radiological work is expected to demonstrate responsibility and accountability through an informed, disciplined, and cautious attitude toward radiation and radioactivity and
- e. **EXCELLENCE** - excellent performance is evident when radiation exposures are maintained well below regulatory limits, contamination is minimal, radioactivity is well controlled, and radiological spills or uncontrolled releases are prevented.

2. Planning Radiological Work

- a. Measures shall be taken to maintain radiation exposure in controlled areas as low as is reasonably achievable (ALARA) through facility and equipment design and administrative control. The primary methods used shall be physical design features (e.g. confinement, ventilation, remote handling, and shielding). Administrative controls and procedural requirements shall be employed only as supplemental methods to control radiation exposure.
- b. For specific activities where use of physical design features are demonstrated to be impractical, administrative controls and procedural requirements shall be used to maintain radiation exposures ALARA.
- c. For routine tasks, such as surveillance, tours and minor non-radiological maintenance, performance of a review, and documentation-identified radiological requirements may be conducted as part of the Radiological Work Permit process.

3. Action Levels

Envirocon has established the following trigger levels requiring formal radiological review of nonroutine or complex work activities.

- a. An individual is expected to exceed an annual occupational dose of 500 millirem.
- b. The collective occupational dose on a job is likely to exceed 1,000 millirem.
- c. The airborne radioactivity in an area is likely to exceed 1 Derived Air Concentration.
- d. The removable contamination in work areas will likely require posting as a "High Contamination Area."
- e. Entry will be made in an area that requires posting as a "High Radiation Area."
- f. Potential exists for a non-permitted release to the environment of radioactive material in excess of applicable limits.

4. Review Procedures for Tasks Greater Than Action Levels

Tasks potentially exceeding the above action levels shall undergo formal documented radiological or ALARA review. At a minimum, this review will consider the following:

- a. Inclusion of Radiological Control Hold Points in the technical work documents;
- b. Elimination or reduction of radioactivity through flushing and decontamination;
- c. Use of work processes and special tooling to reduce time in the work area;
- d. Use of engineered controls to minimize the spread of contamination and generation of airborne radioactivity;
- e. Specification of special radiological training or monitoring requirements;

- f. Use of mock-ups for high exposure or complex tasks;*
- g. Engineering, design, and use of temporary shielding to reduce radiation levels;*
- h. Walk down or dry run of the activities using applicable procedures;*
- i. Staging and preparation of necessary materials and special tools;*
- j. Maximization of prefabrication and shop work;*
- k. Review of abnormal and emergency procedures and plans;*
- l. Identification of points where signatures and second-party or independent verifications are required;*
- m. Establishment of success or completion criteria, with contingency plans to anticipate difficulties;*
- n. Development of a pre-job estimate of the collective dose to be incurred for the job;*
- o. Provision for waste minimization and disposal; and*
- p. Use of dust-suppression techniques.*
- q. Radiological requirements identified as part of the above radiological review will be documented in the job plans, procedures, or work packages.*

5. Respiratory Protection Guidelines

When engineering and administrative controls have been applied and the potential for airborne radioactivity still exists, respiratory protection will be used to limit internal exposures. Use of respiratory protection will be considered under the following conditions:

- a. Entry into posted Airborne Radioactivity Areas;*
- b. During breach of contaminated systems or components;*
- c. Work in areas or on equipment with removable contamination levels greater than 100 times the applicable limits; and*
- d. During work on contaminated or activated surfaces with the potential to generate airborne radioactivity.*
- e. The selection of respiratory protection equipment includes consideration of worker safety, comfort, and efficiency.*
- f. In specific situations, the use of respiratory protection may be inadvisable due to physical limitation, or the potential for significantly increased external exposure. In such situations, written authorization must be obtained from the Corporate Director of Health and Safety or his designee before any exposure is allowed.*

6. Work Preparation

- a. Radiological Work Permits (RWPs) are an administrative mechanism used to establish radiological controls for intended work activities. The RWP informs workers of area radiological conditions and entry requirements and provides a mechanism to relate worker exposure to specific work activities.*
- b. RWPs and access control log sheets will be used to control the following activities:*

- i. *Entry into High and Very High Radiation Areas;*
 - ii. *Entry into High Contamination Areas;*
 - iii. *Entry into Airborne Radioactivity Areas;*
 - iv. *Entry into Contamination Areas and*
 - v. *Tasks in areas in which adverse radiological conditions are suspected or to ensure accountability of personal exposure.*
- c. *Job-specific RWP's shall be used to control non-routine operations or work in areas with changing radiological conditions. The job-specific RWP shall remain in effect only for the duration of the job.***
- d. *General RWP's may be used to control routine or repetitive activities, such as tours and inspections or minor work activities, in areas with well-characterized and stable radiological conditions. However, they will not be approved for periods longer than one year.***

7. Stop Radiological Work Authority

Radiological control technicians and their supervisors, line supervisors, and any worker through their supervisor, has the authority and responsibility to stop radiological work activities for and of the following reasons:

- a. *Inadequate radiological controls;***
- b. *Radiological controls not being implemented; and***
- c. *Radiological control Hold Point not being satisfied.***

Stop radiological work authority shall be exercised in a justifiable and responsible manner. Once work has stopped, it will not resume until proper control has been reestablished. Resumption of radiological work requires the approval of the line manager responsible for the work and the Corporate Director of Health and Safety.

8. Personal Protective Equipment and Clothing

- a. *Personnel shall wear protective clothing during the following activities:***
 - i. *Handling of contaminated materials with removable contamination in excess of applicable limits;*
 - ii. *Work in Contamination, High Contamination, and Airborne Radioactivity Areas; and*
 - iii. *As directed by or as required by the RWP.*
- b. *Protective clothing and shoes designated for radiological control shall be:***
 - i. *Marked for such use in accordance with applicable standards; and*
 - ii. *Used only for radiological control purposes.*
- c. *Protective clothing dress-out areas will be established adjacent to the work area, and the worker will proceed directly to the radiological work area after donning personal protective equipment (PPE) and clothing.***
- d. *PPE and clothing shall be selected as prescribed by the controlling RWP.***

- e. *The use of PPE or clothing, including respiratory protection beyond that authorized by the RWP or site control documents, is contrary to ALARA principles and waste minimization practices and is not authorized.*
- f. *Company-issued clothing is considered the same as personal clothing and is not to be used for radiological control purposes.*

9. Controlling the Spread of Contamination

The following measures will be used to prevent the spread of contamination across the boundary of Contamination Areas, High Contamination Areas, and Airborne Radioactivity Areas:

- a. *Use solid barriers to enclose areas wherever practicable;*
- b. *Mark and secure items such as hoses and cords that cross the boundary;*
- c. *Control and direct airflow from areas of lesser to greater removable contamination; and*
- d. *Use engineering control and containment devices such as glove bags, glove boxes, and tents.*

10. Frisk Monitoring for Personnel Contamination

Personnel shall perform a whole body frisk under the following conditions:

- a. *Immediately upon entry into an uncontaminated area after exiting Contamination Areas, High Contamination Areas, and Airborne Radioactivity Areas;*
- b. *As directed by the RWP or site control personnel. Personnel exiting a Radiological Buffer Area containing Contamination, High Contamination, or Airborne Radioactivity Areas will perform a hand and foot frisk. This frisk is not required if the Radiological Buffer Area exit is immediately adjacent to the location where the exiting worker has already performed a whole-body frisk;*
- c. *Where frisking cannot be performed at the exit from Contamination Areas, High Contamination Areas, or Airborne Radioactivity Areas due to high background radiation levels, personnel will:*
 - i. *Remove all protective equipment and clothing at the exit;*
 - ii. *Proceed directly to the nearest designated monitoring station and*
 - iii. *Conduct a whole-body frisk.*
- d. *Personnel frisking will be performed after removal of protective clothing and prior to washing or showering;*
- e. *Personnel frisking shall be performed using instruments that, under laboratory conditions, can detect total contamination of at least the applicable standards for the isotopes of interest, excluding Tritium and Noble gases*
- f. *Personal items, such as notebooks, papers, and flashlights, shall be subject to the same frisking requirements as the person carrying them.*

11. External Dosimetry

For the purpose of monitoring individual exposures to external radiation, personal dosimetry shall be provided to and used by:

- a. **Radiological workers who, under typical conditions, are likely to receive one or more of the following:**
 - i. *An effective dose equivalent to the whole body of 0.1 rem or more in a year;*
 - ii. *A shallow dose equivalent to the skin or any extremity of 5 rem (0.05 sievert) or more in a year;*
 - iii. *A lens of the eye dose equivalent to 1.5 rem (0.015 sievert) or more in a year; and*
 - iv. *A deep dose equivalent from external exposure to any organ or tissue other than the lens of the eye of 5 rem (0.05 sievert).*
- b. **Declared pregnant workers who are expected to receive external sources; a dose equivalent to the embryo/fetus in excess of 10 percent of the applicable limit; and**
- c. **Minors, students, and members of the public likely to receive--in 1 year, from external sources--a dose in excess of 50 percent the applicable limit.**
- d. **Neutron dosimetry shall be provided when a person is likely to exceed 100 mrem annually from neutrons.**
- e. **Dosimeters shall be issued only to personnel formally instructed in their use and shall be worn only by those to whom the dosimeters were issued.**
- f. **Dosimeters will only be issued to personnel entering Radiation Areas, High Radiation Areas, or Radiological Buffer Areas where there is a potential for external exposure at the above limits.**
- g. **Personnel shall return dosimeters for processing as scheduled or upon request, and they should be restricted by line management from continuing radiological work until dosimeters are returned.**
- h. **Personnel shall wear their primary dosimeters on the chest area, on or between the waist and the neck, in the manner prescribed.**
- i. **Personal dosimeters will be left at the worksite and controlled in accordance with site procedures.**
- j. **A person whose dosimeter is lost, damaged, or contaminated should immediately exit the area and report the occurrence to the Project Safety Officer. The affected employee will be denied entry into radiological-controlled areas until a review has been conducted and management has approved re-entry.**

12. Internal Dosimetry

For the purpose of monitoring individual exposures to internal dose, evaluation programs shall be conducted for:

- a. **Radiological workers, who under typical conditions, are likely to receive 0.1 rem (0.001 sievert) or more committed effective dose equivalent, and/or 5 rem (0.05 sievert) or more committed dose equivalent to any organ or tissue, from all occupational radionuclide intakes a year;**
- b. **Declared pregnant workers likely to receive an intake resulting in a dose equivalent to the embryo/fetus in excess of 10 percent of the applicable limit; and**

- c. Minors, students, and members of the public who are likely to receive, in 1 year, an intake resulting in a committed effective dose equivalent in excess of 50 percent of applicable limits.**
- d. The estimation of internal dose shall be based on bioassay data rather than air concentration values unless:**
 - i. Bioassay data are unavailable or inadequate; or*
 - ii. Internal dose estimates based on representative air concentration values are demonstrated to be as accurate or more accurate.*
- e. Personnel shall participate in follow-up bioassay monitoring when their routine bioassay results indicate an intake in the current year with a committed effective dose equivalent of 100 mrem or more.**
- f. Personnel whose routine duties involve exposure to surface or airborne contamination or to radionuclides readily absorbed through the skin.**
- g. Personnel shall submit bioassay samples, such as urine or fecal samples, and**
- h. participate in bioassay monitoring, such as whole body or lung coughing, and the frequency required.**

N. WASTE MINIMIZATION

The goal of the Waste Minimization Program is to reduce the generation of radioactive waste and the potential spread of contamination from Contamination, High Contamination, or Airborne Radioactivity Areas.

1. The following work practices will be instituted at job sites.

- a. Personnel will be trained to restrict material entering Radiological Buffer Areas to those needed for the performance of work.**
- b. Hazardous materials, such as paints, solvents, chemicals, cleaners, and fuels, will be restricted by limiting quantities and taking measures to prevent inadvertent radioactive contamination.**
- c. Recyclable or reusable items will be used in place of disposables.**
- d. Common tools will be maintained in the Buffer Areas and designated for use in Contamination, High Contamination, or Airborne Areas. Administrative control for issuance and use will be maintained.**
- e. Potentially contaminated material from Radiological Buffer Areas will be surveyed to separate uncontaminated from contaminated materials. Material that meets the criteria for unrestrictive use will be removed or protected.**
- f. Reusable items such as protective clothing, respirators, and tools will be segregated from the controlled areas at the access control point or step-off pad.**

2. Mixed Waste

Requirements specified in the Resource Conservation and Recovery Act and Toxic Substance Control Act apply to waste that contains both radioactive and hazardous materials. Material with the potential to become a mixed waste will be controlled under a separate procedure.

O. RELATED DOCUMENTS

None.

P. ATTACHMENTS

None.

TITLE: Fall Protection		PREPARED BY: Jerry Hipp
SOP NO: 1403.019	PAGE: 1 of 11	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
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A. PURPOSE

The purpose of this standard operating procedure (SOP) is to minimize fall-related injuries by mandating the correct use, maintenance, and selection of fall protection equipment, along with required training and emergency response protocols. This SOP ensures compliance with safety regulations and promotes a culture of risk awareness and prevention for work at heights or near unprotected edges.

B. SCOPE

This procedure applies to all projects where employees are working on elevated work surfaces six feet or greater (or less where applicable) above a lower level or on any surface (regardless of height) over dangerous equipment.

C. DEFINITIONS**1. Anchorage**

A secure point of attachment for lifelines, lanyards, or deceleration devices must be capable of supporting 5,000 pounds. If no sufficient anchorage is available, the work may not proceed. Anchorages attached to personal fall protection equipment must be independent of any anchorage used to suspend employees or platforms on which employees work.

2. Body Belt

A strap means securing it about the waist and attaching it to a lanyard, lifeline, or deceleration device. A body belt shall not be part of a fall arrest system. Body belts are not approved for use within Envirocon.

3. Body Harness

Straps may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders, with the aim of attaching them to other components of a personal fall arrest system.

4. Confined Space Retrieval/Entry Equipment

All equipment used to raise/lower personnel, tripods, winches, lifelines, etc., must be designed and rated for personnel. The manufacturer's instructions must be followed during equipment use. Manila rope may not be used.

5. Controlled Access Zone

An area where specific work (overhead bricklaying) may take place without guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

6. Dangerous Equipment

Equipment (such as pickling or galvanizing tanks, degreasing units, machinery, electrical equipment, and other units) which, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.

7. Hole

A hole means a gap or void two inches or more in its least diameter on a floor, roof, or other walking/working surface.

8. Leading Edge

The edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered an "unprotected side and edge" when it is not actively and continuously under construction. A leading edge may also be found along an excavation.

9. Lifeline

A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline) or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage. Reference both 29 CFR 1926.104 & 29 CFR 1926.502 to correctly size the work activity lifeline.

10. Lifeline Counter Weight

A weight is attached to the end of a vertical lifeline to eliminate slack and unraveling of the line. The weights must touch the ground and should not be left free hanging to prevent the unraveling of the line. Weights must not put excessive tension on the vertical lifeline.

11. Locking Carabiner

A connector is used for attachment purposes (connecting lifelines to an anchorage point, attaching body belt to rope grabs, etc.). All carabiners are to be double-locked, which prevents the possibility of an accidental opening.

12. Locking Snap Hooks

A connector that requires two separate forces to open the gate. All hooks used for fall arresting and retrieval must be of this type.

13. Personal Fall Arrest System

A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and a body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations. As of January 1, 1998, using a body belt for fall arrest is prohibited.

14. Restraining Lanyard

A short flexible rope connecting a worker's safety body belt or harness to a fixed anchorage point. It is used in fall restraining applications to prohibit workers from accessing a fall hazard.

15. Rope Grab

A deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest an employee's fall. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

16. Safety Monitor

A competent person will be near workers on an elevated platform and will warn employees when they approach an unprotected edge.

17. Safety-monitoring System

A safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

18. Self-Retracting Lifeline/Lanyard

A deceleration device containing a drum-wound line that can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after the onset of a fall, automatically locks the drum and arrests the fall.

19. Shock Absorber Lanyard

A lanyard is designed to dissipate a portion of the shock of a fall by extending the deceleration distance. It is used in fall arresting applications. There are three fixed lengths, 20 inches, 3 feet, and 6 feet, plus adjustable lanyards. Use the shortest possible lanyard for the work being performed. The shortest length is used for ascent/descent purposes. The increase in lanyard length when the device is activated must be considered to ensure that the falling person will not contact the level or dangerous equipment below.

20. Steep Roof

A roof having a slope greater than 4 in 12 (vertical to horizontal)

21. Tie Off Adapter

A strap can be used to wrap around a support structure to attach a lifeline or another lanyard. This adapter has two D Rings on the end; one ring goes through the other, with the trim ring becoming the attachment point.

22. Unprotected Sides and Edges

Any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway, with no wall or guardrail system at least 39 inches high.

23. Walking/Working Surface

Any surface, whether horizontal or vertical, on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork, and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located to perform their job duties.

24. Warning Line System

A barrier is erected on a roof to warn employees that they are approaching an unprotected roof side or edge, which designates an area where roofing work may take place without using guardrails, body belts, or safety net systems to protect employees.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS is responsible for the following:

- Develop and review the Fall Protection Program to ensure it meets or exceeds regulatory standards and reflects best practices in fall protection.
- Ensure adequate resources are allocated for implementing the Fall Protection Program, including training, equipment procurement, and monitoring tools.
- Provide leadership and support to Health & Safety Managers and project teams in implementing fall protection measures across all projects.

2. Health & Safety Manager

The Health & Safety Manager is responsible for the following:

- Oversee the implementation of the Fall Protection Program, ensuring all projects comply with SOP requirements.
- Develop fall protection training for employees, ensuring they understand their responsibilities and how to work at heights safely.
- Manage the selection, procurement, and maintenance of fall protection equipment to ensure it is adequate, compliant, and readily available for employees.
- Perform inspections or audits of the work sites to ensure compliance with this Fall Protection Program, promptly identifying and addressing non-compliance issues.
- Provide technical support and consultation to project managers, supervisors, and employees on fall protection matters, including risk assessments and selecting appropriate fall protection methods.

3. Health & Safety Officer (HSO)

The Health & Safety Officer is responsible for the following:

- Implement and enforce the requirements of this Fall Protection Program at the project level.
- Oversee fall protection training for employees, ensuring they understand the use and maintenance of fall protection equipment.
- Regularly inspect and maintain fall protection equipment to ensure it is in good working order.
- Inspect and monitor the project site for compliance with fall protection procedures and conduct regular audits.

4. Project Manager

The Project Manager is responsible for the following:

- Collaborate with the HSM to develop and implement fall protection in the project's work plans.
- Provide the necessary resources and support for fall protection measures, including training, equipment, and personnel.
- Ensure all project activities comply with this Fall Protection Program SOP and applicable safety regulations.
- Assist with identifying fall hazards associated with project activities and ensure appropriate fall protection measures are in place.

5. Supervisor

The Supervisor is responsible for the following:

- Enforce fall protection procedures among crew members, ensuring adherence to this Fall Protection Program SOP.
- Conduct daily inspections of work areas to identify and mitigate fall hazards.
- Report any fall-related incidents or near-misses to the Project Manager and HSO immediately.
- Verify that all team members have received the required fall protection training and are competent in using fall protection equipment.

6. Employees

Employees are responsible for the following:

- Comply with this Fall Protection Program SOP and all safety instructions related to fall protection.
- Properly use and maintain fall protection equipment as trained and instructed.
- Actively participate in identifying fall hazards and suggest measures to mitigate hazards.
- Attend all required fall protection training sessions and refreshers.
- Immediately report any unsafe conditions, fall-related incidents, or equipment malfunctions to the supervisor or the HSO.

E. HAZARD IDENTIFICATION

A fall hazard exists anywhere an employee could lose their balance or grip and fall from an elevated position, leading to injury or death. Common fall hazards include but are not limited to, unprotected edges, holes, uneven surfaces, and improperly secured working platforms.

All identified fall hazards must be evaluated for severity and likelihood of occurrence. This evaluation should consider the height of potential falls, the nature of the work being performed, and environmental conditions that could increase the risk of falls. Documentation of all identified hazards, along with their evaluations, must be maintained as part of the Job Safety Analysis (JSA) and the site-specific Health and Safety Plan (HASP).

The work area must be continuously monitored for new or evolving fall hazards as work progresses or conditions change. This monitoring ensures that all fall protection measures remain effective and are adapted as necessary to safeguard employees.

F. FALL PROTECTION POLICY

1. Fall Protection Plan

- a. *In addition to hazard analysis and task-specific JSAs, a competent person will complete a written Fall Protection Work Plan prior to the start of work as required by 29 CFR 1926.502(k) when a fall hazard exists but standard control measures prove to be infeasible or create a greater hazard to the worker.***
- b. *Depending on the complexity of the plan, it may also be developed as a site-specific appendix to the HASP or other similar document that specifies the type of fall protection to be used. The plan shall include, at minimum:***
 - i. The task(s) to be performed*
 - ii. Evaluation of the hazards associated with each task(s)*
 - a. With an explanation as to why standard fall protection methods are unsafe or infeasible.*
 - iii. Anchor points to be used (when applicable)*
 - iv. Type and length of lifeline or lanyard to be used*

2. Covered Activities

- a. *Fall protection measures shall be taken when doing the following activities:***
 - i. When working on a leading edge or unprotected sides or edges 6 feet or greater above lower levels.*
 - ii. For employees on walking/working surfaces with the possibility of falling through holes (including skylights) greater than 6' above lower levels.*
 - iii. When working in hoist areas 6 feet or more above lower levels.*
 - iv. When working from aerial/boom lifts and other work platforms.*
 - v. When routinely climbing fixed ladders higher than 15 feet (with or without caging). These ladders may be climbed initially to attach fall protection lines for subsequent ascents and descents.*
 - vi. When working above dangerous equipment, regardless of height.*
 - vii. For employees at the edge of an excavation 4' or greater depth.*

3. Fall Protection Equipment Requirements

- a. *All equipment utilized in fall protection and raising or lowering personnel into confined spaces must be designed and approved by the manufacturer for that purpose.***
- b. *All equipment will meet current OSHA 29 CFR 1926.502, 29 CFR 1926.1431, and applicable ANSI requirements.***
- c. *Personal fall arrest full body harnesses shall be designed in accordance with ANSI Z359.1 and capable of supporting a static load of 5,000 pounds.***

4. Warning Line System and Controlled Access Zone

- a. *A warning line system or controlled access zone can be implemented, where workers inside the zone are not required to use fall protection.*
- b. *This zone will be marked at least 6 feet from any leading edge, complying with 29 CFR 1926.502 regulations.*

5. Backup Fall Protection System

- a. *a backup fall protection system is mandatory when using retrieval or self-lowering systems. For instance, when a tripod system (equipped with fall arrest capabilities) is used instead of a built-in ladder for descending into a vertical shaft, personnel must also be connected to a backup system, such as a static line with rope grab or a retractable lifeline.*
- b. *Backup systems shall be detailed in a JSA, and training shall be conducted prior to use.*

6. Entering Vertical Spaces

- a. *When personnel enter vertical spaces, at least one winch (with enough line to reach the final destination) must be available.*
- b. *A self-lowering pulley system (such as the DBI Rescue Positioning Device) may be used as long as it incorporates an inertial locking system that will prevent free fall and backup protection is utilized.*

7. Aerial / Boom Lifts

State and Federal regulations require fall restraint equipment on boom platforms or other aerial equipment.

8. Portable Ladders

- a. *Fall protection while using a portable ladder is not required unless a non-typical hazard exists and a risk assessment indicates the need for it.*
- b. *The project Manager, HSM, and HSO shall review these non-typical cases prior to work beginning.*
- c. *The workers completing the task shall be trained prior to starting work.*

9. Fixed Elevated Platforms

If handrails are provided, personal fall arrest systems are generally not required on fixed elevated platforms such as scaffolds. However, if it is necessary for personnel to lean out over the rails, fall protection equipment is required.

10. Rescue Plan

- a. *When a fall protection system requires the use of personal fall arrest systems, a rescue plan that provides for the prompt rescue of employees in the event of a fall shall be developed.*
- b. *The fall rescue plan shall address the following:*
 - i. *Immediate notification procedures to summon rescue and medical assistance,*
 - ii. *Identification of on-site rescue equipment and its specific locations,*

- iii. *Training requirements for personnel involved in the rescue operations,*
 - iv. *Detailed rescue procedures tailored to the specific fall hazards and scenarios encountered at the site,*
 - v. *Assignment of specific roles and responsibilities to the rescue team members,*
 - vi. *Practice drills to ensure the efficiency and effectiveness of the rescue plan and*
 - vii. *A review and debriefing process following each rescue operation to identify and implement improvements to the rescue plan.*
- c. *If emergency rescue is designed around outside agency support, on-site training, and coordination must occur prior to the task activity.***

11. Surface openings and edges.

a. Stairway and Ladder way Openings

- i. *Every stairway and ladderway floor opening must be guarded by a standard railing with a standard toe board on all exposed sides except the entrance.*
- ii. *The entrances to ladderway openings will be guarded to prevent people from walking directly into them.*
- iii. *For infrequently used stairways, the guards must have a hinged cover and a removable standard railing.*

b. Hatchway and Chute Openings

Every hatchway and chute floor opening must be guarded by a hinged floor opening cover equipped with standard railings to leave only one exposed side or a removable railing with toe board on not more than two sides and fixed standard railing with toe boards on all other exposed sides.

c. Floor Holes

- i. *Every floor hole into which persons can accidentally walk must be guarded by either a standard railing with standard toe board on all exposed sides or a floor hole cover that shall be secured to prevent accidental removal of the cover (e.g., cleated, screwed, or bolted).*
- ii. *Covers shall be color-coded or marked with the word “hole” or “cover.” While the cover is not in place, the floor hole must be attended to or protected by a removable standard railing.*

d. Open Sided Floors

- i. *Every open-sided floor, platform, or runway 6 feet or more above adjacent floor or ground level must be guarded by a standard railing with toe board on all open sides, except where there is an open entrance to a ramp, stairway, or fixed ladder.*
- ii. *Runways not less than 18 inches wide and used exclusively for special purposes may have the railing on one side omitted where operating conditions necessitate it.*

e. Working Above and Around Dangerous Equipment

Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment must be guarded with standard railings and toe board.

12. Staircases

a. Handrails

- i. *Every flight of stairs having four or more risers must be provided with a standard railing on all open sides.*
- ii. *Handrails must be provided on at least one side of closed stairways, preferably on the right-side descending.*

b. Construction

- i. *Stairs must be constructed so that rise height and tread width are uniform throughout.*
- ii. *Fixed stairways must have a minimum width of 22 inches.*
- iii. *Fixed stairs must be provided for access from one structure level to another where operations necessitate regular travel between levels and for access to operating platforms at any equipment that routinely requires attention during operations.*
- iv. *Fixed stairs must also be provided where access to elevations is daily or at each shift, where such work may expose employees to harmful substances, or for purposes for which the carrying of tools or equipment by hand is normally required.*

13. Guardrails and Toe Boards

- a. ***Guardrails may be used for fall protection.***
- b. ***Guardrails and toe boards also prevent objects from falling from higher levels and striking workers or machinery below.***
- c. ***A standard guardrail system shall comply with the provisions in the current (29 CFR 1926.502(b)):***

14. Anchorage point selection

- a. ***Anchorage used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and be capable of supporting at least 5,000 pounds per employee attached per the current 29 CFR 1926.502(d) Fall Restraint Systems***
- b. ***Anchorage points for fall restraint systems need not meet the 5,000-pound requirement but should have the capacity to withstand at least twice the maximum expected force required to restrain the person from exposure to the fall hazard per the current 29 CFR 1926.502.***

15. Other Fall Protection System Requirements

- a. ***Fall Restraining Systems (Ascending And Descending)***
Equipment required, arresting force requirements, and other restrictions and requirements are listed in the current 29 CFR 1926.502(d).
- b. ***Fall Restraint For Mobile Elevated Work Stations***
Equipment required, arresting force requirements, and other restrictions and requirements are listed in the current 29 CFR 1910.66, 29 CFR 1926.453, and 29 CFR 1926.502(d).

c. Fall Arrest Procedures For Exposure To Free Fall Hazards

Equipment required, fall protection plan requirements, and other restrictions and requirements are listed in the current 29 CFR 1926.502(d) & (k).

d. Fall Restraint Procedures For Elevated Work Surfaces

Low Pitch Roofs/Unprotected Work Surface Perimeters - Restraint systems are only used in elevated areas with a slope between 0 and 18.4 degrees.

e. Lowering / Raising / Retrieval Personnel

- i. One person must be assigned to each retrieval apparatus to keep the line taut while the worker descends. Too much slack will allow the line to tangle.*
- ii. Sufficient retrieval and fall protection equipment will be on hand to equip all personnel entering the space, including the standby rescue person. Individual lifelines will be needed if more than one person enters at a time.*

16. Fall Protection Training

a. General Requirements

- i. Training will cover the requirements stated in the current 29 CFR 1926.503 and cover all relevant site-specific tasks and equipment.*
- ii. An Envirocon Competent Person who is a designated competent person in fall protection will provide training to all personnel whose duties involve using fall protection systems.*

b. Certification

Each employee will be issued a certificate upon completion of this training. The certificate will contain the following information:

- i. Name of employee trained;*
- ii. Date of training;*
- iii. Signature of the person who conducted the training; and*
- iv. Fall systems trained on.*

c. Retraining

The Envirocon Competent Person will conduct retraining for the following reasons:

- i. Employee fails to understand the system as evidenced by the inadequacy of knowledge or demonstrated the use of fall protection system, equipment, or procedure;*
- ii. Changes in the workplace that renders previous training obsolete and*
- iii. Changes in the type of fall protection system or equipment to be used.*

d. Documentation

All training conducted on fall protection will be documented and kept with project training records.

G. RELATED DOCUMENTS

29 CFR 1910.66: Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms

29 CFR 1926.104: Safety Belts/Lifelines/Lanyards

29 CFR 1926.451: Scaffolds

29 CFR 1926.453: Aerial Lifts

29 CFR 1926.501: Duty to Have Fall Protection
29 CFR 1926.502: Fall Protection Systems Criteria and Practices
29 CFR 1926.503: Fall Protection Training Requirements
29 CFR 1926.1050: Stairways and Ladders
29 CFR 1926.1431: Hoisting Personnel
29 CFR 1926 Subpart M: Fall Protection

H. ATTACHMENTS

None.



STANDARD OPERATING PROCEDURE

TITLE: Confined Space Program		PREPARED BY: Jerry Hipp
SOP NO: 1403.020	PAGE: 1 of 19	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
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A. PURPOSE

The purpose of this program is to establish a minimum compliance program for Envirocon personnel to comply with OSHA's Confined Space Standards found in 29 CFR 1926, Subpart AA, and 29 CFR 1910.146.

B. SCOPE

For most confined space work being conducted at an Envirocon-manage project, Envirocon will act as the Controlling Contractor responsible for oversight of all confined space entries and as the Entry Employer for Envirocon employees.

In such cases, it is Envirocon's intention to meet and/or exceed the requirements of the OSHA Confined Space Entry Standards. If the host employer has a previously established confined program and procedures, a review of both programs will be conducted to determine which program and procedures are the most stringent. To use the host employer's program, procedures, and documents (signs, logs, permits, etc), they must meet or exceed Envirocon procedures.

Regardless of which company's procedures are ultimately used, Envirocon will designate a Confined Space Supervisor as the Competent Person for all confined space entries. This supervisor must be familiar with the host facility requirements as well as Envirocon's procedures and ensure that the process practiced on the job site meets or exceeds the requirements of both.

C. DEFINITIONS

1. **Acceptable Entry Conditions**

Conditions must exist in a permit space before an employee may enter it to ensure that employees can safely enter and work within it.

2. **Attendant**

An individual stationed outside one or more permit spaces who assesses the status of authorized entrants must perform the duties specified in 29 CFR 1926.1209. The entrant shall not have any other assigned duties.

3. **Atmosphere**

Generic term for oxygen, gases, vapors, mists, fumes, and dusts within a confined space.

4. **Authorized Entrant**

An employee who is authorized by the entry supervisor to enter a permit space.

5. **Competent Person**

One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees and who has the authorization to take prompt corrective measures to eliminate them.

