Lewis Energy Group®

STANDARD OPERATING PRACTICE

Personal Protective Equipment (PPE)

Lewis Energy Group
Version 1.3
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LIST OF ACRONYMS

ALARA – As low as reasonably achievable

ANSI – American National Standards Institute

BU – Business Unit

CFR – Code of Federal Regulations

dBa - Decibels

FRC – Fire Resistant Clothing

IDLH – Immediately dangerous to life and health

NDT – Non-destructive testing

NORM – Naturally Occurring Radioactive Material

NRR – Noise Rating Reduction

OSHA – Occupational Safety Health Administration

PEL – Permissible Exposure Limit

RSO – Radiation Safety Officer

SDS – Safety Data Sheet

TLV – Threshold Limit Value

1.0 Purpose and Policy Statement

This Standard Operating Practice (SOP) document provides Lewis Energy Group (LEG) Team Members/contractors and visitors with the Personal Protective Equipment (PPE) requirements when working at LEG facilities and locations.

Lewis Energy Group (LEG) Team Members shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of PPE. If such hazards are present, likely to be present, or if it is necessary by reason of process, environmental, chemical, or radiological hazards, or if mechanical irritants could be encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact, protective equipment must be utilized. This protective equipment includes PPE for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers. All PPE shall be used and maintained in a sanitary and reliable condition. Team Members/visitors who have the potential to be exposed to workplace hazards are required to wear the appropriate PPE. All PPE shall be of safe design and construction for the work to be performed. Contractors shall provide PPE for their personnel while working on LEG properties and meet LEG's PPE requirements at a minimum[1].

2.0 Applicability

This program applies to Team Members/contractors and visitors who have the potential to be exposed to workplace hazards where PPE is required. Engineering controls shall be the primary method used to eliminate or minimize hazard exposure in the workplace. Administrative controls are a secondary method to control hazards. When controls are not practical, applicable, or effective, then PPE shall be donned to reduce or eliminate personnel exposure to hazards. The LEG safety department will conduct a Hazard Assessment in conjunction with the Business Unit (BU). Based on the results of the Hazard Assessment, LEG safety will assist in the selection of PPE and provide training on how to properly use it. Hazard Assessment forms are included in Attachment A.

3.0 Requirements/Responsibilities

Lewis Energy Group (LEG) has a responsibility to communicate to contractors and visitors the PPE requirements for a location and job task. When required, the minimum PPE will be an approved hard hat, safety glasses, gloves and safety boots. Contractors will ensure proper PPE is worn by their personnel. Any PPE that is used will be maintained in a sanitary and reliable condition at all times. Team Members will be trained by a qualified instructor who will document the date and type of training and the participant name. Those who complete the training will be required to demonstrate an understanding and ability to use PPE before being allowed to perform site visits or work requiring its use.

[1] Lewis Energy Group approved Policy Statement VII.

4.0 Selection and Fitting of Personal Protective Equipment (PPE)

Selection and fitting for PPE will be coordinated with the safety department. The PPE will be properly fitted and the user will be advised on the care and use limitations of the PPE prior to starting work. PPE is generally available in a variety of sizes. Care should be taken to ensure the right size and fit is selected.

Head Protection

Approved Type 1 (Class "E")[2] hardhats will be worn by Team Members/contractors and visitors where required. Class "C" conductive hardhats[3] may be worn in approved areas based on the results of a Hazard Assessment. Protective headgear must meet American National Standards Institute (ANSI) standard Z89.1, be constructed of nonmetallic materials and free of structural defects. "Cowboy style" hardhats are not approved (even those with Z89.1 stamp). Hardhats will be worn where signage is posted, at all field locations, and where specified by a documented Hazard Assessment.

Eye Protection

Team Members/contractors and visitors are required to wear approved safety eyewear whether prescription or nonprescription that meet ANSI Z87.1 specifications.[4] All eyewear must have side impact protection that will be worn at locations identified by a Hazard Assessment. Replace lenses that become scratched or pitted immediately. Exposure or contact with chemicals, vapors or liquids may cause damage and reduce impact integrity. Clean all surfaces with a mild soap and warm water. Do not use solvents on the lenses.

Chemical splash goggles provide eye protection when handling chemicals or working on equipment that contains chemicals.

Impact goggles provide eye protection from flying particles.

Welder goggles provide protection from sparking, scaling or splashing metals and harmful light rays. Lenses are impact resistant and are available in graduated shades of filtration.

Safety Glasses with side shields provide protection from minor splashes.