6. **Confined Space**

A space that:

- Is large enough and so configured that an employee can bodily enter and perform assigned work, and
- Has limited or restricted means for entry or exit, and
- Is not designed for continuous employee occupancy.

Examples of a confined space are storage tanks, underground sumps, pipelines, pits, tunnels, manholes, sewers, storm drains, ducts, vessels, silos and trenches.

7. **Confined Space Entry Permit Form 1403.020.01**

- An Envirocon form which needs to be filled out prior to any confined space entry. Complete use of the form will insure that all health and safety considerations have been addressed prior to entry.
- This form is signed by the Confined Space Entry Supervisor, attendant, and authorized entrants and acts as a permit for entry.
- This permit must be saved for 1 year.

8. **Controlling Contractor**

The employer has overall responsibility for construction at the worksite. If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer. This may be Envirocon, or an oversight contractor designated by the host employer.

9. **Early-Warning System**

The method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to: Alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.

10. Emergency

Any occurrence (including any failure of power, hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.

11. Engulfment

The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, crushing, or suffocation.

12. Entry

The action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.

13. Entry Employer

Means any employer who decides that an employee it directs will enter a permit space. An employer cannot avoid the duties of the standard by merely refusing to decide whether its employees will enter a permit space, and OSHA will consider the failure to do so to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.

14. Entry Permit

The written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in 29 CFR 1926.1206.

15. Entry Rescue

Occurs when a trained and qualified rescue group/service enters a permit space to rescue one or more employees.

16. Entry Supervisor

The person (such as the employer, foreman, Project Manager, etc.) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section. An entry supervisor may also serve as an attendant or as an authorized entrant as long as that person is trained and equipped as required by this standard for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

17. Hazardous Atmosphere

An atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);

- Airborne combustible dust at a concentration that meets or exceeds its LFL. This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less;
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- Atmospheric concentration of any substance for which a dose or permissible exposure limit is published in subpart D (Occupational Health and Environmental Control) or in subpart Z (Toxic and Hazardous Substances), and which could result in employee exposure in excess of its dose or permissible exposure limit. An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition;
- Any other atmospheric condition that is immediately dangerous to life or health. For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

18. Host Employer

The employer that owns or manages the property where construction work is taking place. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in 29 CFR 1926.1203 (h)(1), OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.

19. Hot Work

Operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).

20. Immediately dangerous to life or health

Any condition that would interfere with an individual's ability to escape unaided from a permitted space and that poses a threat to life, or that would cause irreversible adverse health effects.

Note: Some materials – hydrogen fluoride gas and cadmium vapor, for example – may produce immediate transient effects that, even if severe, may pass without medical attention but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim “feels normal” after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be immediately dangerous to life or health.

21. Inerting

Displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. This procedure produces an IDLH oxygen-deficient atmosphere.

22. Intrinsically Safe/Explosion Proof

- Electrical equipment that does not present the potential for electrical spark and/or which is designed and constructed to contain any fire or explosion inside the unit, preventing propagation of fire back into the general environment. This equipment has been certified as safe for use in flammable atmospheres.

- The majority of equipment is certified by Underwriter Laboratories (UL) or Factory Mutual (FM).
- At a minimum, equipment must be rated as Class 1, Division 1 for use around flammable vapors.
- In addition, the equipment must be rated for the group type of atmosphere present.
- At a minimum, all electrical equipment taken into a space containing (or previously containing) flammable liquids or vapors (in excess of 10% LEL) will be certified by the manufacturer for that purpose.

23. Isolation

The process by which employees in a confined space are completely protected against the release of energy and material into the space and contact with a physical hazard by such means as: Blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barrier to eliminate the potential for employee contact with a physical hazard.

24. Limited or restricted means for entry or exit

A condition that has the potential to impede an employee's movement into or out of a confined space. Such conditions include but are not limited to, trip hazards, poor illuminations, slippery floors, inclining surfaces, and ladders.

25. Local Exhaust Ventilation

The use of an exhaust system to capture contaminants at the point of generation and keep them from dispersing into the overall area. Discharge from this system must be directed to a safe location. Note: some discharge airborne contaminants (i.e., asbestos, PCBs, lead) are particulate and will require HEPA filtration.

26. Lockout

The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed. See Envirocon Procedure 1403.021, Electrical and Mechanical Lockout Procedure.

27. Lower Flammable Limit or Lower Explosive Limit

The minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.

28. Mechanical Ventilation

A method of providing dilution ventilation into a confined space; typically provided by electrically powered or air-driven blowers.

29. Monitor or monitoring

The process is used to identify and evaluate the hazards before an authorized entrant enters the space. Monitoring is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

30. Natural (Gravity) Ventilation

Ventilation is provided to a space by non-mechanical means. Air diffusing into a space opening (without aid of blowers or fans) is considered natural ventilation. This is not an

effective method for ensuring the safety of personnel and/or reducing the flammability potential inside the confined space.

31. Non-entry Rescue

Occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.

32. Non-Permit Confined Space

A confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space.

33. Oxygen Deficient Atmosphere

An atmosphere containing less than 19.5 percent oxygen by volume. State and federal safety regulations require that personnel wear air-supplied respirators in oxygen-deficient atmospheres.

34. Oxygen Enriched Atmosphere

An atmosphere containing more than 23.5 percent oxygen by volume. Fire and explosion potentials are increased greatly.

35. Permit-Required Confined Space (Permit Space)

A confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential to engulf an entrant;
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section; or
- Contains any other recognized serious safety or health hazard (e.g. electrical, and mechanical, hydraulic or pneumatic stored energy, etc.).

36. Physical Hazard

An existing or potential hazard that can cause death or serious physical damage. Examples include but are not limited to Explosives; mechanical, electrical, hydraulic, and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces. Physical hazards also include chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).

37. Prohibited Condition

Any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provide the appropriate PPE to each employee.

38. Qualified Person

One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

39. Representative permit space

This is a mock-up of a confined space with entrance openings similar to, and of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.

40. Retrieval System

The equipment (including a retrieval line, chest or full body harness, wristlets or anklets, if appropriate, and a lifting device or anchor) is used for non-entry rescue or persons from permit spaces.

41. Saddle Vent

A piece of equipment that allows a ventilation duct to be placed in a manhole and still allows personnel to enter/exit without the duct being removed. This allows continuous ventilation inside the space.

42. Serious physical damage

An impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed healthcare professional.

43. Tagout

Placement of a tagout device on a circuit or equipment that has been de-energized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed.

The employer ensures that:

- Tagout provides equivalent protection to lockout; or
- That lockout is infeasible, and the employer has relieved, disconnected, restrained, and otherwise rendered safe stored (residual) energy.

44. Testing

The process by which the hazards that may confront entrants of a permit-required space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to and during entry.

45. Unknown Hazard

A space where the hazard potential is unknown. Air monitoring from outside the space is unable to determine if all areas inside are free of hazard. In these cases, personnel will consider the space high hazard.

46. Zero Mechanical State (ZMS)

The point where all power sources, that can produce a hazard to an employee, have been neutralized. This includes all pneumatic, electrical, and mechanical components.

D. RESPONSIBILITIES

1. Environment, Health, and Safety (EHS) Department

The EHS Department consists of the Director of EHS, Project Health and Safety Manager, Site-Specific Health and Safety Officer, and Safety Competent Persons. The EHS Department is responsible for:

- Developing and maintaining the Confined Space Program policy in alignment with OSHA's Confined Space Standards (29 CFR 1926 Subpart AA and 29 CFR 1910.146), ensuring it meets or exceeds legal requirements and industry best practices.
- Providing training for personnel involved in confined space entry, ensuring they understand the risks, proper use of equipment, and emergency procedures.
- Conducting regular audits of the confined space program to ensure compliance with this SOP and regulatory requirements.
- Ensure all confined space entry and rescue equipment meets OSHA standards and is properly maintained, inspected, and available for use.

2. Project Management Team

The Project Management Team consists of the Project Manager, Construction Manager, Supervisor, and Field/Project Engineers/Coordinators. The Project Management Team is responsible for:

- Ensuring that all aspects of the confined space operations are planned and executed in accordance with the SOP.
- Overseeing confined space entries and ensuring compliance with the SOP and OSHA standards, including the use of proper PPE, adherence to entry and exit procedures, and the implementation of safety measures.
- Evaluating the worksite to identify all confined spaces and determine if permits are required. Coordinate with the EHS Department for hazard evaluation and mitigation strategies.
- Ensuring that emergency procedures are in place and understood by all team members and that rescue services are available for the duration of any confined space activities.
- Assisting the EHS Department with maintaining records of all confined space activities.

3. Responsibilities of the Authorized Entrant

Authorized entrants must understand:

- The hazards associated with confined space entry, particularly those associated with entering the Permit Required Confined Space (PRCS).
- How to use all required equipment.
- The procedures for communication with the attendant.
- How to alert the attendant of hazardous or prohibited conditions
- How to exit the space if necessary (self-rescue).

4. Responsibilities of the Attendant

At least one attendant must be present outside the PRCS during the entry. The attendant must:

- Understand the hazards associated with confined space.
- Understand the behavioral effects of the hazards.
- Be able to identify the authorized entrants.

- Remain outside until relieved.
- Communicate with entrants.
- Monitor and evacuate entrants if necessary.
- Activate the emergency rescue response team.
- Warn authorized persons of potential or changing hazards or risks.
- Be able to perform non-entry rescues.
- Not undertake any additional duty that might distract them or interfere with these primary safety-related duties.

5. Responsibilities of the Entry Supervisor

The entry supervisor is responsible for:

- Enforcing the confined space procedures and permit requirements;
- Being familiar with and understanding the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Verifying, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
- Ensuring Confined Space Entry Permits are posted and that an authorized attendant is present during all entry activities;
- Verifying that rescue services are available, that the means for summoning them are operable, and that the employer will be notified as soon as the services become unavailable;
- Verifying that all necessary safety retrieval equipment is on-site, operational, and properly deployed prior to entry when Envirocon employees act as the rescue service;
- Removing unauthorized individuals who enter or attempt to enter the permit space during entry operations;
- Determining, whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, that the entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained;
- Canceling permits at the end of each shift or when work is completed, whichever comes first; and
- Documenting authority in writing on the confined space permit.

E. TRAINING

An Envirocon Competent Person will provide training to all personnel whose duties involve entry, supervision, or support duties for confined space entry.

1. Training Requirements:

Training will be provided:

- In both a language and vocabulary that the employee can understand;***
- Before the employee is first assigned duties;***
- Before there is a change in assigned duties (this includes, in particular, a change in the host employer confined space entry program);***

- d. Whenever there is a change in permit space operations that presents a hazard that the employee has not been trained in, and**
- e. Whenever there are deviations from the permit space entry procedures or inadequacies in the employee's knowledge.**

2. Training Content

a. Envirocon's training will contain the following:

- i. Key provisions of the presiding confined space program being used;*
- ii. Respirator use (based upon the respiratory protection selected in the HASP);*
- iii. OSHA Confined Space regulations and Envirocon's Confined Space SOP;*
- iv. Confined spaces at the project and their designations (non-permit or permit-required);*
- v. Use of ventilation systems;*
- vi. Atmospheric monitoring and equipment such as a Multi-Rae four or five-gas meters (or similar);*
- vii. Use of rescue and support equipment;*
- viii. Emergency rescue procedures/practice;*
- ix. Duties of entrants;*
- x. Duties of attendants;*
- xi. Duties of supervisor;*
- xii. Required personal protective equipment; and*
- xiii. Communication systems.*

3. Rescue Training

Rescue teams shall receive special additional training in accordance with 29 CFR 1926.1203 from a certified, third-party training resource. These training records shall be kept with other project training records.

a. Certification

Each employee will be issued a certificate upon completion of this training. The certificate will contain the following information:

- i. Name of employee trained;*
- ii. Date of training; and*
- iii. Name and signature of person who conducted the training.*

F. CONFINED SPACE HAZARDS

The following represents the general hazards that can be reasonably expected while conducting confined space operations. Each hazard must be assumed until proved otherwise:

1. Atmosphere

- Oxygen deficient (<19.5%) or oxygen enriched (>23.5%)
- Toxic dusts, mists, fumes, smoke, vapor, and gas.

- Flammable and explosive gases, liquids, vapors, and dusts (including chemicals introduced into the space, such as cleaning products).

2. Access

- Inadequate access opening for entry/egress and internal obstructions hampering movement.
- Inadequate illumination.
- Slippery surfaces including ladder rungs, baffles, and tank floors.

3. Mechanical

- Start up of agitators, tumblers, crushers, mixing blades, screw conveyors, saws, etc.
- Opening of feed lines which introduce corrosives, heated or gaseous substances such as steam, water, blast furnace gas, or other substances hazardous to health.

4. Engulfment

- Avalanche of materials or falling objects.
- Pressurized lines containing hydraulic oil, gas, or other fluids.

5. Electrical

- Electrical shock or electrocution from plug-in lights, tools, or other portable equipment.

6. Physical

- Temperature extremes.
- Naturally occurring radioactive materials (NORM).
- Over hanging material in the top of tanks.
- Bites from snakes, spiders, insects, and/or rodents.

G. ENVIROCON PROCEDURES

1. Site Evaluation and Confined Space Identification and Notification

- a. ***Prior to beginning work, a competent person shall identify all confined spaces in which entry may be within the scope of work (including employees and subcontractors). Envirocon shall request all existing information regarding identified confined spaces from the host employer.***
- b. ***These confined spaces shall be evaluated to determine if they meet the criteria for needing a permit and other controls outlined in this program.***
- c. ***If the scope of work involves entry into a permit required confined shall, Envirocon shall:***
 - i. ***Post “Danger” signs (or other equally effective communication means) at the entry of the confined space (e.g., “DANGER – PERMIT-REQUIRED CONFINED SPACE DO NOT ENTER”) .***
 - ii. ***Take effective measures to prevent unauthorized personnel from entering the confined space.***
 - iii. ***Train all employees on the following:***
 - a. The location of the confined space.
 - b. The dangers posed by the confined space.

- c. The procedure to enter the confined space and who is authorized to do so.
- d. Who the authorized entrants, attendants, and supervisors are.
- e. An overview of air monitoring procedures.
- f. The controlling confined space program chosen.
- iv. *Ensure that a written program, compliant with 29 CFR 1910.134 and 1926.1204, is in place (whether it be the Envirocon program or a subcontractor program).*
- v. *Ensure the designated entrants, attendants, and supervisors receive the proper training as outlined in OSHA regulation and this SOP.*

2. Communication And Coordination

a. Before entry operations, the controlling contractor and entry employer(s) must coordinate entry operations when:

- i. *More than one entity performs permit space entry at the same time, or*
- ii. *Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.*
- iii. *Air monitoring for hazardous atmospheres is being conducted.*

b. After entry operations:

- i. *The controlling contractor must debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations,*
- ii. *The entry employer must inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations and*
- iii. ***The controlling contractor must apprise the host employer of the information exchanged with the entry entities.***

3. Confined Space Classification

a. Envirocon considers all confined spaces as permit required, until a hazard evaluation has been completed to re-classify the space to a non-permit required space.

b. Confined spaces may be downgraded temporarily to non-permit status using 1926.1203 (e) rules when the only hazard posed by the permit space is an actual or potentially hazardous atmosphere that can be controlled and maintained safely by continuous forced ventilation.

c. Regardless of the classification, the Envirocon Confined Space Entry Permit Form (1403.020.01) shall be used to document the applicable period of temporary downgrade, to document that the downgrade conditions have been tested and met, and to control entry into the space.

- i. *The atmosphere within the temporarily downgraded space must be continuously monitored unless Envirocon can demonstrate that the equipment for continuous monitoring is not commercially available, or periodic monitoring is sufficient.*

- d. Any conditions making it unsafe to remove an entrance cover must be eliminated before the cover is removed. When entrance covers are removed, the opening must be immediately guarded by a railing, temporary cover or other means that will prevent an accidental fall through the opening.*
- e. To permanently re-classify the space as a non-permit required confined space under the provisions of 1926.1203(e) rules, the space must be free of all hazards, including potential or actual hazardous atmospheres, without forced ventilation.*
- f. The confined space will be re-evaluated if there is a reason to believe that changes have occurred inside or a request for additional monitoring is made.*
- g. The Envirocon Entry Permit Form, 1403.020.01, shall be used to authorize all confined space entries, both permitted spaces and temporarily or permanently downgraded spaces.*

4. No Entry Conditions

- a. Envirocon's policy forbids entry into confined spaces under any one of the following conditions:*
 - i. LEL > 10%;*
 - ii. Oxygen < 19.5% or > 23.5% (no entry into inerted or oxygen-enriched spaces);*
 - iii. Unable to monitor space prior to entry;*
 - iv. Presence of a toxic gas or vapor atmosphere;*
 - v. Entry sizes that require PPE removal;*
 - vi. Spatial configurations that prevent rescue;*
 - vii. An unknown or uncharacterized atmosphere;*
 - viii. Any other hazard or conditions deemed unsafe by an entrant, attendant, or supervisor.*
- b. If one of the aforementioned conditions exists, approval must be made by the Director of EHS in consultation with the Project Management Team.*

5. Ventilation

- a. The need for ventilation will be dependent upon LEL/toxic gas and vapor levels.*
- b. All ventilation and pumping equipment will be bonded and grounded.*
- c. Mechanical ventilation will be initiated prior to entry in any spaces to dilute or maintain flammable levels at 10% LEL or less or purge/dilute toxic atmospheres below IDLH levels.*

6. Confined Space Entry Requirements

All entries into confined spaces with known or potentially hazardous conditions will be directly supervised by an Envirocon Confined Space Competent Person.

The Competent Person will be in attendance whenever personnel are inside the space and is responsible for enforcing all the provisions contained in this procedure, host facility requirements, and 29 CFR 1926 Subpart AA.

The Competent Person may also act as the confined space entry supervisor if qualified.

a. Entry Opening Size

- i. An 18- to 24-inch diameter opening will be the minimum size for entry.*
- ii. Entrants shall not remove protective equipment (with the intent on donning it once inside) to facilitate entry into a small opening.*
- iii. Entrants may not be allowed to enter if, by virtue of their size, they are the only employees small enough to enter.*

b. Fire and Explosion Prevention

No matches, lighters, items capable of producing a spark or flame, non-approved radios or monitoring equipment, flashlights, lanterns, etc., shall be used in or within 25 feet of a confined space containing or potentially containing flammable vapors or gases.

c. External Hazards

- i. External hazards for workers shall be eliminated by the use of barricades, signs, cones, security tape and a spotter if necessary.*
- ii. Pedestrians and vehicles will be kept out of the area.*
- iii. In addition, the Envirocon competent person shall ensure that no hazards are introduced into the confined space by activities conducted by others in the vicinity of the confined space entry (e.g. a generator running near the space entrance introducing carbon monoxide).*

d. Termination of Operation

Entry operations shall not begin or shall be immediately terminated in the event of failure of:

- i. Air monitoring equipment;*
- ii. Ventilation equipment;*
- iii. PPE including respiratory protection; and*
- iv. Rescue equipment.*

Operations will not resume until all inoperable equipment is repaired or replaced.

H. ENTRY PROCEDURE

1. Personal Protective Equipment

Equipment shall be selected in accordance with 29 CFR 1910.120 guidelines.

- a. Classification of contaminant environment regarding chemical properties and routes of entry, IDLH, and cartridge limitations.***
- b. Any unknown toxic environments will dictate a minimum Level B.***
- c. Level C or D respiratory protection will require supportive air monitoring documentation.***

2. Confined Space Entry Permit System

- a. The Envirocon Entry Permit Form, 1403.020.01, or host permit form shall be completed for the following:***

- c. The atmosphere within the space must be continuously monitored unless Envirocon can demonstrate that periodic monitoring is sufficient.*
 - d. Continuous monitoring will always be required when welding or cutting inside the space, using solvents to clean inside surfaces, cleaning operations that disturb contaminants so that previously covered contaminants could become airborne, dismantling pipework or other structures that could contain contaminants, etc.*
 - e. Monitoring readings will be made from bottom to top and in all remote sections of the space.*
 - i. Remote monitoring lines (e.g., probes, Tygon or similar tubing) will be utilized to negate the need to enter the space for monitoring.*
 - ii. It may be necessary to enter the space to test remote locations.*
 - a. In these situations, personnel will be dressed in Level B PPE and will have a Rescue Person(s) available who is also dressed in Level B.*
 - b. The monitoring line should be taped to a length of PVC pipe to enable the individual to monitor ahead of themselves.*
 - f. Monitoring personnel must always confirm that low oxygen concentrations do not cause a lack of LEL reading.*
 - g. All air monitoring results and post-equipment calibrations will be recorded on the Envirocon Entry Permit Form, 1403.020.01.*
 - h. Each authorized entrant will be provided the opportunity to observe any monitoring or testing of permit spaces.*
- 4. Isolation / Lockout-Tagout / Zero Mechanical State (ZMS)**
- a. All Envirocon Lockout-Tagout Operating Procedure requirements will be followed to ensure that engineering controls eliminate or isolate all physical hazards in the space.*
 - b. Before entering any confined space, sufficient steps shall be taken to ensure that toxic contaminants or potentially hazardous products cannot re-enter and that all potentially hazardous conditions (involving electricity or other stored energies) are brought to a Zero Mechanical State (ZMS).*
- 5. Mechanical Ventilation**
- a. The method chosen to ventilate the space will be made based on site conditions.*
 - b. Any ventilation equipment or ductwork exposed to flammable gases or dust must be bonded and grounded prior to use.*
 - c. Electrical fans*
 - i. Shall not be used inside a space that contains flammable vapors.*
 - ii. The fan should be positioned so that flammable vapors are not drawn from space through it, regardless of the motor's distance from the confined space.*
 - iii. When using fans, flexible tubing or ductwork will distribute air into the space.*
 - d. Continuous ventilation criteria*

- i. General dilution ventilation will be continuous at a minimum rate of five (5) air changes per hour for oxygen deficiency and 10 air changes per hour for toxic or flammable atmospheres.*
 - ii. Dilution ventilation is not always sufficient to ensure that toxic environments are rendered safe (below PEL or IDLH concentrations).*
 - iii. Initial or continuous ventilation is not needed if there is NO possibility of contaminant generation while personnel are inside.*
- e. Contaminants displaced from a space**
- i. May present risk of exposure to personnel outside the space;*
 - ii. This discharge can possibly accumulate and form flammable or explosive concentrations.*
 - iii. Any potential exposure must be monitored with appropriate PPE upgrades being made as necessary.*
 - iv. Contaminated air needs to be discharged in an area that is not occupied and/or in a downwind location. This is accomplished by directing the exhaust from the space through a plastic flex hose to a safer area.*
 - v. Be aware of local air pollution district requirements prior to operating ventilation discharge systems.*
- f. Local exhaust ventilation shall be provided when mechanical dilution ventilation cannot prevent the point source contaminant from producing unacceptably high concentrations throughout the area.**
- g. Ventilation equipment may not block the entrance of a confined space.**
- i. If the ductwork will interfere with entry/egress when entering manholes or other small openings, a saddle vent can be utilized.*
 - ii. An alternative is to use flexible poly tubing that can be easily compressed, allowing passage without removal.*
- h. Fans or blowers used for mechanical ventilation shall be located so they will not discharge exhaust gases from vehicles, heaters, furnaces, or adjacent operations capable of generating airborne contaminants into the space.**
- i. Ductwork should be placed so that unnecessary bends are eliminated. Metal elbows or corners may be purchased to avoid pinching the airflow.**
- j. Negative pressure can be provided by placing the inlet of the blower inside the space with the discharge directed outside. This method is effective in drawing clean air into the space but is not as effective (in producing uniform dilution of contaminants) as blowing directly into the space.**

6. Safety Equipment

The following equipment requirements are to be considered minimum. The equipment must be present and operational prior to the start up and initial entry of the individual.

- a. **Oxygen and Combustible Gas Indicators, calibration kit, all accessories including remote sample line and in-line filters, instruction manual, and response charts and graphs to test for and interpret the flammable atmosphere.**
- b. **Use a Photoionizing Detector, detector tubes, or direct-reading toxic gas meters, as appropriate, to determine the toxic content of the atmosphere.**
- c. **Mechanical ventilation equipment, if required, i.e., blowers, compressors, hoses, and auxiliary equipment as designated for the confined space.**
- d. **Respiratory/face protection.**
 - i. *The exact level and type shall be determined by the Project Health and Safety Officer based on the confined space's conditions and test results and the work activity performed and described in the Confined Space Entry Permit.*
 - ii. *All respirators shall be NIOSH-approved devices and shall be fitted and maintained in accordance with the Envirocon Respiratory Protection Program, 1403.016.*
 - iii. *Eye protection will always be worn when a splash or flying object hazard exists.*
 - iv. *An additional standby air source with attached airline and regulator will be necessary for entries into Restricted Entry spaces, where there is any possibility that the 5-minute egress will not provide a good margin of safety for getting out in an emergency. Lines will be coiled and ready for immediate use near the opening.*
- e. **Body/hand/foot protection.**
 - i. *All workers entering a confined space shall wear protective clothing sufficient to protect the wearer against known or suspected toxic or irritating materials.*
 - ii. *Specific types of suit material will be described in the Confined Space Permit.*
- f. **Hearing protection.**
 - i. *Equipment operation and ventilation system operation result in increased noise levels in confined spaces. Hearing protection shall be used when elevated noise levels are present.*
 - ii. *All workers shall wear a hard hat. Exceptions may be made when full-face respirators are required and affect the proper fit of the hard hat.*
- g. **Rescue equipment.**

The specific type and degree of rescue equipment will depend upon the nature of the confined space with regard to access/egress. This decision would take into account the exact manner in which the individual can be feasibly extracted (i.e., by the wrists, waist, straight up) and the accompanying strain to the person's body.

 - i. *A body harness/belt is required when an employee is working in an area that is considered restricted for purposes of rescue and when any failure of ventilation could allow the build-up of toxic or explosive gases within the time necessary to vacate the area.*
 - ii. *A mechanical retrieval device and full-body harness is required for any vertical entry greater than 5 feet.*

- iii. *An ANSI-approved restraint belt will usually be satisfactory for horizontal entry.*
- iv. *If the worker in the confined space is required to wear a harness, the Rescue Person shall also have a safety harness on.*
- v. *Mechanical rescue/extraction equipment*
 - a. *Such as tripod, block, and tackle, and lifelines will be available, set up, and in working order prior to entry if needed to remove a worker from a confined space; and*
 - b. *This equipment must be capable of being hand operated and reversible.*
- vi. *The Safety Officer on the project can make a decision to disconnect lifelines if it is felt that the lines present an undue hazard or hindrance to routine operations.*

h. Lighting

- i. *All portable lights shall be intrinsically safe/explosion-proof when working in potentially flammable atmospheres. The equipment must be UL-certified for the atmosphere in question.*
- ii. *Heavy-duty flexible cords will be used with good insulation and connectors. No splices are permitted. Cords with cracked or worn insulation shall be replaced.*
- iii. *Non-double insulated equipment shall be used with a GFCI.*
- iv. *Lighting shall not be suspended by cords unless specifically designed for it.*
- v. *All lights and plug assemblies should be checked with a volt/ground meter prior to use in a confined space to confirm the adequacy of the grounding integrity of the equipment.*
- vi. *Temporary lighting shall be equipped with adequate guards to prevent accidental contact with the bulb.*

i. Radio communication.

- i. *Radios should be provided as the primary means of direct communication with personnel inside a confined space if direct visual contact is impractical.*
- ii. *Radios must be UL certified.*

I. PROGRAM REVIEW

Cancelled permits shall be kept for one year and reviewed annually. The program shall be revised as necessary to ensure that employees participating in entry operations are protected from permit space hazards.

J. RELATED DOCUMENTS

OSHA Confined Space Standard 29 CFR 1910.146. 29 and CFR 1926, Subpart AA
1403.016 – Respiratory Protection Program
1403.015 – Personal Protective Equipment
1403.021 – Lockout – Tagout Procedure

K. ATTACHMENTS

Form 1403.020.01 – Confined Space Entry Permit



TITLE: Lockout Tagout Procedure		PREPARED BY: Jerry Hipp
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A. PURPOSE

The purpose of this procedure is to establish the requirements for locking and tagging equipment and systems to protect personnel, property, and the environment from the unexpected or unintended release of energy that may cause an injury, in compliance with the OSHA regulations outlined in 29 CFR 1910.147.

B. SCOPE

This procedure applies to all employees and subcontractors performing work at Envirocon projects.

This procedure applies to energy sources that include, but are not limited to, electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, compressed gas, energy stored in springs, and potential energy from suspended objects (gravity) that may injure personnel, cause property damage, and/or release hazardous substances to the environment.

C. DEFINITIONS

1. Affected Employee

An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lock-out or tag-out or whose

job requires him/her to work in an area in which such servicing or maintenance is being performed.

2. Authorized Employee

A person who is trained and authorized to lock out or tag out machinery or equipment in order to perform servicing, maintenance, or troubleshooting/testing.

3. Energy Isolating Device

A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit-type devices are not energy-isolating devices.

4. Energy Source

Any electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, or compressed gas energy; energy stored in springs; and potential energy from suspended objects (gravity) that may injure personnel, cause property damage, and/or cause a release of a hazardous substance to the environment.

5. Lockout

The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, that ensures the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

6. Lockout Device

A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

7. Scissor Hasps

A device that allows multiple locks to be used to lock out a control circuit.

8. Stored Energy

Stored energy may include pneumatic, hydraulic, electrical, kinetic, or spring tension, which poses a potential for injury even though power has been turned off and locked out. All stored energy must be discharged from capacitors, springs, actuators, and the like prior to personnel beginning work.

9. Tagout Device

A prominent warning device, such as a tag and means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

D. RESPONSIBILITY

1. Director of Environment, Health, and Safety (EHS)

The Director of EHS is responsible for:

- Ensuring Envirocon has an effective lockout-tagout program.
- Approving any deviations from this program when necessary.
- Conducting audits to ensure the proper lockout-tagout procedures are being followed.
- Evaluating client lockout-tagout programs to ensure they are as or more stringent than the Envirocon program.

2. Project Health and Safety Manager (HSM)

The Project Health & Safety Manager is responsible for:

- Providing subject matter expertise to project personnel on lockout-tagout issues.
- Evaluating all instances where lockout-tagout may be required.
- Ensuring the proper lockout-tagout procedures are developed as part of the site-specific Health and Safety Plan (HASP) and task-specific Job Safety Analyses (JSAs).
- Conducting a periodic documented inspection to ensure compliance with this procedure at least annually.
- Assisting in evaluating client lockout-tagout programs to ensure they are as or more stringent than the Envirocon program.

3. Site Health and Safety Officer

Responsibilities include:

- Evaluating all instances where lockout-tagout may be required.
- Ensuring that lockout-tagout requirements are listed in relevant project-specific JSAs.
- Ensuring that employees are trained on the lockout-tagout requirements for each work activity, whether it be Envirocon's procedure or the client's.
- Conducting field audits to ensure the proper lockout-tagout procedures are being followed.

4. Project Manager and Supervisors

The Project Manager and Supervisor(s) is responsible for:

- Ensuring employees and subcontractors are adhering to the lockout-tagout requirements outlined in this SOP.
- Ensuring employees and subcontractors are trained and understand lockout-tagout requirements.
- Ensuring the proper equipment and resources are available.

5. Authorized Employee

The responsibilities of employees authorized to lockout and tagout equipment on a project site include:

- Identifying equipment and systems that need to be isolated and kept in that state by using a lock and/or tag.
- Reviewing drawings, schematics, and diagrams as applicable to verify that energy sources requiring isolation are identified.
- Identifying and authorizing the appropriate method(s) to which equipment and systems are isolated, locked, and tagged prior to work being performed.
- Ensuring affected employees are notified that equipment or systems will be locked and tagged out.

- Adhering to the procedures and requirements outlined in this SOP and OSHA regulations.

6. Affected Employee

The responsibilities of employees affected by a lockout-tagout activity include:

- Complying with the provisions of this procedure.
- Informing the Project Manager or Supervisor of unsafe conditions or behaviors concerning lockout-tagout.
- Refraining from messing, interacting with, or attempting to operate equipment that has been locked or tagged out procedures.

E. GENERAL REQUIREMENTS

1. Lockout Devices

- Lockout devices shall be affixed in a manner that will hold the energy isolation device in a safe or off position.***
- Where design permits, a lock shall be applied to the energy isolation device in support of a lockout-tagout-specific "DANGER" tag to ensure it is kept isolated. Tags shall always be used.***
- Lockout devices shall be standardized within at least one of the following criteria:***
 - Color
 - Shape
 - Size
- The key of one lock shall not fit the key of another. Each lock shall only have one key. Additional keys may not be created and kept with another employee (including management team members).***
- Each employee authorized to lock and tag shall apply their own personal lock and tag to the equipment/system being serviced.***
- The authorized employee who applied the lock or tag shall be the only individual who can remove them.***
 - Exception: A Project Manager, with approval from the Director of EHS or the Health & Safety Manager, may remove a lock tag under the following circumstances:***
 - The employee is absent from work, and it has been positively confirmed the employee is not on-site and/or
 - The area in which the lock/tag is applied has been physically checked to ensure no person(s) is exposed to hazardous energy caused by the removal of the lock or tag.
 - In addition, the supervisor must inform the authorized employee that their lock or tag has been removed before the employee resumes work in the area.
- Whenever major replacement, repair, renovation, or modification of machines or equipment is performed or new machines or equipment are installed, energy isolation devices shall be designed to accept a locking device.***

2. Tag Requirements

a. Tags must be:

- i. *Securely attached to energy-isolating devices so that they cannot be inadvertently or accidentally detached during use.*
- ii. *Legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area.*
- iii. *Made of material capable of withstanding the environmental conditions at the project.*

b. A "CAUTION" tag (or other similar tags) shall not be used by Envirocon or Subcontractor personnel. The LOTO Tag must be LOTO-specific.

c. Tag attachments shall be non-reusable, self-locking, and non-releasable.

3. Isolation Devices

a. When the release of energy can cause injury to personnel, create property damage, or release a harmful substance to the environment, authorized employees shall use an isolation device supported by a lock and danger tag. Envirocon or the subcontractor shall ensure the authorized employee knows the type and magnitude of energy being isolated and understands the hazards.

b. When an energy source cannot be locked out, an isolation device shall be utilized to support a danger tag.

F. LOCKOUT-TAGOUT GENERAL PROCEDURE

1. When performing lockout-tagout procedures, the Envirocon or the Subcontractor's authorized employees shall adhere to the following general procedure:

a. Conduct a survey and look at all schematics and drawings to be certain which valves, switches, or other energy-isolation devices apply to the equipment or system to be locked and tagged out. Indicate the type(s) and location(s) of energy isolation and list the type(s) and magnitude of energy hazards.

b. Notify all affected employees that a lock and tag is going to be utilized and the reason why.

c. Shut down machinery or equipment as per manufacturer or company procedure.

d. Ensure the equipment/system that is isolated is de-energized. Stored energy, such as springs, elevated machine members, rotating flywheels, hydraulic systems, air, gas, steam, or water pressure, etc., must be dissipated or restrained.

e. Isolate the equipment or system using an isolation device.

f. Verify that the equipment or system has been properly isolated. Verification is accomplished by operating or testing the equipment or system for energy release after a physical check of the area has been conducted to ensure that all personnel working on the equipment or system are accounted for.

NOTE: Work may not proceed until the isolation of the equipment or system is verified.

- g. Authorized employees install the lock(s) or tag(s) on the equipment or system requiring the energy source to be controlled. Tag-out devices shall be affixed in a manner that will clearly indicate that the operation or movement of energy-isolating devices from the safe or off position is prohibited. When tags are used on equipment designed to use locks, the tag will be attached at the same point as the lock. When a tag cannot be affixed directly to the equipment, the tag will be placed as close to the equipment in a position that will be obvious to anyone trying to operate the equipment.**
- h. After a physical check of the area has been conducted to ensure all personnel working on the equipment or system are accounted for, including other workers who may be affected by its operation, the push button or other normal operating controls shall be operated to make certain the equipment/system will not operate. This process is known as the "Try Step." If the equipment does not operate, the lock-out is considered acceptable, and the activity can start.**
- i. If the equipment operates, the incorrect energy source has been locked out, or the lock-out is not effective. The activity will not be allowed to start under these conditions, and the lock-out must be re-accomplished.**
- j. Operation of the equipment will be tried until an effective lock-out is accomplished. (Ensure operating controls are returned to neutral or off positions after the test).**
- k. In the event that the equipment must be safety tested and the lockout-tagout is temporarily removed for the purposes of testing or diagnostics, the provisions of Section F.2 shall be met. All concerned workers in the area must be notified that the lock and/or tag is removed. Once the test has been completed, the complete lockout tag-out procedure must be repeated. All manufacturer and facility procedures will be followed.**
- l. The individual who placed the tag(s) and a manager or supervisor shall verify that all active tags are in place, legible, and visible every 30 days. This verification shall also include a review to ensure procedural requirements are being met.**
- m. After the work task has been completed, and a physical check of the area is made to ensure everyone is accounted for, all tools have been removed, and guards have been reinstalled, the authorized employee can remove the lock(s) or tag(s).**

2. Testing or Troubleshooting During Lockout-Tagout Operations

When it becomes necessary to temporarily remove lockout and/or tagout devices for testing or positioning purposes during machine servicing and maintenance, the following procedure must be adhered to.

a. Preparation for Testing/Positioning

- i. Ensure that the machine or equipment is free from any tools, materials, or other objects that could pose a hazard during energization.**

- ii. *All employees must be removed from the area around the machine or equipment to be tested. Only authorized personnel required for the testing process should remain, and they must be informed of the risks and precautions.*

b. Removal of Lockout-Tagout Devices

- i. *The lockout or tagout devices shall be removed in accordance with these established procedures, ensuring that only authorized individuals carry out this step. The integrity of our energy control program depends on strict adherence to these protocols.*

c. Energization for Testing/Positioning

- i. *Once the area is cleared, the machine or equipment can be energized. The testing or positioning process should be conducted under the supervision of a trained or competent person who understands the operation and risks associated with the machine or equipment.*

d. Post-Testing Procedures

- i. *After testing or positioning is complete, immediately de-energize the machine or equipment. Reapply all energy control measures to ensure the machine or equipment is in a zero-energy state. This includes the reinstallation of lockout or tagout devices according to our standard lockout/tagout procedures.*
- ii. *Communicate the completion of testing and the reapplication of lockout/tagout devices to all affected employees. Ensure that everyone is aware of the current status of the machine or equipment before resuming normal operations.*

G. MULTI-PERSON LOCK AND TAG PROCESS

1. Single Lock Process

- a. ***If more than one person is required to lock or tag a piece of equipment or machinery, a single authorized person will be assigned to be the person in charge of the entire lockout-tagout process. This authorized person will be responsible for the full lockout-tagout of the equipment or machinery.***
 - i. *This authorized employee has the primary responsibility for all employees working under the protection of a group lockout or tagout.*
 - ii. *Their personal locks shall be the first locks on and the last locks off once work is complete.*
- b. ***Each person shall place their own lock and tag on the energy isolation device. A safety lockout hasp may be used.***
- c. ***During shift changes or personnel changes where different employees are required to assume control of the equipment that has been locked and tagged, there will be specific procedures to ensure the continuity of lock-out/tag-out. This process shall be documented in the equipment or machinery-specific lockout-tagout procedure or the site-specific HASP.***
- d. ***When an energy isolation device cannot accept multiple locks and/or tags, a single lock and tag may be used with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee shall place their own lock and tag on the box or cabinet.***

- i. The single lock shall belong to the primary authorized person in charge of the lockout-tagout.*

2. Multiple Lockout Points Process

- a. In a situation where multiple lockout devices are required to fully lock out and tag out the equipment or machinery, a single authorized person will be assigned to be in charge of the entire lockout-tagout process.***
- b. After locking out and tagging out the system, the keys from the authorized person's locks shall be placed in a lockout box or cabinet which allows the use of multiple locks to secure it.***
 - i. When applicable, a special set of locks may be used to lockout the equipment or machinery, and the keys may be placed in the box, allowing the authorized person in charge to place their lock on the lockout box or cabinet.*
- c. Each employee shall place their own lock and tag on the box or cabinet.***
- d. Once the work is complete, the authorized person shall ensure all personnel involved with the task have left the area prior to removing locks and tags and re-energizing the system.***

H. ENERGY SOURCES THAT CAN NOT BE LOCKED OUT

- 1. An energy source that cannot be locked out is required to be tagged out.**
 - a. Tag out does not physically prevent the inadvertent application of energy to the equipment, and accidental operation of equipment is possible.***
 - b. Tag out will be used only where necessary.***
 - c. An observer will be assigned to ensure that energy is not restored.***
 - d. Jamming blocks and similar devices will be used to prevent equipment operation.***
 - e. The affected employee(s) shall remain "out of harm's way" as much as possible.***

I. CLIENT REQUIREMENTS

1. WORK PERFORMED IN OPERATING CLIENT FACILITIES

The responsible person for the building or facility in which work is being conducted shall be contacted to assist in identifying the equipment or systems required to be isolated, locked, and tagged. After work has been completed in an operating client's building or facility, Envirocon or the subcontractor shall contact the Envirocon Project Manager to coordinate removal of the lock(s) and tag(s) with the person responsible for the building or facility.

2. Client Lockout-Tagout Procedures

Client's procedures shall be reviewed by the Director of EHS and the Project Health & Safety Manager to ensure they are as stringent or more stringent than the requirements of this SOP and OSHA regulations. Client procedures that meet these requirements may be followed where applicable by contract specification.

3. Client-owned equipment or machinery

Equipment or machinery that is owned by the client that is required to be locked or tagged out is required to meet one of the following requirements:

- a. **The client's authorized person shall be in charge of fully locking and tagging the equipment or machinery out.**
 - i. *Envirocon employees working on the equipment or machinery shall place their own personal locks on the equipment or in a lockout box or cabinet.*
- b. **The client shall train all necessary Envirocon personnel on how to fully lockout and tagout the equipment or machinery and provide a written procedure.**
 - i. *Only trained and authorized employees may lock or tag out the equipment or machinery.*

J. TRAINING

1. For Authorized Employees:

- a. **Training of authorized employees shall include, but is not limited to:**
 - i. *Detailed training on recognizing applicable hazardous energy sources, the type and magnitude of energy in the workplace, and the methods and means necessary for energy isolation and control.*
 - ii. *Procedures for lockout-tagout, including the placement, removal, and transfer of lockout-tagout devices and the responsibility for them.*
 - iii. *Specific steps to shut down, isolate, block, and secure machines or equipment.*
 - iv. *Steps for the placement, removal, and transfer of lockout-tagout devices.*
 - v. *Requirements for testing machines or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.*

2. For Affected Employees:

- a. **Training of affected employees shall include, but is not limited to:**
 - i. *Recognition of when the lockout-tagout program is being utilized in their work area.*
 - ii. *Understand the purpose and use of the lockout-tagout procedure and the importance of not attempting to start up or use equipment that has been locked or tagged out.*

3. For Other Employees:

- a. **Training of other employees shall include, but is not limited to:**
 - i. *General awareness training about the lockout-tagout policy and the fact that certain equipment may be locked out or tagged out and must not be operated until the lockout/tagout devices are removed by an authorized person.*

4. Retraining

- a. Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the lockout-tagout procedures.***
- b. Additional retraining shall also be conducted whenever a periodic inspection reveals, or whenever Envirocon or the client has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the lockout-tagout procedures.***
- c. The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.***

K. RELATED DOCUMENTS

29 CFR 1910.147

L. ATTACHMENTS

None

TITLE: Site Specific Silica Exposure Control Plan		PREPARED BY: J. Hipp
SOP NO: 1403.022	PAGE: 1 of 8	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to ensure the health and safety of Envirocon project personnel by controlling exposure to airborne Respirable Crystalline Silica during work activities and in proximity to locations where it is emitted.

B. SCOPE

This Plan applies to all employees who have the potential to be exposed to silica when covered by the Occupational Safety and Health Administration (OSHA) Standard. Table 1403.022.01: Silica Exposure Control Methods applies to all occupational exposures to Respirable Crystalline Silica in construction work, except where employee exposure will remain below 25 micrograms of Respirable Crystalline Silica per cubic meter of air (25 µg/m³) as an 8-hour time-weighted average (TWA), under any foreseeable conditions.

C. DEFINITIONS
1. Action Level

A concentration of airborne Respirable Crystalline Silica of 25 µg/m³ (or 0.025 mg/m³), calculated as an 8-hour TWA.

2. Competent Person

An individual who is capable of identifying existing and foreseeable Respirable Crystalline Silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.

3. Employee Exposure

The exposure to airborne Respirable Crystalline Silica would occur if the employee were not using a respirator.

4. High-Efficiency Particulate Air (HEPA) Filter

A filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.

5. Objective Data

Information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to Respirable Crystalline Silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

6. Permissible Exposure Limit (PEL)

The employer shall ensure that no employee is exposed to an airborne concentration of Respirable Crystalline Silica in excess of 50 µg/m³ (or 0.050 mg/m³), calculated as an 8-hour TWA.

7. Physician or Other Licensed Health Care Professional (PLHCP)

An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by the Medical Surveillance Section of the OSHA Respirable Crystalline Silica Standard.

8. Respirable Crystalline Silica

Quartz, Cristobalite, and/or Tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality-Particle Size Fraction Definitions for Health-Related Sampling.

9. Specialist

An American Board Certified Specialist in Pulmonary Disease or an American Board Certified Specialist in Occupational Medicine.

D. RESPONSIBILITIES

1. Director of EHS

Responsibilities include:

- Overseeing the development and implementation of the Silica Exposure Control Plan to ensure it meets regulatory requirements and aligns with best practices.

- Reviewing and approving changes to the Silica Exposure Control Plan, ensuring they are based on objective data and risk assessments.
- Monitoring the effectiveness of the program through periodic reviews and audits, making necessary adjustments to maintain compliance and safety.
- Ensuring proper resources are allocated to each project to fulfill the requirements of this SOP.

2. Project Health & Safety Manager

Responsibilities include:

- Implementing the Silica Exposure Control Plan at the project level, adapting it as necessary to site-specific conditions and tasks.
- Working with the Site Health & Safety Officer to conduct job site assessments for silica-containing materials and perform hazard assessments for employee exposure.
- Ensuring that appropriate control measures are selected and implemented in accordance with the Exposure Control Plan and regulatory requirements.
- Facilitating training and education for project personnel on the hazards of silica exposure, safe work practices, and the use of protective equipment.
- Maintaining records of training, exposure monitoring, medical surveillance, and other compliance activities as required by the plan and regulations.

3. Health & Safety Officer or Safety Competent Person

Responsibilities include:

- Conducting job site assessments for Silica containing materials and performing employee Respirable Crystalline Silica hazard assessments in order to determine if an employee's exposure will be above 25 $\mu\text{g}/\text{m}^3$ (or 0.025 mg/m^3) as an 8-hour TWA under any foreseeable conditions.
- Selecting and implementing into the project's ECP the appropriate control measures in accordance with Table 1403.022.01 and potentially including (but not limited to) a written ECP, exposure monitoring, Hazard Communication training, medical surveillance, housekeeping, and others.
- Ensuring that the materials, tools, equipment, PPE, and other resources (such as worker training) required to implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.
- Ensuring that Project Managers, Site Managers, Competent Persons, and employees are educated in the hazards of Silica exposure and trained to work safely with Silica. Managers and Competent Persons may receive more advanced training than other employees.
- Maintaining written records of training (for example, proper use of respirators), ECPs, inspections (for equipment, PPE, and work methods/practices), medical surveillance, respirator medical clearance, and fit-test results.

4. Project Managers

Responsibilities include:

- Ensuring all applicable elements of this program are implemented in the project, including the selection of a competent person.
- Assisting the Safety Competent Person (SCP) in conducting job site assessments for Silica containing materials and performing employee silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance are necessary.

- Assisting in the selection and implementation of the appropriate control measures in accordance with the Construction Tasks identified in Table 1403.022.01 and potentially including (but not limited to) a written ECP, exposure monitoring, Hazard Communication training, medical surveillance, housekeeping, and others.

NOTE: Table 1403.022.01: Silica Exposure Control Methods lists 18 common construction tasks, along with acceptable exposure control methods and work practices that limit exposure to those tasks.

- Ensuring that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company's Respiratory Protection Program. This process must be documented.
- Ensuring that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls and work practices and wear the necessary personal protective equipment (PPE).
- Where there is a risk of exposure to Silica dust, verifying employees are properly trained on the applicable contents of this program, the project-specific ECP, and the applicable OSHA Standards (such as Hazard Communication).
- Ensuring employees are provided appropriate PPE when conducting such work.

5. Supervisors

Responsibilities include:

- Making frequent and regular inspections of job sites, materials, and equipment to implement the written ECP.
- Identifying existing and foreseeable silica hazards in the workplace and taking prompt corrective measures to eliminate or minimize them.
- Notifying the Project Manager and/or Safety Competent Person of any deficiencies identified during inspections in order to coordinate and facilitate prompt corrective action.
- Assisting in conducting job site assessments for silica-containing materials.

6. Employees

Responsibilities include:

- Following recognized work procedures (such as the Construction Tasks identified in Table 1403.022.01).
- Using the assigned PPE in an effective and safe manner.
- Participating in Respirable Crystalline Silica exposure monitoring and the medical surveillance program.
- Reporting any unsafe conditions or acts to the Project Manager and/or Competent Person.
- Reporting any exposure incidents or any signs or symptoms of Silica illness.

E. SPECIFIED EXPOSURE CONTROL METHODS

When possible and applicable, Envirocon will conduct activities with potential Silica exposure to be consistent with Table 1403.022.01. Supervisors will ensure each employee under their supervision and engaged in a task identified in Table 1403.022.01 has fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the task on Table 1 (unless Envirocon has assessed and limited the exposure of the employee

to Respirable Crystalline Silica in accordance with the Alternative Exposure Control Methods Section of this procedure).

1. Tasks performed indoors or in enclosed areas

Envirocon shall provide a means of exhaust as needed to minimize the accumulation of visible airborne dust.

2. Tasks performed using wet methods

Envirocon shall apply water at flow rates sufficient to minimize the release of visible dust.

3. Measures implemented that include an enclosed cab or booth

a. Envirocon shall ensure that the enclosed cab or booth:

- i. Is maintained as free as practicable from settled dust.*
- ii. Has door seals and closing mechanisms that work properly.*
- iii. Has gaskets and seals that are in good condition and working properly.*
- iv. Is under positive pressure maintained through continuous delivery of fresh air.*
- v. Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0µm range (e.g., MERV-16 or better), and*
- vi. Has heating and cooling capabilities.*

4. Multiple Tasks

- a. Where an employee performs more than one task during a shift, as included in Table 1403.022.01, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift.**
- b. If the total duration of all tasks in Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.**

F. RESPIRATORY PROTECTION

- 1. Where respiratory protection is required, employees will be supplied with an appropriate respirator that complies with the requirements of 1403.016 - Respiratory Protection Program SOP.**
- 2. Respiratory protection is required where specified by Table 1403.022.01 for tasks not listed in Table 1 or where the company has not fully and properly implemented the engineering controls, work practices, and respiratory protection described in Table 1. Situations requiring respiratory protection include:**
 - a. Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;**
 - b. Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and**

- c. During tasks for which an employer has implemented all feasible engineering and work practice controls, and such controls are not sufficient to reduce exposures to or below the PEL.*

G. HOUSEKEEPING

- 1. Envirocon does not allow dry sweeping or dry brushing.**
 - a. Where such activity could contribute to employee exposure to Respirable Crystalline Silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible.*
- 2. Envirocon does not allow compressed air to be used to clean clothing or surfaces.**
 - a. Where such activity could contribute to employee exposure to Respirable Crystalline Silica unless:*
 - i. The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air; or*
 - ii. No alternative method is feasible.*

H. ALTERNATIVE EXPOSURE CONTROL AND ASSESSMENT

Alternative Exposure Control and Assessment apply for tasks not listed in Table 1403.022.01 or where Envirocon cannot fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1.

1. Exposure Assessments

An exposure assessment is required when employees may be exposed to airborne silica at or above the action level in order to determine the extent to which employees are exposed and the appropriate exposure controls required.

2. Initial Determination of Exposure

- a. An initial determination of exposure shall be made at the beginning of operations.*
- b. The determination shall consist of collecting personal air samples representative of a full shift, including at least one sample for each job classification in each work area, either for each shift or for the shift with the highest exposure level.*
- c. During the initial determination, until actual airborne concentrations are determined, personnel shall be protected by respiratory protection based on task-specific anticipated airborne concentrations of silica.*

3. Change of Conditions

Whenever a significant change in equipment, process, controls, or personnel occurs or a new task is initiated that is likely to change previously established exposure of employees, an additional exposure assessment is required.

4. Exposure above Action Level but below PEL

- a. When an assessment determines that exposure has occurred above the action level but below the PEL, additional monitoring shall be required.*

b. Additional monitoring shall continue until such time that the monitoring results fall below the action level on two separate occasions at least 7 days apart and at least every 6 months.

5. Exposure above PEL

When monitoring yields results above the PEL, then quarterly monitoring is required. In addition, the quarterly monitoring may be suspended when additional monitoring results fall below the action level on two separate occasions at least 7 days apart.

6. Exemption from Air Monitoring

a. Where the competent person can clearly demonstrate, in the absence of air monitoring data, that a work activity will not create airborne silica concentrations in excess of the action level, then air monitoring may be unwarranted.

b. Where a negative initial determination is reached without air monitoring, the competent person must develop a written explanation as to why exposures are not expected to exceed the action level.

I. MEDICAL SURVEILLANCE

1. Medical surveillance will be available for each employee who is required to use a respirator for 30 or more days per year due to their exposure to Respirable Crystalline Silica.

2. Medical surveillance (i.e. medical examinations and procedures) will be performed by a PLHCP and provided at no cost to the employee at a reasonable time and place.

3. Subcontractors are responsible for implementing a medical surveillance program for their employees.

J. COMMUNICATION OF HAZARDS

1. Each employee shall be provided training and demonstrate knowledge and understanding of the following:

a. Health hazards associated with exposure to respirable crystalline silica.

b. Specific tasks that could result in exposure to respirable crystalline silica.

c. Specific measures that are required to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and required use of respiratory protection.

d. The identity of the competent person.

e. Purpose and description of the medical surveillance program.

f. A written compliance program shall be made available to all affected employees.

K. RECORDKEEPING

1. Envirocon will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to Respirable Crystalline Silica. This record will include at least the following information:
 - a. *The date of measurement for each sample taken.*
 - b. *The task is monitored.*
 - c. *Sampling and analytical methods used.*
 - d. *Number, duration, and results of samples taken.*
 - e. *Identity of the laboratory that performed the analysis.*
 - f. *Type of PPE, such as respirators, worn by the employees monitored.*
 - g. *Name and job task description of employees actually monitored.*
2. Envirocon will ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020. Exposure records will be kept for at least 30 years.

L. RELATED DOCUMENTS

SOP 1403.016: Respiratory Protection Program
29 CFR 1910.1020

M. ATTACHMENTS

Table 1403.022.01: Silica Exposure Control Methods



STANDARD OPERATING PROCEDURE

TITLE: Site Regulatory Inspections		PREPARED BY: Matthew Curran, CSP, CIH – Director of EHS
SOP NO: 1403.023	PAGE: 1 of 7	AUTHORIZED BY: Pete Joy – President
EFFECTIVE DATE: 10/1997	REVISION DATE: 5/2024	

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A. PURPOSE

This standard Operation Procedure (SOP) outlines the steps of a regulatory inspection procedure and the roles and responsibilities of all Envirocon employees during the inspection.

B. SCOPE

This SOP applies to regulatory inspections conducted at field projects or office locations to prepare management staff. The inspections may be planned, unplanned, or triggered by complaints, accident investigations, or violations in plain view.

C. DEFINITIONS

1. Regulator

Any State or Federal Agency with jurisdiction to inspect, levy fines, or stop work at a project or office location.

2. Compliance Officer (CO)

Official representative of a Regulator as defined above.

D. RESPONSIBILITIES

1. Director of EHS

- Ensure a comprehensive EHS program is implemented and in compliance with regulatory requirements.
- Immediately notify Envirocon's Senior Leadership Team about the inspection.
- Oversee the documentation of inspection activities and ensure compliance with regulatory requirements.
- Lead the review of findings post-inspection and coordinate with corporate counsel on any citations or penalties.
- Provide support and guidance to Project Management Team members during the inspection.
- Ensure citations are managed appropriately.

2. Health & Safety Manager

- Inform the Director of EHS and relevant Project Management Team members when an inspection occurs.
- During the inspection, provide support to the Site Health and Safety Officer and Project Management Team.
- Ensure all staff are trained and prepared for regulatory inspections.
- Assist in managing offsite records that might be requested during inspections.

3. Health & Safety Officer

- Accompany the Compliance Officer during the inspection, acting as a secondary point of contact, and document the process.
- Ensure the Compliance Officer is briefed on site-specific health and safety requirements and provided with necessary PPE.
- Facilitate the process for private employee interviews by the Compliance Officer.

4. Project Manager

- Serve as the primary contact during inspections, verifying the CO's credentials and granting site access.
- Notify the client/facility owner immediately upon the arrival of a Compliance Officer.
- Along with the Site Health & Safety Officer, escort the Compliance Officer through the site inspection.
- Participate in the closing conference to discuss unsafe conditions, violations, and immediate corrective actions.

5. Supervisor

- Ensure the crew is aware of and prepared for potential inspections, including keeping the work area compliant with the HASP and relevant regulations.
- During the inspection, assist the Project Manager and Health and Safety Officer by providing additional insights into daily operations and safety practices.
- Implement immediate corrective actions identified during the inspection and document these efforts.

6. Employees

- Maintain compliance with safety standards and cooperate during inspections, including participating in interviews if selected.

- Be aware of where safety and operational documents are kept and how to access them if requested by the Compliance Officer.
- Inform Supervisors or Health and Safety Officers of any potential violations or unsafe conditions that could be corrected prior to or during an inspection.

E. VERIFICATION OF CREDENTIALS AND GRANTING SITE ACCESS

1. In the event of a CO showing up at an Envirocon project site or office, the following procedures are to be implemented:
 - a. *Ask the CO for official identification. If you suspect the individual is using counterfeit credentials, ensure the individual is not left alone on the site and immediately contact, or direct someone else to contact, the Corporate Office to follow up with the state or regional OSHA office and/or law enforcement.*
 - b. *Notify the Project Manager and the Client/Facility Owner immediately. Do not grant access unless directed to by the owner/client. Ask the CO to wait for the owner/client representative to meet them and grant access.*
 - c. *Never allow the CO to access the site unaccompanied. Ask the CO to wait for a Project Management Team member, such as the Project Manager or Health & Safety Officer / Manager.*
 - d. *Notify the Director of EHS as soon as possible.*
 - e. *Notify the Senior Leadership Team as soon as possible.*
 - f. *Under no circumstances shall an employee request a search warrant unless expressly advised to do so by the Facility Owner or an Envirocon Corporate Officer.*
 - g. *Consent to enter the site also includes granting the CO a reasonable opportunity to collect samples, interview employees, and inspect records.*

F. OPENING CONFERENCE

1. Prior to a site inspection, a CO is required to conduct an opening conference with the Envirocon Project Management Team and/or the Facility Owner representatives to:
 - a. *Explain how or why the Company was selected;*
 - b. *Define the scope of the inspection;*
 - c. *Select employer or subcontractor representatives; and*
 - d. *Select employee representative(s)*
 - e. *Determine who will be accompanying the CO on a walk*

G. SITE INSPECTION WALK-THROUGH

Envirocon's policy is to be courteous and professional during a regulatory inspection and, in a spirit of cooperation, correct concerns or problems identified as soon as possible.

1. **Escorting**
 - a. *At a minimum, the PROJECT MANAGER or CONSTRUCTION MANAGER and site HS or Safety Competent Person should escort the CO by the most direct route.*

An employee representative may also accompany the CO during the inspection. Accompany the inspector during ALL aspects of the inspection except confidential employee interviews.

2. Health and Safety Requirements

- a. Provide the CO with the site orientation or HASP briefing. Require necessary PPE and training (HAZWOPER) for the CO in accordance with site-specific requirements and provide them with any additional PPE they need on the site.***

3. Documentation

- a. During the inspection, take a notepad and pen, a camera if available, and other necessary equipment. Use the following as a guideline for your notes and document:***
 - i. All areas visited.*
 - ii. Any questions asked by the inspector.*
 - iii. Names of interviewees.*
 - iv. A summary of answers given to inspectors.*
 - v. Documents reviewed.*
 - vi. Any deficiencies noted.*
 - vii. If the CO takes photos during the inspection, always take the same photo (stand in the same location, use the same angle, etc.). Document any pictures taken (where, when, who, why, and what was occurring).*
 - viii. Document any monitoring results obtained during the inspection (where, when, who, why, and what was occurring).*

4. Corrective Actions

- a. Take corrective actions immediately, if possible, and document actions taken (i.e., take a picture of how it was and a picture of how it was after corrective actions were taken). If the CO offers advice, write it down and implement it, if feasible. If unsure, contact the Corporate Office;***

5. Request for Clarification

- a. If you do not understand a question or problem raised by the CO, ask for clarification. If you are not sure what the answer is, let the CO know that you will attempt to get it in a reasonable amount of time.***

6. Cooperation

- a. Provide any other information that may be pertinent to the inspection.***

7. Employee Monitoring

- a. If employee exposure monitoring is to be conducted during the inspection, notify the assigned safety personnel as soon as possible so that concurrent monitoring is conducted.***

8. Employee Interviews

- a. *The CO has the right to interview employees privately.*
- b. *Employees may share information with the CO on hazards, procedures, PPE, etc.*
- c. *You may question employees after the interview but do not compel answers.*

H. RECORDS REVIEW

1. Onsite Records

- a. ***Not all project records are required to be maintained on-site. Those that a CO will expect you to have on-site include but may not be limited to:***
 - i. *Required Department of Labor postings and the OSHA log posted from February through April;*
 - ii. *Hazard Communication Program, Inventory of Chemicals, and Safety Data Sheets (hard copy or online);*
 - iii. *Excavation competent person inspection records; and*
 - iv. *Training and medical status records.*

2. Offsite Records

- a. ***Other records that are not required to be maintained on-site but are typically maintained at the corporate office include:***
 - i. *Investigation reports;*
 - ii. *Audit reports;*
 - iii. *Lessons learned;*
 - iv. *Behavior observations;*
 - v. *Meeting records; and*
 - vi. *Exposure records.*

3. Records Requests

- a. ***If the CO requests any such records not kept on site, inform the CO that the request will be passed on to Corporate, and a response will be made in a reasonable amount of time.***

I. CLOSING CONFERENCE

1. **At the end of the inspection, the CO will most likely conduct a closing conference.**
 - a. ***More than one closing conference is possible if the inspection is expected to continue.***
 - b. ***Unsafe or unhealthful conditions and apparent violations will be discussed.***
 - c. ***Envirocon has the opportunity to produce records to show compliance or immediate corrective actions taken up to this point.***
 - d. ***Do not expect to be given a list of citations or penalty amounts at this time.***

2. After the closing conference, write complete notes, develop a report that includes apparent violations and corrective actions taken, and submit the report and notes to Corporate. A “regulatory” incident entry should also be added to VectorEHS for the purposes of historical recordkeeping, hazard identification, and corrective action tracking.

J. CITATION AND PENALTY NOTICES

1. Citation and penalty notices shall:

- a. *Be sent by certified mail or delivered personally;*
- b. *Describe the regulations/laws violated;*
- c. *Describe the proposed deadline for correcting it; and*
- d. *Describe proposed penalties.*
- e. *Immediately provide a copy of the citation to the Senior Leadership Team and Director of EHS. Post the citation at or near the violation for three days or until corrected, whichever is longer.*

K. FOLLOW-UP INSPECTIONS

The CO may return to the facility after the abatement deadlines to verify that hazards were corrected. Abatement timelines may be less than 15 days. If hazards are not corrected within specified timelines, a Failure-to-Abate citation may be issued.

L. EMPLOYER AND EMPLOYEE RIGHTS

1. Employer

- a. **The employer’s basic rights are to:**
 - i. *Ask for credentials;*
 - ii. *Ask for a warrant (not typical under Envirocon policy);*
 - iii. *Know the purpose and scope of inspection;*
 - iv. *Know regulations that apply;*
 - v. *Not pay a penalty at visit;*
 - vi. *See a complaint;*
 - vii. *Have a lawyer present;*
 - viii. *Keep trade secrets;*
 - ix. *Get answers to questions; and*
 - x. *Contest a citation and penalty.*

2. Employee

- a. **The employee’s basic rights are to:**
 - i. *Confidentially report hazards to applicable regulatory agencies;*
 - ii. *Request an inspection;*
 - iii. *Accompany the CO during an inspection;*
 - iv. *Respond to CO questions;*
 - v. *Attend a closing conference;*

- vi. Challenge an abatement date and*
- vii. Suffer no punishment/discrimination*

M. RELATED DOCUMENTS

None

N. ATTACHMENTS

None

TITLE: Incident Reporting and Investigation		PREPARED BY: Matthew Curran, CSP, CIH – Director of EHS
SOP NO: 1403.024	PAGE: 1 of 10	AUTHORIZED BY: Pete Joy - President
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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to outline the procedures for reporting and investigating all incidents occurring on Envirocon projects or involving an Envirocon property or employee off-site or off-hours.

B. SCOPE

This SOP applies to all employee and subcontractor incidents and near misses that occur on Envirocon-managed projects or off-site/off-hours while conducting business in the interest of Envirocon.

C. DEFINITIONS
1. Incident(s)

For purposes of this procedure, the term “incident(s)” is intended to include unanticipated events or conditions that have a potential negative impact on the environment, personnel safety, equipment, or business objectives, such as:

- Any work-related injury or illness of any severity level.
- An exposure to a hazardous substance above the allowable exposure limit.
- Property/vehicle/equipment damage.
- An uncontrolled fire or explosion.
- An unplanned spill or release (including air releases) to the environment.

- Any unexpected contact or damage to aboveground or below-ground utilities.
- Health & Safety policy or procedure violations.
- Incidents involving the general public or visitors.
- New, previously unknown, or unexpected potential hazards.
- Environmental incidents such as:
 - Oil or chemical spills
 - Dead or injured wildlife on the site or
 - Disturbed habitats
- Objects of potential cultural or historical importance such as:
 - Bones
 - Buried coins or money
 - Arrowheads
 - Possible burial sites or
 - Finding articles of any potential cultural significance.
- Unauthorized personnel in work areas.
- Any near-miss incident in which there was a potential for loss or harm as described above.
- Failure to comply with an applicable specification or work process requirement.

2. **VectorEHS**

VectorEHS is the name of the EHS management software used by Envirocon for reporting and storing incident and investigation information and corrective actions.

3. **Project Management Team**

The collective group responsible for overseeing the planning, execution, and safety compliance of work tasks. This includes roles such as the Project Manager, Construction Manager, Supervisors, Health and Safety Manager, Health and Safety Officer, Project Engineers and Coordinators, and Field Engineers and Coordinators.

4. **Senior Leadership Team**

The collective corporate group responsible for overseeing the execution of Envirocon work. This includes roles such as the President, Vice President, Chief Financial Officer, and Senior Advisors.

D. **RESPONSIBILITIES**

1. **Senior Leadership Team**

The Senior Leadership Team is responsible for:

- Establishing goals and performance objectives for operations and goals for reducing or eliminating injuries or incidents within the company.
- Reviewing the performance of all projects with regard to incident prevention and investigations.
- Working with other Senior Leadership Team members to appoint a special incident investigation team when a significant incident occurs.

2. **Director of Environment, Safety, and Health (EHS)**

The Director of EHS is responsible for:

- Overseeing the incident reporting and investigation process for all Envirocon incidents.
- Ensuring investigation reports are completed in a timely manner.

- Overseeing the development of corrective actions and ensuring they are implemented in a timely manner.
- Developing changes in health and safety procedures and policies in accordance with investigation findings.
- Assuming the lead responsibility for follow-up associated with health and safety policies and procedures.

3. Project Health & Safety Manager (HSM) and Site Health & Safety Officer (HSO)

The Site HSM and HSO are responsible for:

- Leading the investigation process until the final report has been completed and closed on VectorEHS unless a special incident investigation team is assigned to lead the investigation.
- Conducting root cause investigations.
- Leading the discussion with Project Management Team members to develop corrective actions and ensuring they are documented and implemented.
- Ensuring that the personnel involved are trained in their roles and responsibilities for incident response and investigation techniques.

4. Project Management Team Members

The Project Management Team is responsible for:

- Ensuring proper reporting of all incidents that occur on their projects.
- Assisting the Health and safety personnel with the incident investigation, documentation, development and implementation of corrective actions, and subsequent follow-up.

5. Employee

Each Envirocon employee is responsible for:

- Immediately notifying their supervisor of unusual conditions, accidents, noncompliance to a requirement, and/or any unexpected incidents.
- Supporting the investigation team with the incident investigation.
- Reporting any work restrictions resulting from the incident to their supervisor immediately.

E. INCIDENT SEVERITY LEVELS

Incident severity levels are a critical component of effective incident reporting and investigation. This provides a standardized method to assess and communicate the impact of an incident so that a quick decision can be made as to what additional notifications are necessary and what resources may be needed. Envirocon incidents are categorized into three levels:

1. Severity Level 3 (High):

These incidents have a high impact, affecting multiple employees or subcontractors or have significant impacts on the project schedule or finances. These events may lead to significant disruptions in project delivery or major effects on Envirocon's ability to continue as per contract requirements. High-severity incidents require an immediate and comprehensive response from the Project Management and Crisis Management teams to manage the situation and restore normal operations as quickly as possible. Severity Level 3 incidents include but are not limited to:

- Employee or subcontractor fatalities.
- Serious injuries to multiple employees or subcontractors.
- Significant property or equipment damage leading to long-term project delays.
- Significant contractual or financial incidents leading to long-term project delays.
- Significant information technology incidents leading to long-term project delays.
- Significant environmental or weather events leading to long-term project delays.

Level 3 incidents require the activation of the Envirocon and WashCorp Crisis Management Plans.

2. Severity Level 2 (Moderate):

Incidents of moderate severity have a noticeable impact on day-to-day project activities or a group of employees but do not jeopardize overall business continuity. These incidents require timely intervention to prevent escalation, ensuring affected areas are addressed promptly while maintaining general operations. These incidents may require a specially appointed incident investigation team or be reviewed by the Incident Review Board. Severity Level 2 incidents include but are not limited to:

- Serious injury to an employee or subcontractor that may require notification to regulatory authorities.
- Loss of a high-priority piece of equipment.
- Property or equipment damage leading to a project delay not exceeding one week.
- Significant environmental spill that may require notification to regulatory authorities.
- Significant weather events leading to a project delay not exceeding one week.
- Moderate quality issues that may impact the project schedule.

Level 2 incidents require notification to the Senior Leadership Team.

3. Severity Level 1 (Low):

Low-severity incidents involve minor issues that affect only a small portion of project activities or a few employees, with little impact on the project. Response to these incidents shall follow the standard incident reporting and investigation process. Severity Level 1 incidents include but are not limited to:

- First aid level injuries
- Minor property or equipment damage leading to minimal project delays.
- Minor motor vehicle incidents
- Minor environmental spills that do not meet reporting quantities.
- Minor quality issues that do not have a significant impact on project schedules.

Level 1 incidents may be communicated to the Senior Leadership Team through VectorEHS or an informal communication method at the discretion of the Project Manager or Health & Safety Officer.

F. INCIDENT REPORTING PROCEDURES

1. General Incident Reporting

- All incidents and near misses shall be reported, investigated, and documented.***
- The initial incident report will be entered into VectorEHS, ideally by the end of the day or shift but no later than 24 hours after the incident occurs.***

- c. Depending on the severity of the incident, an initial phone call may be required to inform the next level-up management team of the incident.**
 - i. Immediate notification to the Senior Leadership Team is required for Level 2 and Level 3 incidents.*
 - ii. For Level 1 incidents, notifications to the service line Vice President and Director of EHS should be made in a timely manner when practical.*
- d. Each incident will require an entry in VectorEHS.**
 - i. All incidents, except medical report-only incidents, shall include an initial notification and an incident investigation report form.*
 - ii. All environmental-related incidents shall include an initial notification, an incident investigation, and an Environmental Report.*

2. Incident Reporting Timeframes

- a. Employees involved in an incident must immediately notify their supervisor or the site SCP/HSO. Any work-related injury is expected to be reported immediately but absolutely no later than the end of the current day work shift.**
- b. The initial incident report should be entered into VectorEHS by the end of the shift but no later than 24 hours after the occurrence by HSO, HSM, or a Project Management Team member with access to VectorEHS.**
- c. The client shall be notified of the incident according to the project contract. Work-related injuries should be reported to the client within 24 hours.**
- d. Envirocon is required to notify OSHA of the following incidents:**
 - i. An employee fatality on the job within eight (8) hours;*
 - ii. When an employee suffers a work-related in-patient hospitalization, amputation, or eye loss within 24 hours.*
- e. Envirocon is required to notify MSHA of the following incidents within 15 minutes:**
 - i. A death of an individual at a mine;*
 - ii. An injury to an individual at a mine which has a reasonable potential to cause death;*
 - iii. Entrapment of an individual for more than thirty minutes or which has a reasonable potential to cause death;*
 - iv. An unstable condition at an impoundment, refuse pile, or culm bank that requires emergency action to prevent failure or which causes individuals to evacuate an area; or failure of an impoundment, refuse pile, or culm bank;*
 - v. An event at a mine that causes death or bodily injury to an individual not at the mine at the time the event occurs.*

3. Procedures for Reporting and Responding to Emergencies

- a. Corporate emergency response procedures are established in the Envirocon Crisis Management Plan. The project's Health And Safety Plan (HASP) shall**

outline site-specific emergency response procedures, which contain additional site-specific requirements not covered here.

- b. In an emergency, a Stop Work shall be initiated to preserve the scene and limit further injuries or losses.*
- c. The first employee(s) identifying or involved in an incident shall notify their supervisor, Health and Safety Officer, and/or client representatives per the established site-specific procedure(s).*
- d. Emergency procedures such as first aid or emergency transportation for medical evaluation/treatment are conducted in accordance with the established site-specific procedures.*

G. GENERAL INCIDENT RESPONSE GUIDELINES

1. Project Management Team and Health and Safety Personnel

The level of response needed for an incident depends upon the event's gravity and circumstances. Each incident will require its own unique response, which shall be determined at the discretion of the Project Manager and the Health & Safety Officer. The guidelines in the site-specific HASP shall be followed; however, in general, the following guidelines shall be considered. The Project Management Team, Health & Safety Officer, or the group responding to the incident shall:

- a. Secure the scene, remove all personnel from the area, and remove any imminent danger hazards if they are safe and practical.*
- b. Ensure that injuries are being adequately treated.*
- c. Contact WorkCare concerning employee injuries when necessary.*
- d. Ensure that physical evidence from the incident scene is preserved for the purposes of the investigation (whether for Envirocon or regulatory authority personnel).*
- e. Escort injured employees leaving the site for medical evaluation/treatment.*
- f. Ensure injured workers and witnesses are made available for interviews as soon as practical.*
- g. Fill out initial notification reports as soon as a timeline and pertinent facts are established.*
- h. Conduct substance abuse testing per the 1403.006 Substance Abuse Policy and Program SOP.*
- i. Conduct and document an incident investigation and develop corrective actions.*

H. PROJECT INVESTIGATION PROCESS

All incidents are required to be investigated. For most incidents, the Project Management Team shall use the flow of the VectorEHS Investigation online form to collect all of the necessary information to complete the investigation. An alternate investigation method may be used when the Senior Leadership Team assigns a special incident investigation team.

1. Initial Incident Investigation and Fact Finding

The incident investigator(s) should:

- a. Gathering physical evidence and pertinent information from the incident site and involved employees.**
- b. Keep complete and accurate notes in their site logs. The information collected should be reflected in the VectorEHS incident investigation form.**
- c. Interview witnesses as soon as possible after an incident. Each involved employee should complete a written statement that details the sequence of events leading to the incident.**
 - i. Written statements, drawings, and photos shall be uploaded to the incident investigation form as part of the incident record.*
 - ii. The investigator shall ensure that accurate records of each interview are kept using the following guidelines:*
 - iii. Ask the witnesses to write a statement in their own words describing the events of the incident.*
 - iv. Record the exact words the witness uses to describe the event. Do not “put words into a witness’ mouth.”*
 - v. Word each question carefully and be sure the witness understands.*
 - vi. Open-ended questions should be used to help establish the events.*
 - vii. Close-ended questions should be used to help clarify statements made by the witness.*
 - viii. Collect relevant information about each witness's qualifications. If the witness is not an Envirocon employee or subcontractor, collect contact information*
- d. Inspect the incident site before any significant changes are made. Take photographs and make sketches of the incident scene.**
 - i. If the incident must be changed before a lead investigator can inspect it, the Project Manager shall ensure that the proper photographs accurately and comprehensively depict what occurred.*
- e. Gather documents relevant to the incident to help the investigation and root cause analysis process. These documents may include but are not limited to:**
 - i. Job Safety Analysis (JSA) for the task.*
 - ii. Field Crew Activity Plan (FCAP) for the day’s task and previous days when relevant.*
 - iii. Work plans and Plan of the Day meeting form.*
 - iv. Equipment inspection forms.*
 - v. Equipment qualifications and required training certificates.*
 - vi. Employee and project incident history.*
 - vii. Drawings, maps, or other relevant project-specific documents.*
- f. Work with the involved employees and witnesses to establish a sequence of events that details how the incident occurred.**

2. Incident Analysis

Every incident shall include an incident analysis that identifies causal factors and determines root causes so that appropriate corrective actions can be developed and implemented.

a. Root Cause Analysis Methodology

- i. *For low-severity incidents, a basic root cause analysis may be performed. The exact methodology used may be determined at the investigator's discretion. This basic root cause analysis may be documented in VectorEHS by documenting the determined causal factors and root causes and summarizing the investigation findings.*
- ii. *For moderate or high-level incidents, a formal root cause analysis should be performed. This in-depth root cause analysis shall use methodologies from well-established incident investigation resources such as DNV or TapRoot. The final report shall include a formalized and documented sequence of events and discussion leading to determining causal factors and root causes.*
- iii. *For incident analysis, at least one causal factor and one root cause shall be established.*
 - a. *Some causal factors may have multiple root causes.*
- iv. *On the VectorEHS incident investigation form, all causal factors and root causes entered must have an explanation or summary explaining why the particular causal factor or root cause was selected.*

b. Control of Work Document Review

- i. *As part of the investigation, the investigators should review all relevant control of work documentation to determine if gaps exist. Where necessary, the control of work documentation shall be updated, and all affected personnel shall be informed and retrained.*

3. Vector EHS Final Report

- a. ***Once the incident investigation and root cause analysis are complete, the final sections of the VectorEHS report will be completed. If possible, this final report should be completed within five working days. Delays in the completion of the VectorEHS report must be coordinated through the Director of EHS.***
 - i. *This timeframe does not include corrective actions that may take longer than five days to implement.*
- b. ***Documentation relevant to the incident investigation shall be uploaded in the attachments section of the form.***
- c. ***The corrective actions developed as a result of the incident shall be documented in VectorEHS and assigned to appropriate personnel for correction. These items will be tracked within the program to completion.***
 - i. *The investigation report cannot be finalized and closed until all corrective actions have been addressed.*
 - ii. *For low-severity incidents with no corrective actions or corrective actions that have already been completed, a summary of the actions taken may be added to the*

“Additional Information” section of the Incident Investigation form instead of entering them into the corrective action tracking module.

- d. In addition to the VectorEHS incident forms, a formal write-up may be provided to the client or parties. When necessary, the 1403.024.01 Incident Investigation Form shall be used.***

4. Post-Investigation Crew Debriefing

- a. When the incident investigation has been completed, affected personnel on-site shall be informed of lessons learned and corrective actions regarding the incident. Depending on the severity of the incident, this information will be discussed during a day/Safety Meeting or a formal stand-down meeting.***
 - i. Do not discuss blame. The focus of this briefing should be on lessons learned.*
 - ii. Discuss what happened and why.*
 - iii. Describe what procedures should have prevented the incident.*
 - iv. Thoroughly brief the crew on corrective actions and any changes in procedures.*

5. Incident Review Board (IRB)

- a. The Incident Review Board process will be initiated for work-related incidents with a high resulting severity or potential severity.***
- b. The IRB is intended to supplement on-site incident investigations by establishing a fact-finding conference call between senior leadership, project management, and any employee(s) involved in the incident.***
- c. The IRB provides a method for reviewing select incidents (particularly those of high severity or high potential severity) and measures implemented to support the investigation and corrective actions.***
- d. The Senior Leadership Team, in consultation with the Director of EHS, will decide whether to activate the IRB process.***
- e. The IRB record shall be created and included with the final VectorEHS report. The 1403.024.02—Incident Review Board Meeting Record form may be used.***

I. ADDITIONAL INFORMATION

1. Lessons Learned

- a. The Health and Safety Department will ensure the development and distribution of lessons learned to all areas of the company.***

2. Injured Employee(s) Return to Work

- a. In most cases, it is medically and economically in the employee’s best interest to return to their regular duties as soon as it can safely be accomplished. The early return of an employee to their regular duties is also in Envirocon’s best interest. Return to work shall, therefore, be treated as a key component of incident follow-up.***
- b. The return-to-work procedures outlined in the 1403.025 – Early Return to Work SOP shall be followed.***

3. Determination of Recordability

a. *The Director of EHS is responsible for:*

- i. Maintaining Envirocon OSHA 300 Logs and MSHA 7000-1 forms in accordance with applicable regulations.*
- ii. Final determinations on the recordability of each injury or illness will be made based on the information available.*

J. RELATED DOCUMENTS

1403.006 – Substance Abuse Policy

1403.025 – Early Return to Work

K. ATTACHMENTS

Form 1403.024.01 - Incident Investigation Form

Form 1403.024.02 - Incident Review Board Meeting Record

TITLE: Early Return to Work Program		PREPARED BY: Mel Lockridge
SOP NO: 1403.025	PAGE: 1 of 4	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
EFFECTIVE DATE: 09/1997	REVISION DATE: 5/2024	

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A. PURPOSE

The purpose of the Early Return to Work Program Standard Operating Procedure (SOP) is to outline the procedures and guidelines for facilitating the safe and timely return of injured employees to work, ensuring they are fully capable and fit for duty.

B. SCOPE

This procedure applies to all Envirocon employees who are injured on the job to the extent that it prevents them from performing their normal work activities.

C. DEFINITIONS

1. Work-Related Injury or Illness

Any physical or mental condition arising directly from the employee's job duties or workplace environment.

2. Fit for Duty

A status determined by a healthcare professional indicating that an employee is physically and mentally able to perform their normal work activities without risking further injury or illness.

3. Modified Duty

Temporary adjustments to an employee's job role or tasks, designed to accommodate medical restrictions while still contributing to the workplace.

4. Functional Job Analysis

A detailed description of an employee's duties, tasks, and work environment used to assess fitness for duty and develop modified duty assignments.

5. Medical Provider

A licensed healthcare professional authorized to deliver medical care and services to patients, including diagnosing injuries or illnesses, prescribing treatment, and evaluating an employee's capacity to return to work.

6. MRO (Medical Review Officer)

A licensed physician working for WorkCare who is responsible for reviewing and interpreting medical reports and tests and providing guidance on medical restrictions and fitness for duty.

D. RESPONSIBILITIES

1. Director of EHS (Environmental Health and Safety)

- Oversees the overall implementation of the Early Return to Work Program, ensuring compliance with applicable regulations and company policies.
- Acts as a liaison between upper management and project sites regarding health and safety issues and return-to-work cases.
- Ensures the proper medical case management best practices are being implemented.
- Acts as the primary contact with worker's compensation insurance companies.
- Reviews and approves modified duty job descriptions and work restrictions based on medical provider recommendations.
- Makes final determinations on OSHA recordability for all work-related injuries and illnesses.

2. Health and Safety Manager

- Coordinates with the Director of EHS to implement the Early Return to Work Program across all project sites.
- Ensures that all documentation related to work-related injuries and the return-to-work process is accurate and maintained confidentially.

3. Health and Safety Officer

- Acts as the primary point of contact for injured employees on the job site, guiding them through the return-to-work process.
- Accompanies injured employees to medical appointments, as necessary, to ensure that medical providers understand the available modified duty options.
- Works closely with Project Managers and Supervisors to identify suitable modified duty assignments for injured employees.
- Monitors the progress of injured employees on modified duty and coordinates with medical providers to adjust work restrictions as needed.

4. Project Manager

- Ensures that all project personnel are aware of the Early Return to Work Program and understand their roles within it.
- Collaborates with the Health and Safety Officer to identify modified duty opportunities for injured employees within the project.
- Communicates with the Health and Safety Manager and the Director of EHS about the status of injured employees and their return to work.
- Manages the integration of returning employees into the project, ensuring that their work assignments align with medical restrictions.

5. Supervisor

- Identifies tasks within their area of responsibility that can be modified to accommodate injured employees' restrictions.
- Provides direct supervision and support to injured employees returning to work, ensuring they do not exceed their medical restrictions.
- Reports any concerns or issues regarding the injured employee's ability to perform modified duties to the Health and Safety Officer and Project Manager.
- Maintains open communication with injured employees to address their needs and feedback during the return-to-work process.

6. Injured Employee

- Communicate openly with the Health and Safety Officer, Supervisor, and Project Manager about their injury, capabilities, and progress.
- Attends all scheduled medical appointments and adheres to the treatment plan prescribed by medical providers.
- Provides updated medical information and work restrictions to the Health and Safety Officer in a timely manner.
- Engages in modified duty work assignments to the best of their ability, following all safety protocols and restrictions.

E. ENVIROCON EARLY RETURN TO WORK PROGRAM

1. Before an injury or illness

- Envirocon employees shall be trained on alternate/restricted duty programs and responsibilities at the time of initial assignment to the project or during employee orientation.*
- Functional Job Analyses (FJA) shall be developed for specific job types. Physicians may use these FJAs to determine Fitness For Duty during physical examinations and to see if they can perform modified duty after an injury.*

Employees shall take a pass a construction-based or HAZWOPER physical in addition to a Back Fit Test (BFT) or Human Performance Evaluation (HPE) in accordance with OSHA regulations and the 1403.005 – Medical Monitoring SOP. The results of the physical shall be reviewed by a WorkCare MRO, and a work status report shall be provided.

2. Managing an injury or illness

- At the time of injury, a supervisor or Project HSO/SCP must accompany the injured employee to the medical facility. If a supervisor or Project HSO/SCP is not available, a member of the Project Management Team shall escort them after consultation with the Director of EHS or Project Health and Safety Manager.*
- A copy of an FJA should be brought to the clinic and presented to the medical provider for review. If an FJA is unavailable, the Envirocon representative should be able to verbalize the various physical requirements of the job and other available restricted-duty jobs.*
- If the medical provider cannot release the employee to normal job duties, alternate job activities and descriptions should be discussed with the provider. The Envirocon representative shall ensure that any modified work proposed for the employee is consistent with the medical provider's restrictions.*

- d. If the medical provider refuses these restricted or modified work offers, contact the Director of EHS or WorkCare for consultation.*
- e. The diagnosis and treatment plan (including all work restrictions) shall be well-understood by the employee, medical provider, and Envirocon representative prior to leaving the clinic. The Envirocon representative may not leave the clinic until a written release is obtained.*
- f. Once all relevant documentation is obtained, the Director of EHS shall initiate a worker's compensation claim (in states where this is the standard practice) and shall act as the point of contact.*
- g. The Director of EHS shall collaborate with the Project Management Team and Health & Safety Officer to manage claims and injuries as needed.*

3. Employee Contact / Correspondence

- a. All communication with the injured employee should be documented, especially if they are away from work.*
- b. All documentation concerning the incident shall be kept in VectorEHS.*
- c. The Director of EHS shall maintain all documentation regarding the injury/illness and the worker's compensation. In coordination with WorkCare, all medical records will remain confidential.*
- d. If it becomes apparent that an injured worker has lost communication with the employer for whatever reason, or if problems arise out of attempts to return an individual to work within their restrictions, it is recommended that contact be made with the insurer directly so that the rehabilitation process can proceed.*

F. RELATED DOCUMENTS

1403.005 – Medical Monitoring

G. ATTACHMENTS

1403.025.01 - Return to Work - Light Duty Offer



STANDARD OPERATING PROCEDURE

TITLE: Safety Incentives Program		PREPARED BY: J. Hipp
SOP NO: 1403.026	PAGE: 1 of 4	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
EFFECTIVE DATE: 04/1998	REVISION DATE: 4/2024	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide guidelines for implementing Safety Incentive Programs at an Envirocon project. Envirocon reserves the right to modify or change this program without notice at the discretion of management.

B. SCOPE

This SOP applies to all active Envirocon projects and encompasses employees and major subcontractors (determined at the Project Manager's discretion).

C. DEFINITIONS

None

D. RESPONSIBILITIES

1. Director of Environment, Health, and Safety (EHS)

The Director of EHS is responsible for:

- Ensuring funding for a safety incentive program is included with each project bid.
- Coordinating with the Senior Leadership Team in setting long-term safety incentive goals and standards.

2. Project Health and Safety Manager (HSM)

The Project Health and Safety Manager's responsibilities include:

- Developing and implementing a site-specific safety incentive program.
- Encouraging active participation from employees in safety initiatives, recognizing contributions beyond normal expectations.

- Ensure that all employees are aware of the Safety Incentives Program's goals, procedures, and recognition opportunities.

3. Site Health and Safety Officer

The Site Health and Safety Officer's responsibilities include:

- Assisting with implementing and monitoring the Safety Incentives Program at the project in coordination with the Project Manager.
- Maintaining accurate records of incidents, hazard identifications, behavior-based safety observation, and other project-specific qualifications for incentive awards.
- Coordinating with the Project Manager to distribute awards and recognition to employees and teams achieving safety milestones.

4. Vice President of Operations

The Vice President of Operations responsibilities include:

- Authorizing the funding for each project's safety incentive program.
- Overseeing the administration of the safety incentive program.
- Review the project team's implementation of the safety incentive program.

5. Project Manager

The Project Manager's responsibilities include:

- Ensuring a safety incentive program has been established for the project.
- Managing the funding for the safety incentive program.
- Coordinating with the site Health and Safety Office to distribute awards and recognition to employees and teams achieving safety milestones.

6. Employee

The employees' responsibilities include:

- Consistently follow all Envirocon safety policies and procedures, contributing to a safe work environment.
- Proactively identifying and reporting hazards to supervisors or the site Health and Safety Officer.
- When involved in or witnessing an incident or safe/unsafe behavior, provide accurate and timely information to the supervisor or site Health and Safety Officer.
- Take responsibility for protecting company equipment from damage or theft and prevent damage to client property.

E. SAFETY GOALS

There are three recognized safety goals that may form the basis for incentives. Which safety goals to use for each individual safety incentive program will be at the discretion of the Director of EHS and Project Manager.

1. "Zero Incidents" or "Incident Free" performance

Projects, teams, or individual employees achieve certain milestones (e.g., project completion, end of a phase of operations, or end of a calendar quarter) without having a significant vehicle, equipment, or property damage incident or a significant policy or procedure violation.

2. Lowering Injury Incident Rates

It is Envirocon's goal to maintain the following incident rates, and these rates may be incorporated into site-specific project awards:

a. Total Recordable Incident Rate (TRIR)

- i. Envirocon's goal is to avoid any accidents that result in an OSHA Recordable Incident.*

b. Lost Days Rate (LWIR)

- i. Envirocon's goal is to avoid any accidents resulting a lost day of work.*

c. All Injury Rate (AIR)

- i. Because the OSHA TRIR value does not include employee injuries which would be categorized as first aid events, Envirocon will recognize the computation of a total All Injury Rate (AIR), which includes all injury events described in the scope of this procedure and as recorded in VectorEHS. It will be calculated in the same manner as the OSHA TRIR using the "All Employee Injury" value from VectorEHS instead of the recordable injuries/illnesses value.*
- ii. The specific values of each safety goal shall be determined for each project based on several project-specific considerations such as crew size, scope of work and complexity, and SSE crew size.*

3. Employee participation

a. Envirocon encourages the active participation of personnel in the safety of their sites. Contributions to site safety, which project managers recognize as going beyond normal expectations, may also be the subject of awards. Examples would include (but are not limited to):

b. Best hazard identified by a crew member in a given period.

- i. This may be identified through PRIDE cards, BBSOs, or an informal notification to the HSO.*

c. Best safety suggestion by a crew member in a given period.

d. A specific safety action recognized to have prevented or minimized an accident.

F. CORPORATE INCENTIVE PROGRAM

This component recognizes the collective efforts of all Envirocon personnel toward a common safety goal. Corporate award(s) recognize Envirocon's best practice approaches and achievements in health and safety management. The Envirocon Senior Leadership team will establish the award program criteria with the intent of employee participation and management support. The award program will be established on an annual basis and communicated to all participating employees.

G. SITE-SPECIFIC PROJECT INCENTIVE PROGRAMS

Site-specific project programs will be evaluated for approval based on the following criteria:

- 1. A site-specific program should be written for each project using the 1403.026.01 form. The program's focus should be on recognizing the goals that have been discussed and agreed upon.**

2. Project programs must be approved by the Director of EHS and the Project Manager. For long-term projects, the program will be reviewed and approved annually (including an annual budget and milestones).
3. Milestones and recognition should focus on the established goals.
4. The site-specific project award should be budgeted as part of the project's projected revenues for that calendar year. Additional funding will be considered if the Project Manager identifies a site-specific need for additional funding (e.g., client contributions or specifications).
 - a. *The standard safety incentive budget will be 0.1% of the total contract value estimate.*
5. The site-specific program should include subcontractors that the Project Manager recognizes as significantly impacting site safety. Depending on the nature of the project, subcontractors will not necessarily be recognized in the same way as Envirocon employees.
 - a. *Subcontractors will not be included in the corporate program unless specifically approved by the Director of EHS.*
6. To the extent practicable, or where contractually required, site-specific programs should be crafted around client programs.

H. RELATED DOCUMENTS

None

I. ATTACHMENTS

Form 1403.026.01 – Project Safety Incentive Program Template



TITLE: Corporate Emergency Management Plan		PREPARED BY: Matthew Curran
SOP NO: 1403.027	PAGE: 1 of 8	AUTHORIZED BY: Pete Joy – President
EFFECTIVE DATE: 9/2024	REVISION DATE: 10/2024	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish a process and guidelines for effectively responding to emergencies in order to quickly contain the event and limit the consequences to Envirocon and our stakeholders.

B. SCOPE

This SOP applies to all Envirocon operations, including offices and project locations where an emergency may occur.

C. DEFINITIONS

1. Client

Entity in which Envirocon has a direct or indirect contractual relationship with to perform services for.

2. Client and Facility Plans

Emergency response plans provided by clients while conducting work for them including facility and location specific plans.

3. Emergency

An emergency is any unplanned event or incident that creates or potentially creates impacts to Envirocon and our stakeholders including safety damage to the environment or property, business interruptions or impacts and reputational impacts.

4. GOB

The Washington Corporations' "General Office Building" located in Missoula, MT, commonly referred to as The Corporate Office or The Missoula Office

5. OSHA

Occupational Safety and Health Administration

6. Parent Company

Washington Corporations is the parent company of Envirocon.

7. Project or Office Emergency Response Plan (P/OERP)

Location-specific plans that list the roles and responsibilities for personnel during an emergency, provide information on emergency services and requirements, and provide basic response procedures for reasonably anticipated emergencies.

8. Severity Levels

Three levels of severity for emergencies defined in this SOP that determine response actions including communication requirements and chain of command.

9. Stakeholders

Clients, client representatives (Engineers), employees, parent company, vendors and the public.

D. INTRODUCTION

This Corporate Emergency Management Plan (CEMP) outlines the expectations and minimum requirements for emergency response planning and execution through the development of plans tailored to specific geographic locations where Envirocon operates, including projects and offices. This CEMP also defines the roles and responsibilities of Envirocon's Leadership Team in supporting and responding to emergencies.

Recognizing the unpredictable nature of potential emergencies that may need to be addressed, this CEMP is intended to provide broad objectives and guidelines as well as establish clear chains of command and communication requirements. It relies on the professional judgment of our staff to adequately address the emergency and minimize impacts on Envirocon and our stakeholders

This CEMP will be reviewed and revised annually or in response to changes in regulatory requirements, business locations, services provided, work conditions, or improvements to Project and Office Emergency Response Plans (P&OERPs).

This CEMP is intended to work with and support other incident and emergency response plans, including Client and Facility Plans, which may be required at project locations or leased/rented properties and related Washington Corporations' Plans, including the Missoula *General Office Building (GOB) Emergency Response Plan (Attachment 1403.027.04)*, the Washington Corporations' Crisis Management Plan and IT Incident Management SOP.

E. EMERGENCY RESPONSE OBJECTIVES

Each emergency is different and presents its own set of challenges that will need to be managed. Envirocon's planning and response to emergencies will comply with the following objectives:

- Prioritize the safety and health of all employees, subcontractors, client representatives, and members of the public.
- Minimize environmental damage or degradation.
- Comply with all applicable laws and regulations.
- Utilize response personnel who are knowledgeable, experienced, and preferably physically close to the incident location to respond and manage the response.
- Minimize the cost and reputational impacts for Envirocon and our stakeholders.

- Clearly and effectively communicate with our stakeholders as appropriate on the current and planned response and recovery operations.

F. EMERGENCY CLASSIFICATION DEFINITIONS

This section defines the three levels of severity used to categorize emergencies, which determines the extent of involvement required from Envirocon's Leadership Team and the necessary communication requirements. Most emergencies will be managed by local staff following a P&OERP with increasing involvement from Envirocon Leadership as the severity of the emergency increases. Envirocon emergencies are categorized into the following three severity levels:

1. Severity Level 1 (Low):

Low-severity emergencies or incidents involving minor issues that affect only a small portion of activities or a few employees and have little potential financial or reputational impact on Envirocon or our stakeholders. Level 1 incidents are managed by the local staff following a P&OERP.

Examples of Severity Level 1 incidents include:

- First aid level injuries.
- Property or equipment damage leading to minimal delays or costs.
- Minor motor vehicle incidents.
- Environmental spills that do not meet minimum reporting quantities.
- Quality issues that have a minimal impact on schedules or costs.
- The presence of a regulatory representative on-site (non-OSHA).

2. Severity Level 2 (Moderate):

Moderate-severity emergencies are incidents that have a moderate potential impact on business and reputation but do not jeopardize overall business continuity.

Examples of Severity Level 2 incidents include:

- Serious injury to an employee, subcontractor, or other member of the project/public.
- Incidents that require notification to regulatory authorities.
- Motor vehicle incidents involving multiple persons or non-employees.
- Property or equipment damage leading to a business delay.
- Environmental spill that requires notification to regulatory authorities.
- Contractual or financial incidents that may impact the project schedule or cost.
- Moderate quality issues that may impact the project schedule or cost.
- Presence of regulatory authorities on-site, including OSHA.
- Fraud or illegal activity.
- Cyber-related events (managed by WashCorp IT Department).

3. Severity Level 3 (High):

High-severity incidents affect multiple employees or subcontractors or have the potential to significantly impact business and reputation and jeopardize overall business continuity. These events may lead to significant disruptions in Envirocon's ability to continue at a project or enterprise-wide level. High-severity incidents require an immediate and comprehensive response from the Office or Project Emergency Response Team and the Corporate Emergency Management Team to manage the situation and restore normal operations as quickly as possible. The President or their designee shall take the lead in responding to the incident.

Severity Level 3 incidents include:

- Employee or subcontractor fatalities.
- Serious injuries to multiple employees or subcontractors.

- Incidents resulting in delays longer than one day and costs that negatively impact the forecasted project gross margin including:
 - Property or equipment damage
 - Contractual or financial incidents
 - Information technology
 - Environmental or weather events
- Large-scale presence of regulatory authorities on-site.
- High-impact fraud or illegal activity (multiple projects or entities).
- Cyber-related events requiring assistance from the WashCorp IT Department, which may lead to long-term impact and delays.

G. PROJECT AND OFFICE EMERGENCY RESPONSE PLANS (P&OERPS)

Project and Office locations will develop a Project or Office Emergency Response Plan as either part of the *site-specific Health and Safety Plan (HASP) (SOP 1403.017)* or as a standalone plan document kept at each project and office location. The Project or Office Emergency Response Plans will comply with OSHA's Emergency Action Plan and Fire Presentation Plan requirements (CFR 1910.38/1910.39 and 1926.24/35) and address, and at a minimum, include the following:

The EHS Director may waive the requirement to develop a P&OERP, for example, on short-term projects, if the substantive requirements of the P&OERP are contained in the Site Health and Safety Plan or other planning documents. Waving the P&OERP requirement shall be documented in writing.

1. Project and Office Emergency Response Plan Minimum Requirements:

- a. *The Emergency Response Team contact list includes roles and responsibilities for each person.***
 - This list shall include relevant client representatives and other significant stakeholders who may participate in or be affected by an emergency situation.*
 - The list shall define alternates in the event that one or more of the Response Team are absent or unavailable.*
 - Team member chain of command, roles, and responsibilities.*
- b. *A list of first aid/CPR-trained personnel.***
- c. *A list and location of response equipment that may be needed to respond to site emergencies.***
 - On-site equipment inventory and location, including fire extinguishers, first aid kits, an AED, eye wash station(s), and emergency decontamination supplies. This may also include specialized equipment such as chemical pumps, spill response supplies, etc.*
 - Off-site equipment, supplies, and subcontractors, including contact information, potential contracts in place, descriptions of services and/or supplies, response time, and limitations.*
- d. *A list of contact information for utility providers.***
 - Reference to the location of utilities and shut off systems/Plan.*
- e. *A list of regulatory agencies and contact information that may need to be notified of an incident.***
- f. *A list of medical and emergency services to be used, including emergency contact telephone numbers and the route to the nearest emergency room.***
- g. *Local emergency resources and medical facilities to be used in the event of employee injury.***

- i. *Local emergency response authorities will be contacted, and site operations and any unique hazards to emergency responders will be reviewed.*
 - ii. *It may be pertinent to provide site tours to local emergency responders (police, fire, EMS) where such agencies may need to respond to high-hazard situations such as demolition, confined spaces, or a work-at-height rescue.*
 - iii. *Establish an air evacuation landing zone with emergency coordinates and demarcation.*
 - iv. *Travel route to medical facilities.*
- h. Site ingress and egress procedures for emergency responders, including:**
- i. *Site security and control.*
 - ii. *Access and egress routes.*
 - iii. *Required PPE, training, and escort procedures.*
 - iv. *Decontamination procedures.*
- i. A list of reasonably anticipated emergencies that are location and or operations-specific and corresponding emergency response plan:**
- i. *High-hazard emergency scenarios such as confined space, fall protection, and chemical exposure.*
 - ii. *Specific response actions for each identified potential emergency.*
 - iii. *A list and contact information of outside resources, including subcontractors and vendors that are required for responding to the emergency.*
- j. Operations recovery and continuity plans (if needed).**
- k. External communications guidelines.**

When working on projects in which the client has an established emergency response plan, Envirocon will follow the client's plan or incorporate the client's emergency response requirements, including who is responsible for communicating with external entities including, regulators or local response resources, into a project-specific plan. Prior to a project beginning, the Project Management Team shall obtain all relevant project emergency response plans from the client and be trained by a competent client representative.

All employees working on projects or offices in which a P&OERP is developed will be trained on the plan.

An example of a *Project Emergency Response Plan*, which can be used as a template, is provided in Attachment 1403.027.03. Physical copies of the P&OERPs will be readily available at project and office locations, and an electronic copy of P&OERPs will be stored on the SharePoint Project Portal and be accessible by Leadership to assist with supporting project and office emergencies.

H. ENVIROCON CORPORATE EMERGENCY MANAGEMENT PROCEDURES

1. Envirocon Corporate Emergency Management Team Structure

When an emergency is categorized at a Level 2 or 3, the Project or Office Emergency Response Team shall notify the Corporate Emergency Management Team. The Corporate Emergency Management Team will provide necessary resources and guidance to ensure that the broader implications of an incident are considered, including operational continuity, financial impacts, Company and Owner reputation, and client/public communications.

For non-project-related events, members of the Corporate Emergency Management Team shall assume both roles.

The Corporate Emergency Management Team (CEMT) includes the following members:

- President
- Vice President of Operations or Director of EHS (based on the nature of the incident or at the discretion of the President)
- Human Resources Manager
- Vice President of Contracts
- Equipment Manager
- Logkeeper / Administrator (assigned as needed)

If the President is unavailable, the Director of EHS will work with the Vice President of Operations to determine when to activate the Corporate Emergency Management Team and when/how to notify the Washington Crisis Management Team.

If neither the President, Director of EHS, or Vice President of Operations is available, the Project Manager (when applicable) will work with the applicable Department Manager to manage the incident and notify the Washington Crisis Management Team.

2. Roles and Responsibilities

The roles and responsibilities of the CEMT are detailed in the *Corporate Emergency Management Team Member Responsibilities Attachment (1403.027.01)*. This attachment should be printed and used as a checklist to assist the CEMT during the response.

3. General Response Guidelines for Common Emergencies

Attachment 1403.027.02, General Emergency Response Guidelines provides common emergencies and corresponding general response guidelines. These guidelines provide recommended responses for managing identified possible emergencies such as major injuries, fires, spills, structural collapses, severe weather, utility interruptions, security threats, and vehicle incidents. These guidelines are intentionally broad to allow for flexibility and adaptation to the unique challenges of each emergency. They outline the basic steps and considerations for responding to various incidents, helping to standardize the approach while allowing for situational adjustments.

4. Project and Office Emergency Response

When an incident occurs at a project site or office location, the Emergency Response Team identified in the applicable P&OERP is responsible for initiating the response, including communicating to Leadership required by the severity of the incident. Should the incident rise to Level 2 or 3, the President shall be notified as soon as practical.

Once notified of a Level 2 or 3 incident, the President will determine the level of response necessary from the Corporate Emergency Management Team and activate the members accordingly. At the President's discretion, team members may be added or dismissed as needed.

After evaluating the emergency, the President will determine if and when to notify the Washington Crisis Management Team or other applicable senior management personnel.

5. Non-Project or Office Emergency Response

When an incident occurs in which there is no corresponding P&OERP, the Director of EHS or his designee is responsible for initiating the appropriate response. The Director of EHS, or his designee, will notify the President as soon as practical.

Once notified, the President will determine the level of response necessary from the Corporate Emergency Management Team and activate the members accordingly.

After being notified of the Level 2 or 3 incident, the President is responsible for determining what level of response is necessary from the Corporate Emergency Management Team and when to contact and/or activate the Washington Crisis Management Team.

6. Corporate Emergency Management Team Meeting Locations

The Corporate Emergency Management Team in Missoula will assemble in one of the available conference rooms.

If a physical location described above is unavailable or impractical, a Microsoft Teams meeting will be set up and distributed to all response members. The WashCorp IT department will set up a secondary Zoom conference bridge if the Microsoft Teams meeting is unavailable. An alternative to these may be implemented at the Envirocon President's discretion.

7. Communication Guidelines

Because of the sensitive nature of emergencies, communication among the various participating team members shall be treated as confidential.

The President will be included in all communications regardless of the communication methods. Communication channel guidance is outlined below:

For financial, legal, or any classified, confidential information or limited reach will be communicated through an in-person or a Microsoft Teams meeting. and information will not be shared in writing (e.g., Email, Teams messaging, or text messaging).

For cyber-related events, communications may be limited to in-person meetings.

8. Media Communication

Effective media communication during an emergency is important for managing public perception, maintaining stakeholder confidence, and providing accurate and timely information to the community.

Only the President is authorized to speak with the media during an emergency.

As information regarding the emergency becomes available, a written response for the media may be created. This should only include basic acknowledgment of the incident and response. The following generic response may be used until a more detailed statement can be developed:

“Thank you for contacting Envirocon. We are aware of the situation and are actively working to gather additional information. At this time, we kindly request your patience as we prepare an official statement that will provide accurate and verified details.

Please understand that we are unable to share specific details about the incident until the official statement is released. Our priority is to ensure that all information provided is accurate and up-to-date.

We value your interest and commitment to delivering accurate news to the public. Rest assure that we are dedicated to keeping you informed and will issue the official statement as soon as possible.

Thank you for your understanding.”

Interview, statement, or conference requests shall be forwarded to the President. If a member of the media arrives on site, they shall be escorted to a safe and secured area.

I. WASHINGTON CORPORATIONS CRISIS MANAGEMENT TEAM

When an emergency rises to Level 3 (or at the discretion of the President), the President shall notify the Washington Crisis Management Team. The Team shall provide resources and direction as necessary to assist in managing the emergency and recovery efforts.

This includes support services such as:

- Legal Support
- Information Technology Support
- Financial / Business Continuity Support
- External Communication Support

J. CORPORATE EMERGENCY RESPONSE TEAM MEMBERS

Role	Name	Contact
President	Pete Joy	406.544.5825
	Alternate - VP of Operations or Director of EHS	
Vice President of Operations	Pat Davidson	810.441.7090
	Steve McQueary	509.727.7981
	Jeff Johnson	503.803.3487
Director of EHS	Matthew Curran – Director of EHS	406.490.8514
Human Resources Manager	Sam Hartman	406.880.8282
	Alternate - Patti Boylan	406.544.1792
Contracts Manager	John D'Antuono	406.544.1161
Equipment Manager	Jed Sandau	406.531.6441
	Alternates Paul Richter / Keith Williams	406.544.4684 / 303.242.2808
Logkeeper / Call Taker	As determined by the Team Leader	

K. RELATED DOCUMENTS

SOP 1403.017: Site Health and Safety Plan (HASP)

L. ATTACHMENTS

- 1403.027.01: Emergency Management Team Member Responsibilities
- 1403.027.02: General Emergency Response Guidelines
- 1403.027.03: Project Emergency Response Plan Template
- 1403.027.04: GOB Emergency Response Plan / Office EAP Template

TITLE: Emergency Response Drill		PREPARED BY: Mohamed Elashheb
SOP NO: 1403.028	PAGE: 1 of 6	AUTHORIZED BY: Matthew Curran, CSP, CIH - Director of EHS
EFFECTIVE DATE: 8/2020	REVISION DATE: 4/2024	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide a standardized method for planning and conducting an emergency drill at Envirocon projects.

B. SCOPE

This SOP will cover planned emergency drills, including the processes of planning and implementing the drill and how to collect and record pertinent information. This will include an after-drill evaluation of what went well and what needs improvement.

C. DEFINITIONS

1. Emergency Drill

Simulated casualty on the work site of a scenario of an injury or illness that is likely to occur on the project site (e.g., heart attack, fall injury, chemical exposure, etc.). At least one drill per year should involve outside EMS response teams.

2. Actor(s)

Employee(s) taking part in the drill who have been assigned a role, including the injured/ill employee, first aid provider, emergency coordinator, or incident witness.

3. EMS

Emergency Medical Services (e.g., on-site responders, ambulance, fire department, police)

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS is responsible for:

- Ensuring the Emergency Response Drill SOP is updated, effective, and aligned with industry standards and regulatory requirements.
- Evaluating and approving the drill planning, execution, and follow-up actions proposed by the project.

2. Project Health & Safety Manager

The Project Health & Safety Manager is responsible for:

- Coordinating with Project Managers, Supervisors, EHS personnel, and emergency services for drill planning.
- Overseeing the development and implementation of the emergency response plan for the project.
- Evaluating drill outcomes and recommending improvements to the emergency response plan.

3. Health & Safety Officer

The Health & Safety Officer is responsible for:

- Acting as or supporting the Emergency Coordinator during drills, managing site response and communications.
- Assisting in the development and implementation of the emergency response plan for the project.
- Evaluating the effectiveness of the emergency response and providing feedback for improvements.

4. Project Manager

The Project Manager is responsible for:

- Notifying local emergency personnel of upcoming drills and coordinating their participation if needed.
- Ensuring the emergency drill is conducted realistically, testing the crew's response to an unannounced emergency.
- Assisting in evaluating the emergency response and providing feedback for improvements.

5. Supervisor

The Supervisor is responsible for:

- Acting as the Emergency Response Coordinator when the drill is being conducted.
- Informing crews during the morning POD/safety meeting that an emergency drill will occur without revealing specific details.
- Monitoring the drill and assisting in evaluating the crew's response and adherence to the emergency response plan.
- Leading the post-drill debrief session to discuss outcomes, lessons learned, and address any questions.

6. Employee

Employees are responsible for:

- Engaging in the drill as actors, witnesses, or responders, according to the assigned roles.
- Offer constructive feedback on the drill execution and suggest improvements based on their experience.
- Apply lessons learned from the drill to enhance personal readiness and response in actual emergencies.

7. Emergency Coordinator

The Emergency Coordinator is responsible for:

- Executing emergency response in accordance with the site emergency response plan.
- Assess the situation and call EMS if needed.
- Notifying the Project Management Team and activating the emergency response plan.
- Assisting in directing EMS to the incident location;
- Directly contact the Project Manager to notify them of the nature and extent of the emergency.
- Notifying EMS if injured/ill employee(s) are chemically contaminated.

8. First Aid Providers

First Aid Providers are responsible for:

- Providing appropriate first aid until EMS arrives.
- Providing information regarding treatment rendered to EMS prior to transport.

E. EMERGENCY RESPONSE DRILL PROCEDURE

1. Drill Planning

- Identify the scenario, select actors, and schedule the emergency drill.***
- Select a location for observers (as needed) and provide clear instructions for all observers so that they do not interfere with the conduct of the drill.***
- If EMS personnel will be involved in the emergency drill, coordinate services as needed. Confirm all notification numbers and access routes are clear and correct.***
- If client representatives will be observing, conduct notifications and provide instructions for them to be able to observe but remain out of the response path.***
- Identify the location on the job site where the injury/illness will occur.***
- Assess the selected location for hazards. If hazards are identified, remove the hazard(s), implement controls, or select an alternate location where no hazards are present.***
- Determine means of access to the location (e.g., standard vehicle, including emergency response vehicles, or specialized vehicle, including off-road vehicles).***
- Try to test actions as closely as possible to how an incident may usually occur, i.e., without the senior management team initiating the event, to test how well site employee training has been received and learned.***

- i. Determine any special equipment needed for the response (e.g., first aid supplies, retrieval equipment, decontamination supplies, etc.).*

2. Implementation

- a. On the day of the drill, during the morning POD/safety meeting, review the site emergency response plan and announce that a drill will be conducted that day.*
 - i. Do not describe the scenario, as the drill measures the crew's response to an emergency.*
- b. Do not describe the scenario, as the drill measures the crew's response to an emergency.*
- c. Prior to initiating the emergency drill, assign the scribe and ensure the scribe is present at the scene.*
 - i. Ensure the scribe has a notepad and pen. If desired, provide the scribe with a camera to document the event.*
 - ii. The scribe should have access to a radio for timeline documentation.*
- d. Initiate the drill using the site radio or other established communication device. Precede or conclude all communications with the phrase: "This is a drill" message.*
 - i. The scribe should begin recording at this time. They need to note the time the event was initiated, the type of injuries, who is acting in what roles, and the time each action is taken, i.e., the call for EMS, the time they arrive, the time they depart the site, and what actions were taken during the initial notification and the arrival of the EMS team.*
 - ii. The Emergency Coordinator initiates site response in accordance with the site emergency response plan and determines which is appropriate for the observed injury/illness.*
 - iii. The Emergency Coordinator assigns someone to make notification calls to client reps, Envirocon staff, and others that may be required by contract.*
- e. Emergency coordinator shall oversee actions taken by others during the emergency drill, including:*
 - i. First aid administered by incident witness and/or additional first aid provider(s);*
 - a. If it is unsafe to move the patient or the injured employee, they will make the injured person as comfortable as possible until EMS arrives. This could require covering with blankets if it is cold, covering with a tarp if it is raining, or other protection. Assignment of an escort for EMS to the site and the patient, making considerations for the type and size of responding vehicles, such as:*
 - Vehicle access to the patient*
 - Potential chemical exposures or decontamination requirements*
 - Special rescue needs, i.e., retrieval equipment, hydraulic jacks or lifts, life flight access, etc.*
 - ii. The incident commander will assign someone to escort EMS to the patient. The transition from first aid provider to EMS should be evaluated.*

- iii. *Escort of EMS from the site (if necessary). Some potential items to consider include:*
 - a. Can EMS drive to where the injured party is?
 - b. Does the ambulance need to be parked in a staging area, and the team takes the EMS team to the patient in a pickup?
 - c. Do we have any decontamination concerns to accomplish prior to putting the injured person in the ambulance, if so do we have another set of coveralls or blankets to cover the individual?
 - d. If we transport the EMS crew to the patient, do we have decontamination concerns for them before they re-enter the ambulance?
- f. ***Upon EMS arrival, the first aid provider will conduct a hand-off with EMS, providing pertinent information about the incident, any vital signs information, and any injuries they are aware of.***
 - i. *After the patient is placed on a backboard or gurney, assist in carrying the patient to the ambulance if necessary.*
 - ii. *After the patient is loaded and secured by EMS, escort EMS off-site again.*
- g. ***Securing or Terminate Drill***
 - i. *Using the site radio or another established communication device, announce that the emergency drill is complete and that everyday activities may resume.*

3. Follow-Up

- a. ***The Emergency Coordinator or other observer should discuss the event with the drill participants, including EMS or other outside participants and observers, to identify any deficiencies and positive observations.***
- b. ***Collect input from the off-site responders to add to the lessons learned.***
- c. ***Develop lessons learned based on participant and observer feedback and prepare a debriefing for the crew.***
 - i. *The debriefing should occur before the following day's POD/safety meeting.*
- d. ***Debriefing Crew Members***
 - i. *If corrective actions are necessary, assign responsible parties and track items to completion.*
 - ii. *Highlight positive observations.*
 - iii. *Answer any questions from the crew regarding the drill or general emergency response.*
 - iv. *Consider other possible scenarios on the project that may result in injury or illness and discuss how to respond.*
- e. ***Revise the Site Emergency Response Plan as needed based on the outcome of the emergency drill.***

F. RELATED DOCUMENTS

None.

G. ATTACHMENTS
None.

TITLE: Pandemic Response Plan		PREPARED BY: Matthew Curran, CSP, CIH – Director of EHS
SOP NO: 1403.029	PAGE: 1 of 13	AUTHORIZED BY: Pete Joy - President
EFFECTIVE DATE: 7/2020	REVISION DATE: 4/2024	

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A. PURPOSE

This Standard Operating Procedure (SOP) provides general guidance to Envirocon's Leadership Team and employees in response to a pandemic (COVID-19 or similar) in an effort to reduce the spread of the disease and the impact on projects, offices, and business continuity. Envirocon will follow all applicable federal, state, local, and client requirements.

B. SCOPE

This SOP applies to all Envirocon employees, subcontractor, and visitors on an Envirocon project site or office.

C. DEFINITIONS**1. Asymptomatic**

An employee that has tested positive for COVID-19 but who is not symptomatic.

2. CDC

Centers for Disease Control and Prevention.

3. Cleaning

The removal of dirt and impurities, including germs, from surfaces. Cleaning alone does not kill germs, but by removing the germs, it decreases their number and therefore any risk of spreading infection.

4. Close Contact

Working within 6ft of a confirmed case of COVID-19 for 15 or more cumulative minutes in a 24-hr period.

5. Disinfecting/Sanitizing

The using of chemicals approved for use against COVID-19 to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but killing germs remaining on a surface after cleaning further reduces any risk of spreading infection.

6. Exposure risk

Close contact with a confirmed case of COVID-19.

7. Fully Vaccinated

You are considered fully vaccinated if you after 14-days:

- Completed the primary series of Pfizer or Moderna vaccine within the last 6 months, or;
- Completed the primary series of J&J vaccine within the last 2 months, and;
- Have received a booster shot

8. Partially Vaccinated

Partially vaccinated means a person who has completed the primary series of Pfizer or Moderna vaccine over 6 months ago and is not boosted, or completed the primary series of J&J over 2 months ago and is not boosted.

9. Presumed Positive

A Person Under Investigation (PUI) who will not be tested due to state/local public health risk assessments, the severity of symptoms, or other reasons as determined by the medical provider, but is experiencing symptoms consistent with COVID-19. Presumed positive cases will be determined on a case-by-case basis.

10. Social distancing

The keeping of space between yourself and other persons while conducting work-related activities inside and outside of the physical establishment by staying at least 6 feet from other persons. Physical separation of an employee from other employees or persons by a permanent, solid floor-to-ceiling wall constitutes physical distancing from an employee or other person stationed on the other side of the wall.

11. Symptomatic

The employee is experiencing symptoms similar to those attributed to COVID-19 including fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, or diarrhea. Symptoms may appear in 2 to 14 days after exposure to the virus.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS is responsible for the development, implementation, and updating of the Pandemic Response Program.

2. Envirocon Senior Leadership Team

The Envirocon Senior Leadership Team is responsible for coordinating with the Project Management Team to evaluate each potential exposure event and determine the appropriate response. The Senior Leadership Team is also responsible for gathering and analyzing information related to the progression of the pandemic in order to implement, alter, or change Envirocon policy.

3. Project Management Team

The Project Management Team includes the project-specific Operations Director (OD), Project Manager (PM), Construction Manager (CM), Supervisors, Project Health & Safety Manager (HSM), and Health & Safety Officer(s) (HSO). The Project Management Team is responsible for the development of site-specific control measures and administration of the Pandemic Response Program. They are responsible for communicating with the client and senior leadership team as needed regarding project and personnel impact.

The single point of contact for each individual project will be the site-specific Health & Safety Officer (HSO). For projects that do not have a site-specific Health & Safety Officer (HSO), the Project Manager (PM) will be the point of contact. In the event the HSO or PM will not be on-site, a designee shall be appointed.

4. Employees

Employees are responsible for following all guidelines outlined in this SOP as well as any additional site-specific guidelines that may be implemented by a client, local health authority, or the company. Employees are required to consistently assess personal signs and symptoms and to report any feelings of illness immediately. Employees are required to take active measures to prevent the spread of disease while at work.

E. SITE-SPECIFIC HEALTH RISK ASSESSMENTS

1. The Project Management Team shall frequently assess their project or office for hazards and tasks that can potentially expose employees to COVID-19 (or other diseases).

a. The Project Management Team shall also consider exposures from members of the public, clients, or subcontractors with whom employees will interact, as well as exposures from close contact with coworkers in the workplace.

b. Once work areas, tasks, and processes have been assessed, the Project Management Team shall inform employees of the tasks identified in the assessment and the control measures that will be used to reduce exposure, as well as the proper procedure for reporting possible exposures and/or symptoms.

2. The Project Management Team, in conjunction with the Senior Leadership Team, will frequently check for regulatory and recommendation updates from state and local public health departments and the local, state, and federal government. When new regulatory requirements or recommendations are announced, the Project

Management Team shall re-evaluate their project site and current control measures to determine if any gaps in compliance exist. Should any gaps exist, the appropriate corrective actions will be taken in a timely manner.

- 3. Additional policies, procedures, or control measures required by a client or local or state government/health department, as well as control measures unique to a project and not included in the general control measures outlined in this SOP, will be outlined in an attachment to the site-specific HASP.**

- 4. Site-Specific Evaluation Considerations**

Prior to beginning a new project, a comprehensive project site evaluation will be conducted to determine if any additional control measures not outlined in this SOP are necessary. This evaluation should include (but is not limited in scope to):

- a. Project access points**

- i. Controlling access to the project is vital in helping limit unwanted interactions between employees, contractors, and visitors. Examine entry and exits points of the project site and determine what security measures and protocols are necessary to ensure that no person enters the area without completing a body temperature check and pre-work health-based risk assessment.*
- ii. Entry and exit control measures and protocols should be added to the site-specific Health And Safety Plan (HASP).*

- b. Meeting Locations**

- i. Evaluate the project site and designate an area that can be used for crew gatherings or meetings such as the daily Plan of the Day meeting, safety meeting, muster areas, etc.*
- ii. Ensure these designated areas will allow for proper social distances during meetings and is easily accessible.*
- iii. If an indoor meeting or gathering area is required, ensure the indoor space is laid out to maximize the distance between employees. When conducting a meeting indoors, all personnel are required to wear a mask regardless of vaccination status when social distancing cannot be maintained.*

- c. High Traffic Areas / High Touch Surfaces**

- i. Evaluate which parts of the project site may have a high volume of foot traffic and determine if different office layouts may reduce this flow. These areas include but are not limited to:*
 - a. Breakrooms/lunchrooms/kitchens
 - b. Bathrooms
 - c. Conference rooms
 - d. Change out / Locker rooms
 - e. Employee desks/cubicles/offices/etc

d. Site-specific Job Safety Analyses (JSA)

- i. When creating or reviewing site-specific JSAs, the guidelines outlined in this SOP shall be considered. Tasks that can be safely modified to reduce potential exposures.*

e. State and Local Regulations

- i. State and/or local regulations will be reviewed to determine if there are any additional requirements not outlined in this SOP.*

f. Inspections

- i. The Project Management Team shall routinely inspect the work environment for hazards associated with COVID-19 and implement the necessary corrective actions.*

F. PRE-WORK HEALTH-BASED RISK ASSESSMENT

- 1. Before coming to work, employees and contractors will be required to conduct a self-guided health check using the following questionnaire or equivalent:**

- 2. Do NOT come on site or enter an office building if you answer “yes” to either question:**

a. Do you have any COVID-19-related symptoms?

i. Fever?

- a. A fever or body temperature of 100.4 degrees Fahrenheit or 38 degrees Celsius or above.*
- b. Envirocon projects shall ensure a touchless infrared thermometer sensitive to within 0.2 degrees is available for use.*

ii. Cough

iii. Shortness of breath

iv. New loss of taste or smell

v. Chills

vi. Repeated shaking with chills

vii. Muscle pain

viii. Headache

ix. Sore throat

x. Congestion or runny nose

xi. Nausea or vomiting

xii. Diarrhea

- b. Have you been in close contact with anyone who has recently tested positive for COVID-19 or has undergone testing for COVID-19?**

- 3. Employees that do not pass the self-guided health check or are feeling symptomatic must:**

- a. Notify their manager or supervisor immediately.**
 - i. The manager or supervisor shall immediately notify the rest of the Project Management Team and then the Senior Leadership Team.*
- b. Remain at home or leave the work area immediately and consult their medical provider.**
- c. If an employee reports that they have failed the pre-work health assessment or report symptoms, the response procedure detailed in Section H will be activated. Contractors that fail the pre-work health assessment or report symptoms will be isolated and their company will be notified immediately.**
- d. In addition to being free of the signs and symptoms associated with COVID-19, all employees must be fit for duty before beginning work as per the 1403.005 Medical Monitoring Program SOP**

G. GENERAL COVID-19 EXPOSURE CONTROL MEASURES

- 1. The Project Management Team shall implement the appropriate hierarchy of controls, including elimination, substitution, engineering, and administrative controls, and personal protective equipment (PPE) selected as a result of site-specific health risk assessments outlined in Section E and in accordance with the 1403.013 Hazard Identification and Correction SOP. Controls and corrective actions for identified health hazards shall follow the hierarchy of controls as described below:**
 - a. Implement engineering controls wherever possible (e.g., physical barriers/shields to separate workers, enhanced ventilation).**
 - b. Implement administrative controls wherever possible (e.g., staggering work shifts, limiting breakroom capacity, practicing social distancing, ensuring workers wear face masks).**
 - c. Encourage appropriate PPE as identified in the site-specific health risk assessments outlined in Section E and in accordance with regulatory standards and the 1403.015 Personal Protective Equipment SOP and 1403.016 Respiratory Protection Program SOP.**
- 2. General exposure control measures include but are not limited to:**
 - a. Limit the size of all in-person gatherings as much as practical.**
 - i. Conference or gathering rooms/areas should be measured and evaluated to determine the maximum occupancy while maintaining proper social distancing.*
 - ii. Conduct Plan of the Day and safety meetings outdoors if possible and use remote meeting applications such as Zoom or Microsoft Teams for meetings that are typically face-to-face.*
 - b. Whether inside or outside, maintain distances of 6ft or more between persons.**
 - i. For employees working in an office setting, desks/chairs shall be positioned to ensure a minimum distance of 6ft or more between each employee.*
 - ii. Where appropriate, signage may be put up to remind employees of social distancing guidelines.*

- c. Where social distancing is impractical outside, face masks may be worn at the discretion of the employee unless required by a client mandate or the local case rate indicates the need.**
- i. *Consideration for wearing a face mask should be made in the following circumstances:*
 - a. When two or more employees must share a vehicle or piece of equipment, regardless of vaccination status.
 - b. When two or more employees must work in close proximity to each other in order to complete a job or task.
 - c. When two or more employees must share a tight, enclosed work area for long periods of time.
 - ii. *Employees are strongly encouraged to wash any face masks or covers frequently that can be cleaned.*
 - iii. *Special accommodations may be made for employees with qualifying conditions or circumstances. The project management team and human resources will determine this on a case-by-case basis.*
 - iv. *Where special accommodations have been made or a mask increases risk during an activity, an alternative may be worn, such as a face shield.*
 - v. *Facemasks or Face Coverings must:*
 - a. Completely cover the nose and mouth;
 - b. Be made with two or more layers of a breathable fabric that is tightly woven (i.e., fabrics that do not let light pass through when held up to a light source);
 - c. Be secured to the head with ties, ear loops, or elastic bands that go behind the head. If gaiters are worn, they should have two layers of fabric or be folded to make two layers;
 - d. Fit snugly over the nose, mouth, and chin with no large gaps on the outside of the face; and,;
 - e. Be a solid piece of material without slits, exhalation valves, visible holes, punctures, or other openings. Acceptable face coverings include clear face coverings or cloth face coverings with a clear plastic panel that, despite the non-cloth material allowing light to pass through, otherwise meet these criteria and which may be used to facilitate communication with people who are deaf or hard-of-hearing or others who need to see a speaker's mouth or facial expressions to understand speech or sign language respectively.
 - vi. *The following are exceptions to Envirocon's requirements for face coverings:*
 - a. When an employee is alone in a project trailer or office.
 - b. While an employee is actively eating or drinking.
 - c. When an employee is wearing a respirator or facemask.
 - d. Where Envirocon has determined that the use of face coverings is infeasible or creates a greater hazard to the employee.

- d. All personnel should avoid different forms of physical contact such as a handshake.**
- e. The EPA will approve all forms of hand sanitizer and cleaning agents and/or require them to adhere to CDC guidelines.**
 - i. The office or project shall provide hand sanitizer with at least 60% alcohol.*
 - ii. All secondary containers shall be properly labeled as per GHS requirements.*
 - iii. All cleaners and sanitizers brought on-site shall be managed via the 1403.010 Hazard Communication Program SOP.*
- f. All personnel are strongly encouraged to wash their hands and use hand sanitizer frequently. Projects and Offices are required to maintain handwashing/sanitizing facilities and supplies properly.**
 - i. Where running water wash facilities are not available, alternative hand hygiene options, such as mobile handwashing stations, will be provided.*
- g. All personnel are strongly encouraged to limit the touching of the eyes, nose, and mouth as much as possible. If a person must touch their face, they are strongly encouraged to wash or sanitize their hands first.**
- h. Envirocon will follow the direction of the CDC, WHO, state/local public health department authorities, and/or clients (including office building owners) on any requirements to discontinue work in any capacity at a work location.**
 - i. If this becomes a requirement, it will be communicated with any additional information at that time.*
 - ii. The Senior Leadership Team will evaluate the data trends in each project and office city and state and make appropriate recommendations for remote working / returning to physical workspaces.*
 - iii. The data trends may include but are not limited to:*
 - a. Number of new, local/state cases;*
 - b. Rolling average of new, local/state cases;*
 - c. Active hospitalizations in local hospitals/statewide, and;*
 - d. Employee or contractor absenteeism rates.*
- i. Offices and Projects shall keep a contact list up to date for communication and notification purposes.**
- j. All personnel are encouraged to maintain all appropriate immunizations as directed by their personal medical provider.**
- k. When case rates indicate a need, office buildings, conference rooms, office trailers, etc, shall be measured to determine maximum occupancy.**
 - i. Maximum occupancy signage shall be posted on the door leading to the room.*
 - ii. The Project Management Team is responsible for enforcing the maximum occupancy.*
 - iii. In the event the maximum occupancy is met and/or exceeded, an assessment shall be conducted to determine how to reduce the number of people in the room. This can be accomplished using the methods outlined in Section G.2.V.*

- l. Shared equipment or machinery should be cleaned and sanitized prior to operation. Shared equipment and machinery should be equipped with spray bottles of disinfectant.***
- m. Project Crew Vans (and similar)***
 - i. Each project crew van should have a bottle of hand sanitizer and disinfectant available.*
 - ii. Project crew vans should be cleaned and sanitized at regular intervals.*
 - iii. When case rates indicate a need, the Project Management Team should assign specific employees to the same project crew van on a daily basis in an effort to reduce the number of close contacts should an employee test positive.*
- n. Employees shall ensure they have the appropriate PPE for the task they are assigned to do and shall keep the required PPE in a clean, sanitary condition. Each project is responsible for ensuring an adequate supply of PPE.***
- o. When required to clean up contaminated surfaces, employees shall clean up the surfaces in accordance with the guidelines established in the 1403.007 Blood Borne Pathogen Exposure Control Plan SOP.***
- p. Where practical, the Project Management Team may implement additional safe work practices to help reduce potential exposure. These practices include but are not limited to:***
 - i. Staggering of shift start/end times.*
 - ii. Staggering of lunch/break times.*
 - iii. Limiting the number of people authorized in a crew van or bus.*
 - iv. Scheduled cleaning/sanitizing times for work areas or equipment.*
 - v. Decreasing crew or shift sizes.*
 - vi. Limiting the number of employees in lavatory facilities to one.*
 - vii. Consideration of special precautions or accommodation for high-risk employees to reduce exposure risks.*

H. GENERAL RESPONSE PROCEDURE FOR A SYMPTOMATIC PERSON

- 1. For a person who begins to feel symptomatic, the following general procedure will be followed:**
 - a. Isolate the person away from other employees or contractors immediately. Provide the symptomatic person with a mask and ask them to wear it.***
 - b. Immediately send the person home if at work or advise them to stay at home and away from the project or office if symptoms arise outside of work.***
 - i. In the event the employee is unable to transport themselves home, the Project Management Team shall assist in helping the employee get home or to their hotel to the extent practical.*
 - c. Conduct Contact Tracing.***

- i. Determine who the person may have had close contact with from the time they first developed symptoms. If possible, determine any close contacts up to 48 hours prior to the initial manifestation of symptoms.
 - ii. Close contact is defined as being within six feet of the symptomatic person for a cumulative total of 15 minutes or more over a 24-hour period with that 48-hour period.
- d. Ensure the Project Management Team has been properly notified. A member of the Project Management Team shall immediately inform the Senior Leadership Team. A member of the Project Management Team will notify the client before the end of the shift.**
- e. Notify those that may have had close contact and monitor symptoms for the next 14-days.**
- i. It is possible to shorten the self-quarantine depending on testing capabilities and health assessments. Consult with the site-HSO for additional details.
- f. Have the symptomatic person and other potential close contacts contact their local healthcare provider or public health department for guidance and testing options when practical or when required.**
- i. The Site-Specific Health & Safety Officer shall identify the local health departments and nearby testing locations during project mobilization. This includes resources for OTC at-home test kits.
 - ii. In the event the employee is unable to transport themselves to the testing locations, the Project Management Team shall assist in helping the employee get there to the extent practical.
- g. Inform other employees and contractors at the project site or office of the cases while ensuring employee privacy.**
- i. For large-scale exposures or high levels of new cases, the Envirocon Senior Leadership Team will work with the Project Management Team and the client to strategize and deliver a formal announcement and response plan.
- h. Sanitize the area or equipment where the person worked. Other persons in close contact should also clean their work areas. No employee is authorized to work in the contaminated area or equipment until it has been properly cleaned and sanitized.**
- i. When possible, the Project Management Team should wait up to 24 hours before cleaning an area potentially contaminated with COVID-19.
 - ii. The proper PPE shall be worn as per the 1403.007 Blood Borne Pathogen Exposure Control Plan SOP.
 - iii. If the contaminated area is an office or piece of equipment, windows and doors can be opened to increase airflow and circulation.
- i. If the test for SARS-CoV-2 result is:**
- i. **Positive**: The person may not come back until all Return-to-Work criteria are met (see Section I for Return-to-Work Guidelines).
 - ii. **Negative**: The person may not come back until all Return-to-Work criteria are met (see Section I for Return-to-Work Guidelines).

j. Employees in close contact shall follow the provisions outlined in the Return-to-Work section.

i. Due to the unique nature of all cases and possible exposures, additional site-specific guidelines or procedures may be developed to address local, state, or client requirements.

I. RETURN TO WORK GUIDELINES

1. Guideline Supremacy Clause:

In the absence of more restrictive client-based Return-to-Work requirements, Envirocon will follow the most up-to-date CDC guidelines regarding Return-To-Work Guidelines. This includes guidelines on discontinuing self-isolation and returning to work after illness, as well as discontinuing self-quarantine and monitoring after exposure. Envirocon will follow CDC recommendations in the event the client requirements are found to be less restrictive.

2. Employees with confirmed COVID-19 who are symptomatic may NOT return to work until the following criteria are met:

a. At least 5 days have passed since symptom onset;

i. Some persons with severe illness and symptoms may produce replication-competent virus beyond 5 days, which may warrant extending the duration of isolation after symptom onset. If symptoms persist beyond 5 days, the employee shall consult with their medical provider.

b. At least 24 hours have passed since the resolution of fever without the use of fever-reducing medications, and;

i. If a fever persists after 5 days, continue to stay at home until the fever resolves.

c. Resolution of all other symptoms (e.g., cough, shortness of breath, etc).

i. If other symptoms persist after 5 days, continue to stay at home until signs and symptoms resolve.

3. Employees with confirmed COVID-19 who are NOT symptomatic may NOT return to work until the following criteria are met:

a. At least 5 days have passed since their first positive test for COVID-19.

b. At the end of the 5 days, the employee remains sign and symptom-free.

c. The employee continues to wear a mask for 5 additional days.

4. Employees who have had close contact exposure to someone with confirmed COVID-19 may not be required to quarantine if they meet all of the following criteria:

a. The employee wears a mask around others for 10 days and has remained asymptomatic since the exposure.

b. A negative test is completed on Day 5.

5. If an employee has had COVID-19 ruled out and has been given an alternate diagnosis (for example, tested positive for influenza), the criteria for return to work should be based on that diagnosis.

- a. In this circumstance, the healthcare provider's recommendations will be followed. Upon returning to work, the employee must be able to pass a pre-work health assessment.**

J. TRAINING

1. Project and Office Employee Training

- a. Training on the general and specific exposure control measures shall be given to employees and contractors in conjunction with the HASP training prior to beginning work at a project site. This includes but is not limited to:**
 - i. Signs and symptoms of COVID-19;*
 - ii. Training on PPE requirements will include a don/doff demonstration, proper disposal, cleaning and maintenance, storage, limitations, and any applicable local, state, or federal requirements/guidelines;*
 - iii. Face covering requirements including don/off and limitations;*
 - iv. Self-monitoring / self-screening including temperature checks using CDC Guidelines and the reasons for it;*
 - v. Hazard or symptom reporting and response procedures including;*
 - vi. How the disease spreads and site-specific control measures that have been implemented such as social distancing;*
 - vii. Location of disinfectants, hand sanitizer, gloves, handwashing stations, and the expectations for use;*
 - viii. General illness and disease prevention including spread avoidance, symptoms, and hygiene;*
 - ix. Envirocon PTO policies and Return-to-work guidelines;*
 - x. Site-specific tasks that may have an elevated risk for COVID-19 exposure;*
 - xi. Other applicable State, Local, or OSHA/MSHA regulations;*
 - a. This includes but is not limited to, Fatigue Management, Hazard Communication, Hazard Identification and Correction, Personal Protective Equipment, and Respiratory Protection.**
 - xii. Mental health & wellbeing considerations and resources*
 - xiii. Employees who work at an Envirocon office will be provided with the proper training in an online announcement via email, Microsoft Teams, or an equivalent medium.*
 - xiv. Updates in local, state, federal, client, or company guidelines or requirements shall be communicated to employees and contractors in a timely manner.*
 - xv. Updates to internal guideline documents shall be made in a timely manner and posted on the Envirocon Portal.*

K. CONFIDENTIALITY AND PRIVACY

It is Envirocon's policy to treat any medical information as a confidential medical record. In furtherance of that policy, all communications and interactions between the employee and the COVID Coordinator are private. This information will only be shared with certain members of

management on a need-to-know basis, as well as first aid and safety personnel and/or government officials, as required by law.

L. RELATED DOCUMENTS

- SOP 1403.004: Fatigue Management Procedure
- SOP 1403.005: Medical Monitoring Program
- SOP 1403.007: Blood Borne Pathogen Exposure Control Plan
- SOP 1403.010: Hazard Communication Program
- SOP 1403.013: Hazard Identification and Correction Procedure
- SOP 1403.015: Personal Protective Equipment
- SOP 1403.016: Respiratory Protection Program
- SOP 1403.024: Incident Response and Investigation

M. ATTACHMENTS

State or Local regulations where applicable.

TITLE: Thermal Stress Program**PREPARED BY:** Matthew Curran, CSP,
CIH – Director of EHS**SOP NO:** 1403.030**PAGE:** 1 of 17**EFFECTIVE DATE:**
7/2020**REVISION DATE:**
2/2024**AUTHORIZED BY:** Pete Joy - President**Table of Contents**

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A. PURPOSE

The purpose of this Standard Operating Procedure is to establish guidelines for managing thermal stress in the workplace, ensuring the health and safety of all employees through proactive risk assessment, effective training, and implementation of appropriate preventive and response measures.

B. SCOPE

This SOP applies to all Envirocon project sites where the potential for temperatures above 81°F or under 20°F exists. It is the responsibility of those carrying out Envirocon work to understand and comply with legal and regulatory requirements, clients' requirements and Envirocon practices.

C. DEFINITIONS

Define anything that need clarification

1. ACGIH

American Congress of Government Industrial Hygienists

2. WBGT

Wet Bulb Globe Temperature

3. HRrest

Resting Heart Rate

4. HRmax

Maximum Heart Rate

5. Acclimatization

The physiological adaptation to heat exposure allows the body to continue to function normally despite higher temperatures.

6. At-risk employee

A person with conditions or risk factors that can contribute to heat stress.

7. Heat stress

The physiological condition is induced when high temperatures and humidity compromise the body's ability to cool itself, resulting in heat-related illness.

8. Threshold Limit Value (TLV)

The limit of heat stress conditions, under which it is believed nearly all workers can be repeatedly exposed without adverse effects. (Developed by the ACGIH).

9. Wet Bulb Globe Temperature (or WBGT)

A measure used to indicate environmental heat taking into account the effects of temperature, humidity and radiant energy.

D. RESPONSIBILITIES

1. Director of EHS

- Oversee the development and implementation of the Thermal Stress Program to ensure it aligns with legal and regulatory requirements, as well as Envirocon practices.
- Ensure that comprehensive training, preventive measures, and emergency response procedures for thermal stress are effectively communicated and accessible to all employees, contractors, and visitors.

2. Project H&S Manager

- Collaborate with the Site H&S Officer to enforce the Thermal Stress Program at the project level.
- Facilitate the integration of the program into the project's Health and Safety Plan (HASP).
- Ensure all project employees receive appropriate training on thermal stress risks, signs, symptoms, and mitigation strategies.

3. Site H&S Officer

- Implement and monitor the Thermal Stress Program on the project site.
- Conduct risk assessments to identify at-risk employees and ensure they receive additional attention and protection.
- Train employees in recognizing the hazards of working in extreme temperatures and the proper use of personal protective equipment (PPE) and other control measures.

4. Project Manager

- Ensure the project complies with the Thermal Stress Program and that all employees and subcontractors understand their roles and responsibilities.
- Coordinate with the Project H&S Manager and Site H&S Officer to ensure all thermal stress mitigation measures are in place and followed.

- Support the timely completion of corrective actions identified from thermal stress risk assessments.

5. Supervisor

- Monitor daily work activities to ensure compliance with the Thermal Stress Program.
- Educate employees on recognizing the signs and symptoms of thermal stress and the importance of hydration and appropriate work-rest cycles.
- Report any incidents of thermal stress and ensure that affected employees receive immediate care and are removed from exposure if necessary.

6. Employees

- Follow the guidelines and procedures outlined in the Thermal Stress Program.
- Participate in all training sessions related to recognizing and mitigating thermal stress.
- Report any personal health conditions that may affect their susceptibility to thermal stress and immediately report any signs or symptoms experienced while working in extreme temperatures.

E. HEAT STRESS PROGRAM REQUIREMENTS

1. Effects of Hot Weather

When the air temperature is greater than 81°F, or the humidity is higher than 60%, most people can feel uncomfortable. As the environment warms up, the body tends to warm as well. The body's "internal thermostat" maintains a constant temperature by pumping more blood to the skin, which is cooled by evaporation from increased perspiration production. In extremes of heat or humidity, or when heat loss through perspiration is limited by impervious clothing, the body's coping mechanism can be overwhelmed, resulting in heat illness and a range of serious and possibly fatal consequences. See Attachment A for Information on Heat Disorders and Health Effects.

2. General Requirements

Envirocon project-specific heat stress controls will be established based on a risk assessment done by following this procedure and will be added as an appendix in HASP as a site-specific control plan. This plan will include emergency response procedures to be followed for heat-related emergency procedures.

a. Training

All site personnel shall be trained in the hazards and controls of heat stress prior to the onset of hot weather. Training will include heat stress fundamentals, the use of heat stress monitoring equipment such as a pulse-ox meter and thermometer and how to take a carotid or radial pulse properly.

b. Acclimatization

Personnel become acclimatized in about 7 to 10 days (and lose acclimatization in about the same period of time). Extra attention should be given during transitional weather and to new employees who are not acclimated to heat stressful conditions.

c. Fluids

Workers shall be encouraged to increase the consumption of water. Cool or cold water shall be used to enhance palatability and consumption. Electrolyte-containing, low-sugar, and caffeine-free beverages may also be used to encourage consumption but should be limited.

d. Shelter

Shelter from radiant heat (i.e., shade) shall be available for ground laborers exposed to direct sunlight (i.e., radiant heat loading) during conditions of heat stress. Shelter does not necessarily require air conditioning, and air conditioning may be uncomfortable for employees working in heat stressful conditions.

e. Clothing

Clean dry undergarments help prevent some heat stress-related problems. Provisions should be made to change PPE garments that may become sweaty and dirty. Showering, if available, also helps to rehab personnel who show signs of high stress. Every effort should be made to minimize PPE requirements, which may increase the heat stress of personnel without a commensurate gain in personal protection.

f. Additional Control Options

Additional heat stress control options are described in Attachment B, Control Options

g. Monitoring

- i. The buddy system is one of the most important aspects of monitoring for heat stress. Through training, employees must be sensitive to early warning signs of heat-related illnesses. Self-/buddy pulse checks are a simple method of extending this principle.*
- ii. At the discretion of the Site Health and Safety Officer, one of two monitoring programs may be employed during program implementation. A program of personal stress monitoring is appropriate for personnel wearing PPE (e.g., level C workers) and for most other situations. A program of WBGT & work/rest regimen is appropriate for personnel not wearing chemical-resistant PPE, which fully encloses the body and prevents evaporative cooling of skin surfaces (e.g., level D workers and workers using certain modified level D or C ensembles). Employees that must be monitored in either program shall include at a minimum:*
- iii. Exposed personnel (e.g., those not working in air-conditioned spaces) conducting ground labor tasks in any ensembles;*
- iv. Exposed personnel (e.g., those not working in air-conditioned spaces) wearing whole body, chemical protective clothing PPE; and*
- v. Any additional personnel considered to be at particular risk by the Site Safety Officer or Project Manager.*

3. Area Monitoring and Work-Rest Regimens-WBGT Based

The following Area Monitoring and Work Rest Regimens are most appropriate when working without PPE:

a. WBGT Area Monitoring

- i. The use of WBGT (wet bulb globe temperature) area monitoring may be used in conjunction with an established work/rest regimen. WBGT monitoring and the work/rest regimen shall be in accordance with the latest edition of the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents" also referred to as the "TLV booklet."*
- ii. In general, this procedure should only be applied to personnel in breathable work clothing with PPE which allows for evaporative cooling (e.g., level D workers or*

modified level D workers where PPE does not prevent evaporative cooling of the skin). If this monitoring program is used for personnel in PPE, then WBGT correction factors for clothing in Table 2 below shall be used.

- iii. Use Attachment C, Area Monitoring Log, to document WBGT readings and workload.

b. Work Rest Regimen

- i. The TLVs specified on Table 1 refer to heat stress conditions under which it is believed that nearly all heat-acclimatized, adequately hydrated, unmedicated, healthy workers wearing lightweight summer clothing may be repeatedly exposed without adverse health effects. The work areas are assumed to have at least some air movement.

Table 1: ACGIH Screening Criteria for Heat Stress Exposure						
Hourly Activity	WBGT for Work Rates that are:					
	Light		Moderate		Heavy	
	C°	F°	C°	F°	C°	F°
100% Work	31.0	87.8	28.0	82.4	-	-
75% Work; 25% Rest	31.0	87.8	29.0	84.2	27.5	81.5
50% Work; 50% Rest	32.0	89.6	30.0	86.0	29.0	84.2
25% Work; 75% Rest	32.5	90.5	31.5	88.7	30.5	86.9
Notes: Based on 5-day week and 8-hour workdays with conventional breaks. Conventional breaks include a 15-minute break in a four-hour period and a half-hour lunch in an 8hour period.						

- ii. Examples of workload intensity:
 - a. **Rest:** sitting quietly
 - b. **Light work:** sitting or standing to control machines, light arm or hand work, occasional walking, driving.
 - c. **Moderate work:** walking about with moderate pushing and pulling, walking at a moderate pace.
 - d. **Heavy work:** digging, carrying, pushing/pulling heavy loads, walking at a fast pace, pick and shovel work.

c. Heat Stress and Clothing Guidelines

- i. If heavy coveralls clothing is worn, ACGIH guidelines must be corrected according to the following table:

Table 2: Correction of TLV for Clothing	
Clothing Type	WBGT correction (in °F)
Cloth coverall	+3
Spunbonded polypropylene coveralls	+6
Polyolefin coveralls	+8
Double-layer woven clothing	+9

- ii. *These values are not to be used to completely encapsulate (level A) suits. In addition, the assumption is that coveralls are worn with only modest clothing underneath, not street clothes.*
- iii. *For Fire Retardant Clothing (FRC), there is no WBGT correction: the lightest weight available should be worn during work in hot environments in conjunction with modest cotton undergarments.*

4. Personal Monitoring and Work-Rest Regimens

a. Personal monitoring programs

- i. *A program of personal stress monitoring shall be used when wearing semi-permeable or impermeable clothing at temperatures above 70 degrees F or with heavy work rates. It may also be used in place of the WBGT monitoring for workers in Level D PPE.*
- ii. *A minimum of two leading indicators as described below shall be used for personal monitoring:*

b. Pulse

- i. *Pulse is the primary means of personal monitoring for heat stress.*
- ii. *Finger or wrist cuffs are simple and objective measuring devices that employees can use to monitor their own crews. If employees are used as part of a monitoring program, these devices should be available to ensure objective observations. Training in such cases should include signs and symptoms, this procedure, and thorough reading of the instructions provided for the monitoring device(s) that will be used.*
- iii. *A baseline Resting Heart Rate (HR_{rest}) and body temperature will be taken each morning and recorded as a daily baseline on the individual's daily heat stress monitoring log (Attachment D) before the worker goes to the field.*
- iv. *Take readings at the beginning of a break whenever heat stress conditions exist (The resting radial or carotid pulse should be taken seated or standing if necessary).*
- v. *Pulse should be less than 110 bpm. (It is important to verify that the worker's resting heart rate is <110 bpm).*
- vi. *Use Attachment D, Heat Stress Monitoring Log, to record workers' readings, including their HR_{rest} and HR_{max}. Where:*

- HRmax = Maximum Heart Rate (Use the chart below to find the HRmax based on worker's age).
- HRrest = Resting Heart Rate (HRrest to be taken before starting back to work after a break).

vii. The following chart is developed based on the ACGIH TLV equation:

- HRmax = 180 - Worker's Age
- Examples:
 30yo: HRmax = 180 – 30 = 150 BPM
 55yo: HRmax = 180 – 55 = 125 BPM

viii. Workers should be rehabbed until the pulse returns below 100 bpm.

ix. The safety officer is responsible for establishing a schedule for monitoring and should include the following minimum requirements (additional monitoring may be required on certain days or for more sensitive individuals):

Pulse Monitoring Schedule			
Conditions	8 am to 11 am	11 am to 3 pm	3 pm to shift end
Personnel do not show any signs or symptoms and monitoring is negative.	• Monitor for signs and symptoms	• 2 hr interval	• 1 hr interval
Personnel show any signs or symptoms and monitoring is negative.	• Monitor for signs and symptoms	• 1 hr interval	• 1 hr interval
Monitoring shows employee stress	• 2 hr interval	• 1 hr interval	• half hour interval
For ANY employee that has already removed for stress and is being returned	• Interval should be cut in half for any individual who has been removed from work for rehab earlier in the shift and is now returning to work. Additional monitoring should also be performed on the following days until the employee becomes acclimatized and is no longer showing symptoms or positive monitoring results.		

x. *Ear or Oral temperature*

- a. Ear temperature may also be used. Ear temperature should be taken when full-face respirators and/or hoods are being worn (i.e., the head may become overheated before the rest of the body shows signs of stress). Workers should be removed if ear temperature increases by more than 1.5°F. Workers should be rehabbed until the temperature returns to normal. It should be noted that some employees may have a “normal” temperature that is different than 98.5°F (Individual employees should be monitored for one week prior to the beginning of heat stress conditions in order to establish if they have a different normal baseline temperature). Workers should not be allowed to enter the zone if they are already having an elevated temperature.

xi. *Body weight*

- a. Body weight change may also be used for personal monitoring for heat stress. Body weight loss of more than 1.5% shall not be exceeded.

xii. Rehab

- a. Rehabilitation should include, at a minimum, seated rest in a shady location; removal of some/all outer garments; fluids; observation; reduction in the ratio of work/rest periods; and increased monitoring after return to work.

xiii. Action level for personal monitoring

- a. An action level for personal heat stress monitoring has been established at 70° F ambient temperature when site personnel are wearing chemical protective clothing during the performance of field activities.

xiv. Work/rest regimen

- a. The following work/rest schedule may be used to help control heat stress when monitoring removals dictate the need. Ground labor and PPE labor should also be scheduled for early morning or evening if possible.

Ambient Temperature (° F)	Work Period (minutes)	Rest Period (minutes)
72-80	120	15
80-85	90	15
85-90	60	15
90-95	30	15
95-100	15	15

5. Identification of At-Risk Employees.

- i. How a person functions under conditions of heat stress will be unique to that person and will depend on:*
 - Age
 - Weight
 - Metabolism
 - Alcohol or drug use
 - Pre-existing medical conditions
 - Level of physical fitness
 - Use of medications
 - Individual sensitivity to heat
 - Possibility of hypertension.
- ii. Employees with any “at-risk” conditions shall have more stringent work/rest regimens or controls.*

F. COLD STRESS PROGRAM REQUIREMENTS

1. Introduction to the Cold Stress Program

To minimize cold-related illnesses, site supervisors are to be aware of the symptoms and environmental conditions that lead to cold-related illnesses. Appropriate steps shall be taken to take to prevent the occurrence of these illnesses. This procedure describes the causes, symptoms, treatment, and/or prevention of cold-related illness.

When the surrounding air or water temperature is cooler than the worker, the body's physical processes must increase to maintain thermal balance. Shivering is the body's attempt to generate increased heat.

2. Cold Stress Signs and Symptoms

a. **Common (but unreliable) symptoms**

- i. *Shivering, pain, and numbness, although commonly associated with cold stress, are not trustworthy indicators to cold exposures!*
- ii. *You should not trust these because prolonged cold exposure numbs all body sensations.*
- iii. *If these symptoms are detected, cold stress should be suspected.*
- iv. *The lack of these symptoms DOES NOT rule out the possibility of cold stress.*

b. **Wind-chill temperature is a better evaluation method as it considers the wind's ability to strip heat from the body through convection.**

c. **c. Water conducts heat away from the body much faster than air. Personnel are especially exposed to a cold stress hazard when performing spill clean-ups in boats or around open water in cold weather situations. Falling into cold water can quickly rob body heat.**

d. **Clothing that is wet with perspiration (as well as from water contact) will cause heat loss through conduction.**

3. Cold-Related Injuries and Illnesses

a. **Trench Foot.**

- i. *Cause: Occurs as a result of extended exposure of the feet to cold and moisture.*
- ii. *Injury: Capillary walls of the feet are injured, resulting in tingling, itching, and pain.*
- iii. *Recognition: Blisters may form, followed by ulceration of the skin.*

b. **Frost-Nip.**

- i. *Cause: Is a localized superficial freezing of extremities such as ears, nose, toes, and fingers.*
- ii. *Injury: Workers experiencing frostnip are susceptible to future injury and should avoid chilling.*
- iii. *Recognition: The skin initially appears dark and bluish due to bleeding under it, which can sometimes become gangrenous.*

c. Frostbite.

- i. Cause: Frostbite occurs when the moisture in the skin actually freezes, forming ice crystals, resulting in the damage of skin cells. The ears, nose, toes and fingers are most susceptible because of poorer circulation in these areas. The body may shut down flow to the extremities in order to maintain warmth in body core areas. See Table 5 for a chart on how long it takes frostbite to occur in the most susceptible 5% of the population.*
- ii. Injury: Tissues are destroyed when bodily fluids turn to ice. A damaged area can become gangrenous, resulting in the loss of tissue, finger tips, and toes.*
- iii. Recognition:*
 - a. A burning pain is noted initially, then pain decreases and numbness sets in.*
 - b. The injured area becomes red, then blue/red.*
 - c. The skin becomes waxy pale in appearance because of lack of oxygen.*

d. Hypothermia.

- i. Cause: Occurs when body heat production is insufficient to replace heat lost to the environment.*
- ii. Injury: The core body temperature is lowered and the pulse rate slows. Metabolic processes in the body are finely tuned to perform at normal body temperature. As the temperature is lowered, muscular weakness occurs, mental abilities dull, and the worker becomes uncoordinated. Cardiac arrest follows if the core temperature continues to fall.*
- iii. Recognition:*
 - a. Signs of hypothermia are evident at 95° F body core temperature.*
 - b. Consciousness is lost between 89.6 - 86.0° F.*
 - c. At lower core temperatures, cardiac arrest is possible.*
- iv. Exposure to cold water decreases the body's core temperature rapidly, and consciousness is quickly lost.*
- v. Workers on or over water should be acutely aware of the danger of immersion during cold weather.*
- vi. Hypothermia results in dulling of senses and could result in poor decision-making.*

4. Cold-Stress Prevention

a. Training and recognition.

- i. Preventing cold stress is similar to preventing heat stress in many ways. Training and recognition of the hazard are especially important.*
- ii. All personnel will receive training on the cause, symptoms, and, most importantly, methods of prevention of cold stress injuries.*

b. Clothing.

- i. Prevention of hypothermia and other cold injuries is best accomplished by protecting workers from cold and moisture.*
- ii. Clothing is the most important factor in the prevention of injury.*
- iii. Personnel working on land should layer clothing with the outer layer being wind and water-resistant.*
- iv. The layers should be vented at the wrist, neck, and waist to reduce wetting from perspiration.*
- v. Protect extremities that have poor circulation.*
- vi. Keep the head and face covered.*
- vii. Wear insulated footwear, and keep socks dry (bring extra socks as needed).*
- viii. Gloves are extremely important.*
- ix. Never allow bare skin to contact metal surfaces at sub-zero temperatures.*

c. Acclimatization.

- i. Do not count on acclimatization. Only a limited degree of acclimatization can occur from exposure and working in cold environments.*
- ii. Some physiological changes do occur, but people also learn to protect themselves more effectively from extreme temperatures.*

d. Fluid Replacement

- i. As with heat stress, blood circulation and heat transfer is critical to dealing with cold temperature extremes.*
- ii. Cold weather causes significant water loss as a result of the dryness of the air.*
- iii. Fluid intake should be increased to prevent dehydration, which directly affects blood volumes and flow to the extremities.*
- iv. Warm, sweet, caffeine-free, nonalcoholic drinks and soup offer the best fluid replacement and provide caloric energy.*

e. Work-Rest Regimens

- i. When temperatures are less than 20° F (actual or wind chill), heated warming shelters should be available.*
- ii. Workers should use these on a regular basis. See Table 3 at the end of this procedure for guidelines for scheduling breaks.*

f. Diet

- i. As with any work in extreme temperatures, personnel will be instructed to eat a well-balanced diet to replace calories burned and provide necessary vitamins and nutrients.*

g. Environmental Monitoring

- i. Regular monitoring of the environment by recording wind speed and actual thermometer readings for comparison to the wind-chill chart should occur at regular intervals depending on conditions. See Table 4 for wind chill equivalents.*

h. Prohibited Activities

- i. Alcohol should not be consumed since it increases blood circulation to the skin and interferes with internal thermostatic control. Alcohol also interferes with mental acuity, which can lead to risk-taking.*
- ii. Cigarette smoking should be prohibited since nicotine restricts the flow of blood to the extremities.*

5. Cold-Stress Injury and Illness Treatment and Management

a. Trench Foot, Frosting, and Frost Bite.

- i. These injuries require immediate response, including removing the individual from a cold environment, gradually warming the affected areas, and preventing the victim from using the affected limbs (e.g., driving the victim or carrying or not allowing the victim to walk).*
- ii. Obtain immediate medical attention as these types of injuries become more severe as exposure progresses.*
- iii. AVOID RAPID WARMING OF EXTREMITIES.*

b. Hypothermia

- i. Hypothermia is a life-threatening condition that requires immediate response. Remove the victim to a warm area. The individual may be disorientated and unable to talk clearly or understand you.*
- ii. Help the individual to a warm place and wrap them in warm blankets or bathe them (if possible) in warm (not hot) water.*
- iii. If they are conscious, give hot (non-caffeine) liquids to drink.*
- iv. Summon immediate medical attention. Untreated hypothermia can lead to ventricular fibrillation (heart attack) and death.*

6. Environmental Monitoring

a. Measurement of Cold Stress

- i. Key climatic factors such as air temperature and speed influence the heat exchange rate between a person and the environment. The Wind Chill Temperature (WCT), also known as the Wind Chill Index, accounts for both air temperature and air speed. See Table 4 for the Wind Chill Temperature Chart.*

b. Workplace Monitoring Guidelines

- i. It's recommended to start environmental monitoring when temperatures fall below 16°C (61°F). Specifically, below -1°C (30°F), the temperature and airspeed should be measured and recorded at least every four hours. When airspeed exceeds 2 m/s (5 mph), the WCT should be determined and recorded, especially when the ECT falls below -7°C (19°F).*

7. Physiological Monitoring

a. Core Temperature Monitoring

- i. A physiological marker for cold stress is a reduced core temperature below 36°C (96.8°F). Monitoring for hypothermia includes checking for signs and symptoms such as a noticeable drop in manual dexterity reported by workers or supervision, which indicates local cold stress.

b. Medical Surveillance

- i. For individuals routinely exposed to extremely cold conditions (below -24°C or -11°F ECT), medical certification based on physical exams considering fitness, weight, cardiovascular health, and other conditions affecting cold-stress tolerance is suggested.
- ii. Consultation with a WorkCare physician is advised for employees under care for chronic diseases. Medical restrictions may be appropriate if there's a reason to suspect a person cannot properly thermoregulate, especially in air temperatures below -1°C (30°F).

8. Cold-Stress Monitoring Procedure

To conduct physiological monitoring for cold stress effectively, following a structured procedure that includes preparation, the monitoring process itself, and responsive actions based on the monitoring results is crucial.

a. Step 1: Preparation

- i. *Equipment Needed:*
 - a. Digital thermometer for measuring core body temperature.
 - b. Heart rate monitor.
 - c. Skin temperature sensors.
 - d. Stopwatch or timer.
 - e. Monitoring logs or software for recording data.
- ii. *Preparation Steps:*
 - a. Ensure all equipment is calibrated and functioning correctly.
 - b. Train personnel in using the equipment and in recognizing symptoms of cold stress.

b. Step 2: Conducting Monitoring

- i. *Select Monitoring Times:*
 - a. Conduct monitoring before the shift starts to establish baseline physiological parameters.
 - b. Monitor at regular intervals, especially during colder periods or when workers report feeling cold. For example, every 2 hours during work in cold environments.
 - c. Conduct a final check at the end of the shift.
- ii. *Measuring Core Body Temperature:*

- a. Use a digital thermometer to measure the worker's core body temperature. Ensure the thermometer is used according to the manufacturer's instructions to get accurate readings.

iii. Checking Skin Temperature:

- a. Use skin temperature sensors placed on extremities (e.g., fingers, toes) to measure surface temperatures.

iv. Heart Rate Monitoring:

- a. Use a heart rate monitor to check the worker's heart rate, which can indicate the body's effort to maintain warmth.

b. Maximum Heart Rate Calculation

The formula for calculating the maximum heart rate is:

$$\text{Maximum Heart Rate} = 206 - (0.62 \times \text{Age})$$

This formula indicates that the maximum heart rate decreases by approximately 0.62 beats per minute for every year of age.

c. Decision-Making Based on Heart Rate

If a worker's heart rate approaches their calculated maximum, they should be removed from the cold environment and brought into a shelter to warm up. The exact threshold for action should consider the nature of the work and individual fitness levels, but as a general guideline, reaching or exceeding 90% of the calculated maximum heart rate could be used as a trigger for intervention.

d. Age Consideration

Since the maximum heart rate decreases with age, older workers may reach their maximum heart rate at lower levels of exertion compared to younger workers. This must be considered when setting thresholds for intervention.

e. Practical Application

Before Work: Calculate the maximum heart rate for each worker based on their age using the provided formula.

During Work, Monitor heart rates, especially in cold conditions. Wearable heart rate monitors provide real-time data.

v. Decision-Making Process:

- a. If the worker's heart rate reaches 90% of their age-adjusted maximum, then the worker should be directed to take a break in a warm shelter.
- b. If the worker's heart rate remains within safe limits, then they can continue working but should still be monitored for any signs of cold stress or other health issues.

vi. Record and Analyze Data:

- a. Document all readings in the monitoring logs (1403.030.01 or 02 – Area / Employee Thermal Stress Monitoring Log), noting any significant changes from the baseline measurements.

c. Step 3: Decision-Making Process

i. If Core Body Temperature Drops Below 35°C (95°F):

- a. Then initiate immediate warming measures. Remove the worker from the cold environment, provide warm fluids, and use warming blankets if necessary. Seek medical evaluation.
- ii. *If Skin Temperature Drops Significantly:*
 - a. Then provide localized warming (e.g., hand warmers), and assess the need for additional protective clothing or a break from exposure.
- iii. *If Heart Rate Increases Significantly Without Physical Exertion:*
 - a. Then it may indicate the body's increased metabolic rate to generate heat. Allow for a warm-up break in a sheltered area and reassess clothing insulation.
- iv. *If Any Symptoms of Hypothermia or Frostbite Are Observed:*
 - a. Then, remove the worker from the cold environment immediately and follow emergency procedures to treat hypothermia or frostbite. Seek medical attention as soon as possible.

d. Step 4: Follow-Up

- i. *Evaluate the Effectiveness of the Intervention:*
 - a. Re-measure the physiological parameters to ensure they return to safe levels.
 - b. Based on the findings, Adjust work-rest schedules, clothing, or environmental controls as needed.
- ii. *Document and Review:*
 - a. Record all incidents, interventions, and outcomes.
 - b. Review the data periodically to identify patterns and improve cold stress management practices.

9. Cold-Stress Program Resources

Work/Warm-up Schedule for a 4-Hour Shift

Air Temperature--Sunny Sky °C (approximate)	°F (approximate)	No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind	
		Maximum Work Period	Number of Breaks	Maximum Work Period	Number of Breaks	Maximum Work Period	Number of Breaks	Maximum Work Period	Number of Breaks	Maximum Work Period	Number of Breaks
-26 to -28	-15 to -19	(Normal Breaks) 1		(Normal Breaks) 1		75 min	2	55 min	3	40 min	4
-29 to -31	-20 to -24	(Normal Breaks) 1		75 min	2	55 min	3	40 min	4	30 min	5
-32 to -34	-25 to -29	75 min	2	55 min	3	40 min	4	30 min	5	Non-emergency work should cease ↓	
-35 to -37	-30 to -34	55 min	3	40 min	4	30 min	5	Non-emergency work should cease ↓			
-38 to -39	-35 to -39	40 min	4	30 min	5	Non-emergency work should cease ↓		Non-emergency work should cease ↓			
-40 to -42	-40 to -44	30 min	5	Non-emergency work should cease ↓		Non-emergency work should cease ↓		Non-emergency work should cease ↓			
-43 & below	-45 & below	Non-emergency work should cease		↓		↓		↓		↓	

Schedule applies to any 4-hour work period with moderate to heavy work activity; with warm-up periods of ten (10) minutes in a warm location and with an extended break (e.g. lunch) at the end of the 4-hour work period in a warm location.

Adapted from ACGIH 2012 TLVs

Table 3: Cold Stress Work-Rest Chart



Wind Chill Chart

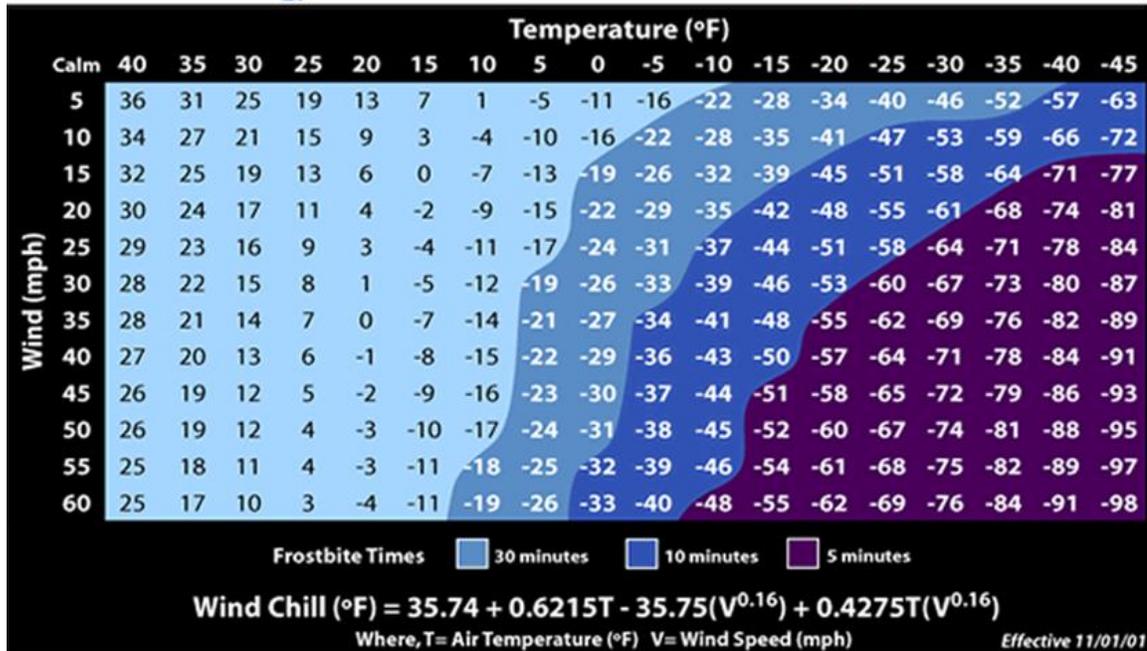


Table 4: Wind Chill Temperature Chart

G. TRAINING

Ensure comprehensive understanding and capability among all employees to identify, prevent, and respond to thermal stress risks in line with OSHA regulations and Envirocon best practices.

1. Thermal Stress Training

When thermal stress becomes an identified hazard at the project, employees shall be trained on the following:

- a. **Fundamentals of heat and cold stress, including the physiological effects on the body.**
- b. **Identification of the signs and symptoms of heat and cold stress.**
- c. **Preventive measures including hydration, work-rest cycles, and appropriate use of personal protective equipment (PPE).**
- d. **Procedures for responding to heat and cold emergencies, including first aid and when to seek medical attention.**
- e. **Use and interpretation of environmental monitoring tools like the Wet Bulb Globe Temperature (WBGT) for heat and the Wind Chill Temperature (WCT) for cold.**
- f. **Specific protocols for acclimatization and adapting work practices based on weather conditions and individual risk factors.**

2. Frequency and Timing

- a. Initial training upon job assignment or introduction of the program.*
- b. Annual refresher training to update employees on any changes in procedures or regulations.*
- c. Additional training when significant changes occur in job roles, equipment, or after an incident related to thermal stress.*
- d. Documentation and Record Keeping:*
- e. Maintain comprehensive records of all training sessions, including dates, attendee lists, and assessment results.*
- f. Regularly review and update training materials to ensure they remain current with the latest health and safety standards and research findings.*

H. RELATED DOCUMENTS

None

I. ATTACHMENTS

Form 1403.030.01: Area Monitoring Log

Form 1403.030.01: Employee Thermal Stress Monitoring Log



TITLE: Ground Disturbances		PREPARED BY: Matthew Curran, CSP, CIH
SOP NO: 1403.031	PAGE: 1 of 16	AUTHORIZED BY: Pete Joy - President
EFFECTIVE DATE: 5/2022	REVISION DATE: 5/2024	

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A. PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish the requirements for personnel engaged in ground disturbance activities, in particular ones that have the potential to interact with underground utilities, cave-in hazards, and confined spaces.

B. SCOPE

This SOP applies to all ground disturbance activities on an Envirocon project. Ground disturbance includes any activity that results in the disturbance of the earth by the use of hand tools, heavy equipment, or earth-moving equipment. Examples of ground disturbance activities include but may not be limited to:

- Excavating & Trenching
- Clearing and grubbing;
- Grading;
- Plowing or tilling;
- Topsoil stripping;
- Landfilling;
- Any mechanical digging that goes further than the One Call requirements as per state regulations;
- Constructing easements, berms, borrow pits/areas
- Installation of environmental easements and fence posts on projects;
- Vacuum, Hydro, Potholing, and all activities involved with locating underground utilities
- Drilling, soil sampling, piezometer installations, and geographical surveys.

The ground disturbance does not include the following activities:

- Routine, minor road maintenance;
- Blasting activities;
- Use of hand tools to dig to a depth of less than 1ft

C. DEFINITIONS

1. Excavation Competent Person

The Excavation Competent Person(s) (ECP) is responsible for authorizing and inspecting all ground disturbances and excavations, identifying excavation hazards, and determining controls as required in 29 CFR 1926, this SOP, and Envirocon SOPs listed below in Section F. The Project Manager and H&S Manager are required to authorize and designate (respectively) the competent persons required for projects involving ground disturbance activities.

An Excavation Competent Person shall be listed by name and qualified in accordance with 29 CFR 1926.650, Subpart P, and will be identified in the site-specific HASP and on the Competent Persons Designation form after a review of relevant training and experience has been conducted by the Project Manager using the criteria outlined in the Code of Safe Work Practices Section Q.3.

2. Mark Outs

Markings placed on the ground demarcate underground utilities. Depending on the terrain, vegetation, and weather conditions, mark outs may consist of paint, pin flagging, whiskers, or a suitable combination.

Uniform Color Code and Marking Guidelines

White	Proposed Excavation
Pink	Temporary Survey Markings
Red	Electric Power Lines, Cables, Conduit, and Lighting Cables
Yellow	Gas, Oil, Steam, Petroleum, or Gaseous Materials
Orange	Communication, Alarm or Signal Lines, Cables, or Conduit
Blue	Potable Water
Purple	Reclaimed Water, Irrigation, and Slurry Lines
Green	Sewers and Drain Lines

3. One-Call or “811”

One-call or “811” is a national call-before-you-dig phone number that alerts local utilities of the intent to perform ground disturbances in an area.

4. Requirement

Action or activity that must be undertaken prior to or while excavating in areas suspected of, or having confirmed underground utilities.

5. Spotter

An individual who assists a heavy equipment operator by visually monitoring the work. The spotter shall maintain communication with the operator.

6. Tolerance Zone

Proximity to an underground utility where only soft or hand dig methods are utilized is defined as the radial distance from the outer edge or wall of a utility. It varies by State and may vary depending on the type of utility. Typically, it is between 18 and 36 inches. It shall not be less than 18 inches unless approved by the utility owner or engineer and Envirocon Excavation Competent Person (ECP), Health and Safety Officer, and Project Manager.

7. Underground Utility

Any below-ground line, installation, or structure used by a utility, service provider, or property owner. Common examples include cable, internet, telephone lines, water service, sewer lines, electrical lines, and gas lines.

8. Trench

A trench is an excavation in which the depth exceeds the width. Despite the depth, excavations greater than 15 feet wide at the bottom are not trenches.

9. Excavation

All excavation activities, regardless of depth, must comply with 29 CFR 1926, Subpart P, and Envirocon's Site-specific HASP and JSAs.

Subpart P (29 CFR 1926.650[b]) defines excavations as "... any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal."

10. Ground Disturbance Permit

The high-risk activity permit must be completed by an Excavation Competent Person prior to beginning any activities defined in the scope above.

D. RESPONSIBILITIES

1. Director of EHS

The Director of EHS authorizes this SOP and periodically reviews and updates the SOP in accordance with industry guidelines and best practices.

2. Planning and Estimating Team

The Planning and Estimating Team is responsible for allocating sufficient resources and scheduling duration to allow the project to perform ground disturbances near underground utilities in accordance with this SOP.

3. Project Manager

The Project Manager is responsible for field teams performing operations in accordance with this SOP as applicable to their specific project site. Along with the Health & Safety Manager, the Project Manager is responsible for designating Excavation Competent Person status for qualified individuals, as described in Section C.1, above.

4. Construction Manager or Superintendent

The Construction Manager or Superintendent is responsible for implementing field operations in accordance with this SOP and notifying the ECP, Project Manager, and Health and Safety Officer if field operations cannot be performed in compliance with this SOP. The Construction Manager or Superintendent may take on the role of ECP if designated as described in Section C.1 above.

5. Health and Safety Officer (HSO) or Safety Competent Person (SCP)

The Site Health and Safety Officer (HSO) and/or Safety Competent Person (SCP) is responsible for monitoring and controlling field operations per the requirements in this SOP. The HSO and/or SCP consults with the Construction Manager, Superintendent, ECP, and Project Manager when ground disturbances near utilities are planned for a project site.

6. Excavation Competent Person (ECP)

An excavation competent person (ECP) shall be listed by name and qualified in accordance 29 CFR 1926.650, *Subpart P* as described in Paragraph J. The Envirocon Competent Person will be designated in writing per the company's most current training and qualifications requirements, or an equivalent document or certificate shall be used to document the person's designation.

General requirements for competent persons are described in Section Q (below).

The Project Manager and H&S Manager for projects involving ground disturbances are required to authorize and designate (respectively) the competent persons required for projects involving ground disturbance activities. This is typically accomplished by making these designations in the HASP or by using the Competent Person Designation Form.

The HASP and/or the Competent Person Designation Form require three signatures:

- The Project Manager must sign the form to give the competent person authority to correct conditions.
- The H&S Manager or officer is required to sign as the person responsible for designating the competent persons in the project safety plans.
- The competent person must also sign in order to acknowledge the assignment of these responsibilities.

The competent person is responsible for inspecting all ground disturbances, identifying excavation hazards, and determining controls as required in 29 CFR 1926.650 through 1926.652; as well as Envirocon procedures. They include (but are not limited to):

- Protecting surface encumbrances.
- Identification and protection of above and below-ground utilities and installations.
- Safe access and egress.
- Controlling exposure to vehicular traffic.
- Controlling exposure to falling loads.
- Ensuring appropriate warning systems for mobile equipment.
- Identification and evaluation of hazardous atmospheres and confined space hazards.
- Protection from hazards associated with water accumulation.
- Evaluating the stability of adjacent structures.
- Protection of employees from loose rocks or soil.
- Establishing safe walkways.
- Any additional responsibilities specified in the site-specific HASP or work plans.

E. GROUND DISTURBANCE SAFETY

A competent person shall authorize and inspect all ground disturbances to ensure compliance with 29 CFR 1926.650 Subpart P and the following safe work practices. Ground disturbance

activities involving personnel entry shall be authorized through the use of a job safety analysis and a ground disturbance permit.

1. Ground Disturbance Permit

- a. The Project Manager, Supervisor, Site Health and Safety Officer, and/or Excavation Competent Person are responsible for documenting compliance with the requirements above and OSHA's excavation standard. This shall be accomplished by written documented inspections and/or using the Envirocon Ground Disturbance Permit process.**
- b. The Ground Disturbance Permit is required for work activities defined as ground disturbance and should include a signed Job Safety Analysis (JSA) and Field Crew Activity Plan (FCAP) signed by all involved employees. The Ground Disturbance Permit includes:**
 - i. Hazards and associated controls*
 - ii. Steps used to identify and mark underground utilities*
 - iii. Soil classification*
 - iv. Depth change considerations*
 - v. General sketches or additional notes*
- c. The Ground Disturbance Permit shall be completed and reviewed by all employees involved with the ground disturbance prior to beginning.**
- d. If the ground disturbance task is scheduled to take one shift or less, the single-day 1403.031.01 – Daily Ground Disturbance Permit may be used.**
- e. If the ground disturbance task is scheduled to take more than one shift and it is practical to do so, the 1403.031.b Weekly Ground Disturbance Permit may be used.**
 - i. For each new week, a new Weekly Ground Disturbance Permit shall be issued and used.*

2. Safe Work Practices

a. General Requirements

- i. The ground disturbance area shall be inspected each day by a competent person before work begins. Any issues or new potential hazards shall be reported to the Excavation Competent Person, Project Manager, Supervisor, and Site Health and safety Officer and corrected prior to work beginning.*
- ii. The appropriate documentation shall be recorded on the Ground Disturbance Permit.*
- iii. Access and egress (ladders, ramps, stairways) are to be provided within 25 feet of lateral travel along the trench for any/all personnel in trenches at all times.*
- iv. In ground disturbances where employees may be required to enter, excavated or other materials shall be effectively stored and retained at least 2 feet or farther from the edge of the trench.*
- v. All employees in trenches shall wear the appropriate PPE as identified in the site-specific HASP.*

- vi. *Personnel shall not work in excavations where water has accumulated (or is accumulating) unless adequate precautions have been taken to protect workers against the hazards posed by water accumulation.*
- vii. *Employees exposed to vehicular traffic shall be provided with and instructed to wear warning vests made of reflective or high visibility materials.*
- viii. *No employees will be permitted under loads handled by shovels, excavators, derricks, or hoists.*
- ix. *Dust conditions shall be kept to a minimum through the use of water or other dust controls or by limiting ground disturbance activities.*
- x. *When water is visible in the excavation or trench, the Excavation Competent Person shall inspect (or re-inspect) the area to ensure it is safe to continue work.*
- xi. *Each employee at the vertical edge of a trench or excavation 6 feet or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.*

xii. Other Protective Systems

- a. Where employees or equipment are allowed to cross over excavations, all walkways and/or bridges will have guardrails. Do
- b. Adequate barrier protection will be provided at remotely located excavations (e.g., reflective cones or sawhorse barriers).
- c. Employees will be protected from water accumulation, including the use of shields, and such working conditions must be inspected by a competent person before work begins.
- d. Where the potential for a cave-in exists, the following protective controls may be used:
 - Sloping and benching the sides of the excavation;
 - Supporting the sides of the excavation; or
 - Placing a shield between the side of the excavation and the work area.
 - Adding additional support systems such as underpinning;
 - A registered professional engineer may evaluate the excavation and determine that the structure is far enough away from the excavation that it would not be affected by the excavation activity or that the excavation work will not pose a hazard to workers.

b. Utility Locates

Before any ground disturbance activity, a local utility locate service (or on-site equivalent) shall be contacted to determine the presence of any underground utilities such as a sewer line, communication line, water line, natural gas line, electric line, or other underground installation. See Section G for additional requirements and best practices for excavations near underground utilities.

c. Trenches

- i. *Trenches more than 5-feet in depth must either be shored, supported, or the excess height laid back to protect personnel entering the trench from cave-ins. Acceptable methods of protection are described in 29 CFR 1926.650, Subpart P.*

- ii. *All trenches more than 5 feet deep have to conform to OSHA regulations for sloping/shoring depending on soil type A, B, or C (See 29 CFR 1926.650, Subpart P).*
- iii. *Others less than 5 feet may require sloping/shoring based on a competent person's judgment.*
- iv. *Sloping other than for Type C materials shall not be used unless the competent person has documented two tests as described in 29 CFR 1926.650, Subpart P.*

d. Atmospheric Hazards and Testing

- i. *As part of daily inspection responsibilities, the competent person is responsible for evaluating potential sources of hazardous atmospheres or confined space hazards.*
- ii. *Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, the atmospheres shall be tested before employees enter excavations 4 feet deep or deeper.*
- iii. *Ground disturbances where monitoring results or the competent person has identified the potential for such atmospheres shall be considered a permit-required confined space per the 1403.020 Confined Spaces SOP.*

F. GROUND DISTURBANCES NEAR OVERHEAD UTILITIES

1. General Requirements

Overhead utility lines near the ground disturbance activities should be evaluated prior to work beginning. Specific control measures shall be implemented to prevent contact, including maintaining the required separation distance depending upon the voltage and using a spotter if required.

The minimum distances from overhead power lines must be maintained unless a qualified electrician has verified that the lines are de-energized, the appropriate lockout has been completed, or protective barriers or insulating material have been applied to the line by the local power authority. This applies to mobile equipment as well as manual handling of materials.

2. Overhead Utility Line Clearances

Before beginning any work near overhead utility lines, the ECP, or a designee, shall determine the voltage of the utility line and if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, one of the following controls must be implemented:

a. Deenergize and ground.

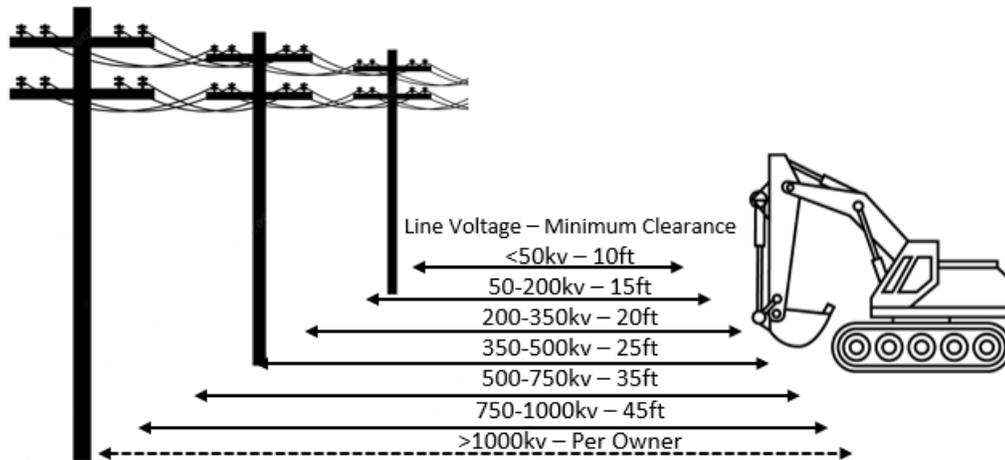
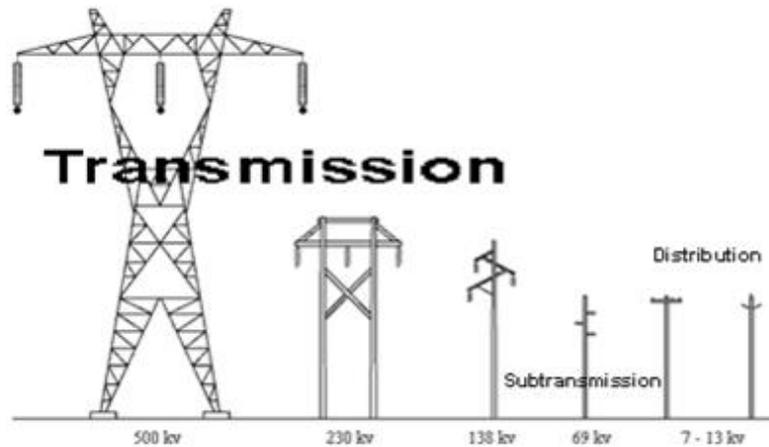
- i. *Confirm from the utility owner/operator that the power line has been de-energized and visibly grounded at the worksite.*

b. 20-footoot clearance.

- i. *Ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer than 20 feet to the power line.*

c. Based on the utility line voltage, maintain the prescribed distance from the utility line:

TABLE A—MINIMUM CLEARANCE DISTANCES	
Voltage (nominal, kV, A/C)	Minimum clearance distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	As per the utility line owner



G. GROUND DISTURBANCES NEAR UNDERGROUND UTILITIES

1. Introduction

Listed below are industry-standard best practices that all project teams are required to follow to prevent inadvertently striking an underground utility during ground disturbance

operations. The procedures provided in this section are considered the minimum. Additional measures may be required depending on the project and identified hazards.

2. Project Planning and Estimating

To the extent practicable, all ground disturbance work near underground utilities should be planned and budgeted for during the estimating phase of the project. Planners and estimators will use the resources available to assist in the identification of underground utility lines during the planning and estimating phase. Construction or Existing Conditions drawings typically provide known utility locations but should not be exclusively relied upon.

3. General Requirements

The following sections provide actions site personnel must take if a ground disturbance is planned for a project site.

a. Applicability

- i. In some specific situations (e.g., remote site, no exposure to utilities, cold and dark status, etc.) the following may not be applicable, but a deviation must be reviewed and approved by the ECP, Project Manager, and Health and Safety Officer and be documented daily on the ground disturbance permit or documented within the Project Work Plan, Work Package, Task Specific Work Plan, or site-specific Health and Safety Plan.*

b. Utility Locate via One-call or “811”

- i. If ground disturbance activities are planned, a utility location must be performed prior to starting ground disturbance operations. To schedule a utility locate, use the one-call system or submit a request through the State-specific website in which the work is being performed.*
- ii. Locates must be requested two days prior to the planned ground disturbance (the day the request is made is not included). Ideally, locates should not be requested earlier than ten days prior to the planned ground disturbance, but if locate markings are preserved or can be readily and accurately reestablished, the duration between locate marking and planned ground disturbance may be extended.*
- iii. Upon notification, the affected utility companies will send representatives to the site and mark their underground utilities within the ground disturbance area.*
- iv. Utility representatives may only mark their owned utilities and not those owned by the property owner.*
- v. If the location determines that no utilities are within 5 feet of the planned ground disturbance area, the project can proceed with ground disturbance activities.*

c. Private Utility Locates

- i. It is common that the property owner is responsible for utility lines from a residence or facility to their connection with the municipality/utility-owned connection.*
- ii. If the ground disturbance is planned on privately owned property, a private utility locator should be used for utility marking or clearance.*
- iii. The private utility locator should provide a map with coordinate locations, either latitude and longitude or northing, and easting, of located and suspected utilities.*

- iv. *Additionally, the ECP should interview the private landowner or facility representative to inquire about the potential location of utilities on the property prior to starting earthwork.*

d. Ground Disturbance Permit

- i. *Ground Disturbance Permits must be completed daily. The permit may be Envirocon Form 1403.031.01 or 1403.031.02, or client-provided equivalent.*

e. Pre-Ground Disturbance Planning and Inspection

Prior to performing ground disturbance activities in an area that may contain underground utilities, complete the following:

- i. *When the ground disturbance site cannot be clearly and adequately identified on the locate ticket, the ECP should designate the route and/or area to be excavated using white pre-marking prior to the arrival of the locator.*
- ii. *Each contractor executing ground disturbance activities on a site should initiate their own one-call locates and have separate reference numbers. This includes Envirocon-managed subcontractors.*
- iii. *The ECP shall verify the one-call ticket(s) is current (check Ticket Number and a copy must be with the ECP and/or the excavator operator). Retain the locate reference number from the one-call center that verifies the locate was requested.*
- iv. *Verify that one-call locates have been completed but are not expired.*
- v. *Verify all listed utility owners have responded to the one-call locate request and that the contact information is available to any subcontractors on the site.*
- vi. *The ECP has obtained a notice from the underground utility owner/operator of the tolerance zone of the underground utility by marking, flagging, or other acceptable methods at the work site or is notified that a no-conflict situation exists. This takes place after notification from the one-call center to the underground utility owner/operator and within the time specified by state law.*
- vii. *Record and maintain a combination of dated pictures, videos, and/or detailed field sketches of the locate marks to document the actual placement and record the response to the locate request.*
- viii. *Review the construction drawings and verify that all the utilities shown on the drawings agree with the locate markouts.*
- ix. *Monitor for critical utilities on-site, including restrictions on ground disturbance or encroachment permits, and notify the appropriate inspectors, if required (ground disturbances in and around some critical and hazardous utilities require an inspector on-site to ensure the integrity of the systems during the ground disturbance process; prior notice is often required on gas, oil, high voltage, and some communication systems).*
- x. *Verify that the physical conditions, surface utility structures, risers, pedestals, previous markings, and job site work plan match and confirm the locate marks (if not, or if marks look disturbed, request a remark).*
- xi. *Monitor for any privately owned utilities or underground structures that may not participate in the one-call ticket system but which may exist, i.e., lighting, landscape lights, irrigation, sprinkler systems, power outlets, and septic systems. If any evidence is found, contact the owner and/or engineer and wait until the*

systems have been located and marked or obtain the services of a private utility locator to mark utilities located on private property.

xii. Monitor for any new construction, utility trenches or evidence of new utility installations.

f. Utilities Located Within the Ground Disturbance Area

The following steps are required if utilities are located within the ground disturbance area.

i. Protect Markings

- a. The ECP should ensure the protection and preservation of the staking, marking, or other designations for underground utilities until they are no longer required for safe ground disturbance. If any utility mark is removed or no longer visible, the ECP should stop excavating and notify the one-call center for re-marks.
- b. The ECP should call the one-call center to refresh the ticket when excavation continues past the life of the ticket (sometimes, but not always, as defined by state law).

ii. Define the Tolerance Zone

- a. The industry-standard tolerance zone is between 18 and 36 inches and often varies by State and utility company. Each project shall verify its minimum tolerance zone in accordance with State law and the utility owner. See the chart in Section J for more information.
- b. The location of the buried utility line may vary relative to the location of the paint markings. This can happen for a number of reasons, such as inaccurate location information or human error during the marking process. Therefore, it is important to use additional methods, such as vacuum excavation or hand digging, to locate the utility line before any excavation work begins accurately. It is also important to note that the paint markings themselves do not indicate the depth of the utility line, so additional precautions should be taken to prevent accidental damage to the line.
- c. To account for variation between the paint markings and the actual location of the line, a wider tolerance zone should be put in place beyond the marked location of the underground utility line to allow for any errors in the markings' location and any potential deviation from the expected depth and location of the utility line.
- d. The "wider tolerance zone" measurement may vary depending on the field conditions, the utility's location, the soil type, other nearby utilities, etc. The ECP should consider this when completing a Ground Disturbance Permit.

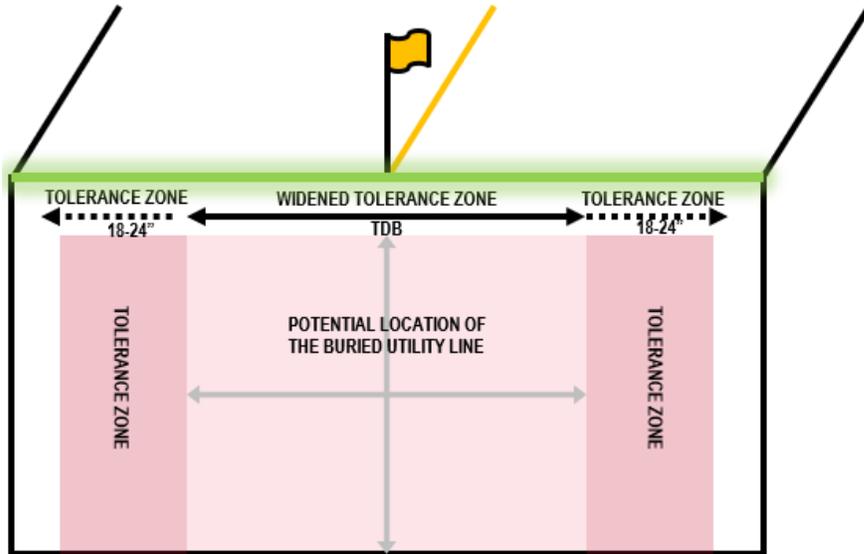


Figure 2a: Tolerance Zone Example Pre-Physical Locate

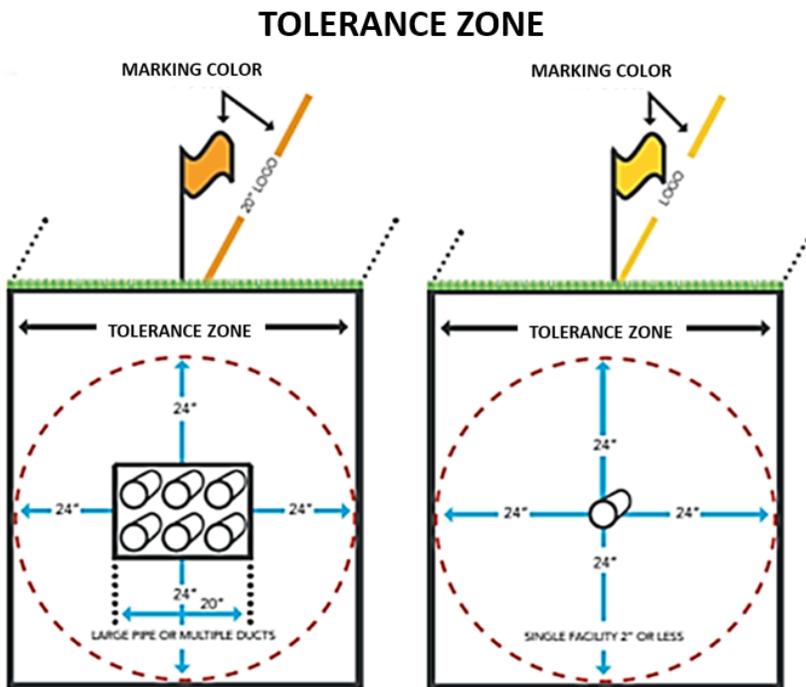


Figure 2b: Tolerance Zone Example Post-Physical Locate

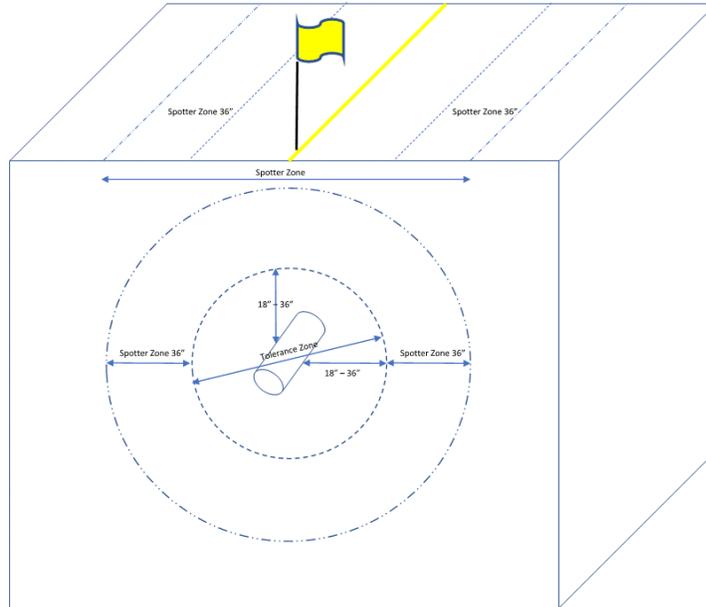


Figure 3: Tolerance Zone With Spotter Zone Example

- e. Different types of utilities may have different tolerance zones. For example, the tolerance zone for a private underground irrigation pipe may be 6 inches, whereas the tolerance zone for an industrial gas line may be 3 feet. If the owner or utility does not define the tolerance zone for a known utility, work shall not be started until the tolerance zone is defined and documented.
- f. The tolerance zone shall not be less than 18 inches unless written approval is received from the owner or engineer and Envirocon ECP, Project Manager, and Health and Safety Officer.
- g. In the event the planned ground disturbance depth intersects the tolerance zone around the actual utility, all material within the tolerance zone must be excavated in accordance with Section G, and confirmation of the utility's location is required.

iii. Confirm the Location of the Utility

- a. Physically expose the utility to confirm the location using methods that will not damage the utility. Methods to consider include hand-digging (potholing), soft digging, vacuum excavation, and hand tools that use air or water under pressure or other means approved by the owner or facility.
- b. To confirm a utility's position, it must be physically located at a minimum of 2 positions along the alignment. Site conditions may warrant confirming additional physical location positions as determined by the ECP, in consultation with the Health and Safety Officer and Project Manager, and documented on the ground disturbance permit.

Note: If a utility line is reburied after an initial uncovering, or if potholes have been filled in, new potholes must be dug and new utility line depths must be confirmed prior to any new ground disturbances.

- c. After visual confirmation, each pothole shall receive a marker visible above the ground surface that contains markings as to the type of utility and depth below the ground surface. The markings may be removed after the ground disturbance is complete.
- d. The ECP shall notify the utility owner/operator directly or through the one-call center if an underground utility is not found where one has been marked, is found at a depth other than indicated by the locate, or is found unmarked. Ground disturbance activities stop until the reason for the discrepancy is understood. Project documents and maps should be updated accordingly.

iv. Ground Disturbance Adjacent or Above the Utility but Outside the Tolerance Zone

- a. When using heavy equipment to excavate within 3 feet of the tolerance zone, a spotter shall assist the operator by visually monitoring the ground disturbance. A spotter may not be required if the utility has been physically located in enough positions to accurately determine its location as determined by the ECP in consultation with the Health and Safety Officer and Project Manager.
- b. In instances where buried utility lines are found at varying depths after potholing with soft dig methods and material removal adjacent or above the utility line is required, the utility line should be fully uncovered before proceeding with mechanical means.
- c. If the measured depth of the utility line is less than 36", no mechanical means for material removal may be used within the tolerance zone without fully uncovering the utility line unless a written risk review is performed and written approval is received from the owner or engineer, Envirocon ECP, Project Manager, and Health and Safety Officer.

v. Ground Disturbances within the Tolerance Zone

- a. If ground disturbance is required within the tolerance zone it must be performed by methods that will not damage the utility. Methods to consider include hand digging (potholing), soft digging, vacuum excavation, and hand tools that use air or water under pressure.

vi. Protection of exposed utilities

- a. In areas where the potential for falling objects exists, protective barriers or other suitable methods should be implemented to prevent objects from reaching the utilities.
- b. Workers must use appropriate barriers, barricades, or caution tape to create a visible perimeter around the exposed utilities, clearly demarcating the area.
- c. Protective measures for exposed utility lines shall be documented on the daily or weekly Ground Disturbance permit.

vii. Inadvertent Contact

- a. Incidents involving inadvertent contact with an underground utility must be reported immediately in accordance with 1403.024 Incident Reporting and Investigation requirements. Additionally, notifications to the utility line

owner, client, and relevant third parties must be made in a timely manner according to contract requirements and state or local regulations.

g. *Utility Relocation*

In all cases, the ECP should coordinate work that requires a temporary or permanent interruption of a utility owner/operator's service with the affected utility owner/operator.

H. RELATED DOCUMENTS

SOP 1401.007: Project Plans, Procedures, and Submittals
SOP 1403.011: Code of Safe Work Practices
SOP 1403.013: Hazard Identification and Correction Procedures
SOP 1403.021: Lockout Tagout Procedure
SOP 1403.024: Incident Reporting and Investigation

I. ATTACHMENTS

Form 1403.031.01: Daily Ground Disturbance Permit
Form 1403.031.02: Weekly Ground Disturbance Permit

J. RESOURCES

1. Common Ground Alliance Website: <https://commongroundalliance.com/>
2. State-Specific Minimum Tolerance Zone Chart

Alabama - 18"	Montana - 18"
Alaska - 24"	Nebraska - 18"
Arizona - 24"	Nevada - 24"
Arkansas - 18"	New Hampshire - 18"
California - 24"	New Jersey - 18"
Colorado - 18"	New Mexico - 18"
Connecticut - 18"	New York - 24"
Delaware - 24"	North Carolina - 24"
Florida - 24"	North Dakota - 24"
Georgia - 18"	Ohio - 18"
Hawaii - 30"	Oklahoma - 24"
Idaho - 24"	Oregon - 24"
Illinois - 36"	Pennsylvania - 18"
Indiana - 24"	Rhode Island - 18"
Iowa - 18"	South Carolina - 24"
Kansas - 24"	South Dakota - 18"
Kentucky - 18"	Tennessee - 24"
Louisiana - 18"	Texas - 18"
Maine - 18"	Utah - 24"
Maryland - 18"	Vermont - 18"
Massachusetts - 18"	Virginia - 24"
Michigan - 36"	Washington - 24"
Minnesota - 24"	West Virginia - 24"
Mississippi - 18"	Wisconsin - 18"
Missouri - 24"	Wyoming - 18"

TITLE: Subcontractor Management Program**PREPARED BY:** Matthew Curran, CSP,
CIH – Director of EHS**SOP NO:** 1403.032**PAGE:** 1 of 6**EFFECTIVE DATE:**
2/2022**REVISION DATE:**
4/2024**AUTHORIZED BY:** Pete Joy – President**Table of Contents**

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A. PURPOSE

The purpose of the Subcontractor Management Program (SMP) SOP is to establish standards for the qualification, approval, and management of subcontractors performing work for Envirocon.

B. SCOPE

This program applies to all subcontractors conducting work for Envirocon and may also apply to certain specified contract services under Envirocon Service Agreements. This program does not apply to contract services that may be considered incidental such as package delivery by a third-party vendor, general off-site administrative work, or other non-production-based services.

C. DEFINITIONS

None

D. RESPONSIBILITIES**1. Director of EHS**

The Director of EHS is responsible for:

- The development and implementation of the Subcontractor Management Program.
- Reviewing subcontractor performance and qualification to determine suitability for Envirocon projects.

- Including subcontractor compliance and performance in annual audits and health and safety performance reviews.

2. Project Health & Safety Personnel Responsibilities:

The Project Health & Safety Personnel, which includes the assigned Project Health & Safety Manager, Site-Specific Health & Safety Officer, and/or the Site Safety Competent Person, is responsible for:

- Acting as a project resource for the Subcontractor Management Program.
- Ensuring proper communication, training, and availability of the program to all employees, current and potential subcontractors.
- Approving all non-Envirocon Standard Operating Procedures (SOPs), plans, or procedures for subcontractors not working under the Envirocon EHS Program and/or HASP.

3. Project Management Team Responsibilities:

The on-site Project Management Team, which includes the assigned Vice Presidents of Operations, Project Manager (PM), Construction Manager (CM), Project Coordinators, and Supervisors, is responsible for:

- Ensuring that all elements of the program are in place.
- Ensuring that subcontractors are held responsible for this program's requirements, in collaboration with the Health and safety Personnel.

4. Employee Responsibilities:

All employees are responsible for:

- Using the information and training given to them to assist in managing subcontractor activities on Envirocon property.
- If they have questions regarding subcontractor management, they should contact their supervisor or the Project Health & Safety Officer for specific information.

5. Subcontractors

Subcontractors are responsible for:

- Using the information and training given to them to protect themselves, coworkers, and the environment against workplace hazards.
- Contacting the Project Management Team member if there are questions concerning compliance with Envirocon, client, or regulatory requirements.
- Ensuring their employees have been properly trained and approved to conduct work at Envirocon properties.
- Providing the proper tools and equipment for the requested job, personal protective equipment for all contract employees, and ensuring that their equipment meets the requirements of the Envirocon EHS Program where applicable.
- Reporting all injuries, illnesses, near misses, or other safety-related issues to an Envirocon supervisor or manager immediately.
- Reporting any hazards identified, whether caused by their work or Envirocon, and taking action to prevent injuries or incidents.
- Actively participating in incident investigations.

E. SUBCONTRACTOR MANAGEMENT PROGRAM DESIGN

This Subcontractor Management Program has been written such that:

- 1. It complies with federal, state, and local regulations;**
- 2. It complies with the relevant requirements of the Envirocon EHS Program;**
- 3. Workplace hazards are adequately evaluated and characterized on the Envirocon Hazard and Risk Assessment Worksheet and;**
- 4. Hazard control measures are in place to minimize health and safety risks and protect employees, subcontractors, and visitors.**
 - a. Each Project manages the training and control of work processes for all subcontractors that are requested to conduct work on Envirocon property;***
 - b. Safe work procedures and training on Envirocon EHS Program requirements are provided prior to the Subcontractor beginning work;***
 - c. The Envirocon Hazard and Risk Assessment Worksheet shall be used to identify potential health and safety exposures during routine and non-routine tasks specific to the site and tasks being performed.:***

F. SUBCONTRACTOR MANAGEMENT POLICIES

- 1. The Subcontractor Management Program is applicable to all Envirocon projects and property to ensure Subcontractors perform work in accordance with federal, state, and local regulations and within the Envirocon EHS Program requirements.**
- 2. General Subcontractor Management Program Requirements**
 - a. The Envirocon Project Team and Subcontractor must complete the Subcontractor Kick-Off Checklist (Form 1401.006.02) prior to the subcontractor beginning work.***
 - i. Where the subcontractor is unable to meet the requirements outlined in the checklist, the subcontractor will be required to conform to the requirements of the relevant Envirocon policy, SOP, or HASP requirement(s), or submit a written plan detailing how they will comply or why it may be unnecessary that they comply.*
 - a. Any requests for exemptions or alternative compliance procedures must be approved by the Project Management Team, the Director of EHS, and/or the Project Health and Safety Managers.**
 - b. Where the subcontractor will be required to adopt Envirocon and/or client EHS SOP(s), they will receive training on the relevant SOP(s) by an Envirocon competent person.**
 - b. Subcontractors must have policies and procedures governing working conditions and work practices that meet or exceed applicable federal, state, and local regulations and are at least as protective as those required by Envirocon. Subcontractors without such policies and procedures shall conform to Envirocon EHS Program standards.***
 - c. Subcontractors are responsible for providing a safe and healthy work environment for their employees and shall work in a manner that does not***

endanger themselves, Envirocon employees, Envirocon property, or the environment.

- d. Subcontractors shall not permit hazardous, at-risk, unhealthy, or environmentally unsound conditions or activities over which it has control to be conducted on Envirocon property by their employees.**
- e. Prior to beginning work, subcontractors must provide training documentation for required regulatory training (such as HAZWOPER), fit-for-duty statuses (when required), all machinery or equipment being operated on-site, and any other activities requiring task-specific training.**
- f. Subcontractors must ensure a drug and alcohol-free workplace. Any subcontractors performing risk-sensitive job functions are subject to the same conditions and prohibitions of Envirocon's Substance Abuse Policy. Envirocon may, at its sole discretion, include other "comparable" job functions as covered by its EHS and HR Programs.**
- g. Subcontractors will review the Envirocon Subcontractor Management Program Orientation information (Attachment A), the site-specific Health And Safety Plan (HASP), Envirocon Hazard and Risk Assessment Worksheet (Form 1403.017.d), and relevant Envirocon SOPs with its employees assigned to the job and discuss any site-specific or job-specific safety issues with an Envirocon Project Team Member prior to the start of work.**
- h. After reviewing the Envirocon Subcontractor Environmental Health and Safety Orientation Information, HASP, and other related documents, all Subcontractors assigned to the job will sign an acknowledgment form (Attachment B) stating that they have reviewed and understand the content. Any new employees assigned to the job after the project has begun will also be required to review the safety information and sign an acknowledgment form.**
- i. Subcontractors will be required to attend each morning's Plan of the Day (POD) meeting or meet with a Project Management Team member prior to beginning work if the start time is after the POD has concluded.**
- j. Subcontractors shall meet with an Envirocon Project Management Team or Health & Safety Team member prior to beginning work in order to discuss the scope of the job, the hazards involved, work controls, and other job-specific items. An Envirocon Project Team member will help subcontractors fill out applicable Control of Work documents prior to the Subcontractors beginning work. Subcontractors are required to have these documents with them in the vicinity of the work being conducted.**
 - i. Applicable Control of Work documents include but are not limited to:**
 - a. Plan of the Day / Authorization to Work (POD / ATW)**
 - b. Field Crew Activity Plans (FCAP)**
 - c. Job Safety Analyses (JSA)**
 - d. Behavior-Based Safety Observations (BBSO)**
 - e. Equipment Qualifications**
- k. Subcontractors shall adhere to the incident and injury reporting requirements outlined in SOP 1403.024.**

- l. Subcontractors will participate in any and all incident or injury investigations with Envirocon Management. Unsafe acts or conditions conducted by Subcontractors will also be subject to investigation.***
- m. Subcontractor will participate in a post-job evaluation if requested by Envirocon.***
- n. Subcontractors are subject to a health and safety inspection with no previous notice. The Subcontractor shall grant Envirocon access to records (including but not limited to relevant policies, procedures, SDSs, etc.) and its premises (including but not limited to vehicles, trailers, etc.) and those of its Subcontractors to verify compliance under this program.***
- o. Implement corrective actions identified in the incident investigation prior to restarting of work activities as determined by Envirocon PM and HSO.***

G. SUBCONTRACTOR APPROVAL PROCEDURE

1. Proposal and Estimating Phase

- a. Subcontractor approval will be granted once the following elements of the Subcontractor Management Program have been completed and received:***
 - i. The Subcontractor Vendor Pre-Qualification and RFQ Package for each Subcontractor assigned to the job is reviewed, signed, and on file.*
 - ii. The subcontractor has met the minimum Envirocon insurance requirements.*
 - iii. When practical, it is determined that the subcontractors have a history of regulatory compliance with governmental entities and Envirocon (if work has been conducted previously) and a safety record that is in good standing with Envirocon expectations.*
 - iv. When the subcontractor is required to perform a significant portion of the scope of work or will be completing high-risk jobs on the project site, relevant subcontractor safety documentation shall be reviewed by the Director of EHS, the Project Health & Safety Manager assigned to the bid, or their designee and determined to be as or more stringent than Envirocon and/or Federal/State requirements.*
 - a. Where subcontractor policies or procedures do not meet Envirocon or client requirements, the subcontractor will be required to follow the provisions outlined in Envirocon or client SOPs.*
 - b. If the subcontractor is a large influence (as determined by the professional judgment of the Envirocon estimating team, Capture Manager, and/or Operation Lead) on the project bid and their scope of work is an elevated safety risk, and Envirocon has not received the applicable safety questionnaire and documents, the subcontractor quote will be considered a “non-compliant” quote. The project bid team will consult with the relevant Senior Leadership Team members to determine if the subcontractor’s quote will be used in the final bid submission.*

2. Subcontractor Mobilization and Pre-Work Phase

- a. Subcontractor approval for beginning work will be granted once the following elements of the Subcontractor Management Program have been completed:***

- i. Completion of Subcontractor Kick-Off Checklist*
- ii. Completion of training as required based on hazard and risk assessment and JHA's associated with work to be completed by the subcontractor.*
- iii. Site-Specific HASP and site-orientation training including any pre-mobilization or on-site training required by the client*

H. TRAINING

The Project Management and Health & Safety Team shall ensure that all subcontractors are trained on the procedures of the Subcontractor Management Program. All Envirocon Project Team and Health & Safety Team members shall be trained on the provisions of the program, the subcontractor approval process, and the responsibilities of all parties involved.

I. AUDIT AND REVIEW

This program will be reviewed annually or when new or significant changes occur that necessitate changes to the program. Periodic audits will be performed to ensure adherence to this program. This is done to ensure that the Subcontractor Management Program is being effectively implemented and that it continues to be effective.

J. RELATED DOCUMENTS

SOP 1403.017: Health And Safety Plan

Form 1403.017.04: Envirocon Hazard and Risk Assessment Worksheet

K. ATTACHMENTS

Form 1403.032.01: Subcontractor Environmental Health and Safety Orientation

Form 1403.032.02: Subcontractor Acknowledgement Form



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Envirocon Environmental Policy

Envirocon, Inc., nationwide providers of remediation, demolition, and ecological restoration services, hereby affirm our commitment to sustainable and responsible use of natural resources in our business practices. Through management leadership, employee participation, and professional environmental support, Envirocon is committed to executing work in an environmentally responsible fashion with a focus on continuous improvement in all aspects of our business.

Our commitment to the environment extends to our employees, customers, joint ventures, subcontractors, and the communities in which we operate. As such, we are committed to:

- Communicating this policy to our employees, subcontractors, teaming partners, vendors, and other affected project stakeholders
- Meeting or exceeding compliance standards for all applicable environmental laws and regulations
- Minimizing waste by considering all opportunities to minimize consumption of resources and maximize waste reduction
- Minimizing resource consumption through reduced use, and reuse or recycling of materials
- Minimizing air emissions through the selection and use of our transportation and equipment fleet, and the source of our power requirements
- Training our employees regarding environmental issues that may affect their work
- Evaluating all environmental concerns brought to our attention by our employees
- Supporting client programs by assisting them in meeting their sustainability goals
- Ensuring our projects are performed in compliance with this environmental policy
- Continuously evaluating our policy and practices, including measuring, and verifying our environmental performance.
- Monitor our impact on the environment and measure our performance, then communicate the results to our employees, subcontractors, and stakeholders.

The President of Envirocon is responsible for implementing and monitoring this policy. All Envirocon employees and subcontractors are obligated to follow this policy.



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Sustainability Practices

1.0 ENVIRONMENTAL SUSTAINABILITY

Envirocon’s culture of sustainability is embodied in our vision statement “Inspired People Improving our World.” We embrace the value of sustainability and through management leadership, employee participation and professional environmental support we are committed to operating in an environmentally responsible fashion with a focus on continuous improvement in all aspects of our business. We believe each decision we make and project we complete should provide long-term benefits to our employees, the communities we work in, the environment we restore, and the clients we serve. It is with this mindset that we adopted an Environmental Policy to help fully support our client’s green remediation goals.

2.0 COMPLIANCE

Envirocon is committed to meeting or exceeding compliance standards for all applicable laws, regulations, and other environmental requirements concerning protection of the public health and the environment regardless of cost and schedule impacts.

3.0 SUSTAINABLE REMEDIATION AND GREEN PRACTICES AND PROCEDURES

Envirocon’s project management team takes leadership in promoting and achieving green remediation goals on all our project sites. Our management team communicates the goals, policies, and procedures to all employees and subcontractors prior to beginning work.

Envirocon’s policies and procedures that support environmental stewardship, long-term sustainability, and green remediation practices are summarized below.

3.1 Equipment

Maintenance - All motor vehicles and mobile equipment are maintained in a safe operating condition free of oil, hydraulics, and other fluid leaks. Envirocon uses in-house planned preventive maintenance tracking software. This system is part of our company-wide accounting software and allows us to systematically review machine performance. The planned preventive maintenance status of all equipment is reviewed weekly. Scheduled preventive maintenance is conducted using a written checklist. Our mechanics also have received factory training from major equipment manufacturers and specialty equipment manufacturers. Mechanics and operators are trained to use spill kits whenever equipment has a hydraulic leak or oil spill. On environmental-sensitive work sites Envirocon uses bio oil or clarity oil (the equivalent to vegetable oil), and marine grease in case of a spill or leak.

Fueling - Envirocon adheres to strict equipment fueling procedures to prevent discharge of fuel products into the environment. These requirements are also required of our subcontractors. Each



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fuel truck carries a fuel spill kit and the fueling process is administered by an in-house mechanic or oiler.

Emissions - We have a strong commitment to controlling the emission impacts of operating heavy equipment. We use low-sulfur and ultra-low sulfur diesel at many of our projects. More than 80% of our heavy equipment fleet is Tier II or better.

To reduce emissions and fuel consumption, we have equipped our heavy equipment fleet with Komatsu’s KOMTRAX monitoring system. The GIS tracking system allows our team to evaluate equipment performance in real time and allows us to monitor and reduce idling times and reduce vehicle emissions and fuel consumption. The system also identifies mechanical problems to reduce downtime and reduce the possibility of accidentally releasing fluids or contaminants into the environment.

Other Policies – In addition to those listed above, the following Envirocon policies support compliance, maintenance, and environmental stewardship:

- Retrofitting machinery and equipment with clean diesel technologies, such as diesel particulate filters
- Using closed-loop graywater washing systems for equipment and vehicles
- Establishing efficient traffic patterns to minimize soil compaction by vehicles and machinery in work areas
- Recycling all fluids from vehicles (i.e., oil, anti-freeze, and cleaning solvent)
- Improving miles per gallon of fleet vehicles through consistent vehicle maintenance and upkeep
- Consolidating on-site and off-site vehicular trips to reduce fuel consumption

3.2 Energy

- Using energy-efficient equipment for temporary power, solar where possible
- Conducting periodic optimization evaluations of treatment processes and adjusting operations accordingly
- Integrating sources of on-site renewable energy to power treatment units or auxiliary equipment
- Using a planned preventative maintenance program to systematically review machine performance and keep them running at their optimum efficiency
- Using LED lights for trade show booth displays

3.3 Water Conservation

- Using closed-loop graywater washing systems for equipment and vehicles
- Using treated water for purposes such as irrigation and dust control, as appropriate
- Applying low-impact development techniques to treat stormwater as a resource, instead of a waste product



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3.4 Land & Ecosystems Protection

- Installing silt basins to capture sediment runoff along slopes
- Establishing efficient traffic patterns to minimize soil compaction by vehicles and machinery in work areas
- Rescuing and relocating sensitive or threatened wildlife
- Restoration of natural environments including native plantings, grasses, and installation of riprap
- Rechanneling rivers to their natural alignment

3.5 Materials & Waste

- Segregating demolition materials such as metals, concrete, and lumber for reuse or recycling whenever possible
- Screening and stockpiling clean, excavated soil for potential onsite use as infill, and minimizing shipments to landfills
- Salvaging woody debris for on-site landscaping use or sale
- Reusing sheetpile materials from one project to another
- Reusing demolished concrete sized for use as road base material
- Utilizing recycled material intended for disposal as part of our remedial processes such as using slag, off-spec Portland cement, fly ash, lime kiln dust, cement kiln dust and off-spec activated carbon for in-situ stabilization (ISS) of S/S reagent
- Substituting ground granulated blast furnace slag or other waste materials, instead of purchasing Portland cement for stabilization processes
- Utilizing rail for off-site transportation of bulk waste and debris is always evaluated and preferred (as compared to trucking) to reduce carbon footprint

3.6 Office Policies

- Purchasing office supplies made from recycled materials (i.e., pens, paper, binders)
- Purchasing office supplies from local companies
- Recycling all office materials (i.e., paper, cardboard, plastic, and aluminum)
- Endeavoring to improve miles per gallon of fleet vehicles
- Properly disposing of all non-recyclable materials (i.e., fluorescent lights and electronic wastes)
- Using paperless processes whenever possible or allowed
- Elimination of paper cups at corporate office for coffee and water
- Use of hand dryers in corporate offices instead of paper towels
- Reuse of binders, folders, padded envelopes, and boxes whenever possible
- Reviewing and determining new opportunities for better practices continually
- Promoting employee carpooling and/or public transportation to offices and project sites
- Using online meeting hosting when possible to avoid air travel miles
- Using company-provided filtered water instead of bottled water



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- Embracing telecommuting and the use of home offices to reduce carbon footprint of underutilized office space
- Motion sensors on office lights
- Using fixed temperature thermostats that are set by time of day
- Using energy saving printers, all equipped with double-sided printing capability

Envirocon's environmental policy represents the commitment from senior management, project managers and all employees to ensure that our projects are planned and implemented to meet the intent and requirements of sustainable environmental management. We are continually learning from best management practices and developing new methods for protecting the environment, enhancing sustainability efforts, and meeting our client's established environmental goals of each project.