Face shields will be used in operations when the entire face needs protection and should be worn to protect the eyes and face from flying particles, metal sparks, and chemical/biological splash. They

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[2] Type 1 hardhats reduce the force of impact to the top of the head. Class "E" are designed to reduce exposure to high voltage conductors, and offer dielectric protection up to 20,000 volts (phase to ground).

[3] Class "C" hardhats are not intended to provide protection against contact with electrical conductors.

[4] ANSI "Z87/1" approved safety rating.

consist of an adjustable headgear and face shield of tinted/transparent acetate or polycarbonate materials or wire screen. Face shields are to be worn over ANSI approved eyewear whether they are prescription or nonprescription.

Welding shields protect the Team Member/contractor eyes and face from infrared or radiant light burns, flying sparks, metal spatter and slag chips encountered during welding, brazing, soldering, resistance welding, shielded electric arc welding and oxyacetylene welding and cutting operations.

Hearing Protection

Hearing protection will be made available to all Team Members/contractors and visitors when necessary. Hearing protection must be worn where signage is posted and a documented Hazard Assessment has been conducted that includes noise surveys. When subjected to sounds exceeding 85 decibels (dBa), administrative or engineering controls will be utilized. If such controls fail to reduce sound levels, hearing protection will be used. Hearing protection will be available in different types such as ear plugs and ear muffs. In some work environments, both types of hearing protection must be worn at the same time to provide adequate protection.

Hearing protection devices will indicate the Noise Reduction Rating (NRR) for each device. Devices with a higher NRR will offer the greatest protection, when they are worn properly.

Hand Protection

Selection of hand protection is based on the job task(s) to be performed and the Hazard Assessment information. Gloves are the PPE of choice for hand protection and their suitability for the job task(s) being conducted. It is important to know the performance characteristics of gloves relative to the specific hazard anticipated. When selecting gloves for use against chemicals, read instructions and warnings on chemical container labels and recommendations on the Safety Data Sheet (SDS).

Foot and Leg Protection

Lewis Energy Group (LEG) requires Team Members/contractors to use protective footwear when working in areas where there is a danger of foot injury due to falling or rolling objects, objects piercing the sole, and where feet are exposed to electrical hazards. Safety footwear must meet minimum compression and impact performance standards or provide equivalent protection. When selecting footwear, consideration must be made for material type (leather/rubber), steel composite toe, ankle protection and oil resistant soles. Slip protection (heel) will be considered when job task includes climbing ladders and stairs. Leg protection such as gaiters will be worn by LEG Team Members who have the potential of snake encounters.

Visitors may be permitted on a LEG location/facility without approved foot protection. Approval from the BU supervisor is required and the visitor must be escorted by a LEG representative who is familiar with the location/facility hazards.

Respiratory Protection

Based on the results of the Hazard Assessment and job site atmospheric sampling, the use of appropriate respiratory protection equipment may be required. For immediately dangerous to life and health (IDLH) atmospheres, self-contained or supplied air respirators will a full face piece will be used. Air purifying respirators will not be worn in oxygen deficient or toxic environments. Team Members/contractors will be medically qualified and fit tested for the type of respirator needed and trained to properly don, doff, use, clean and store respiratory equipment. Respirators shall fit properly with an airtight seal, and Team Members/contractors must be clean shaven where the mask seals to the face. Each Team Member/contractor that uses a respirator is responsible for inspecting the respirator before each use and must also maintain clean and store the respirator after each use.

The recommendations of the Hazard Assessment are based primarily on the physical, chemical and toxicological properties of the contaminants present and on the limitations of each class of respirator. This includes filtration efficiency, air supply capability, job task, face seal characteristics and leakage so that the most appropriate respirator can be chosen.

To select the proper respirator, the user must first assemble the necessary toxicological, safety, and other relevant information for each respirator hazard. The safety department will assist with the selection of respiratory protection and verify that it will meet the regulatory requirements to prevent exposures above permissible exposure limits (PELs).

The information obtained on general use conditions for respirators should include a description of the actual job task including the duration and frequency, location, physical demands and industrial processes, as well as issues affecting the comfort of respirators.

For respirators that require a cartridge, the BU Team Member must follow manufacturer recommendations and establish a cartridge/canister change out schedule which is based on the service life of the cartridge/canister under the conditions of use. Information obtained on the service life of the cartridge/canister must be evaluated regardless of the odor warning properties of the chemicals.

Protective Clothing

Protective clothing should be used in conjunction with other PPE when necessary. For any given situation, PPE and protective clothing should be selected that provides an adequate level of protection. Overprotection as well as under-protection can be hazardous and should be avoided. Field Team Members will wear complete sets of protective clothing appropriate for the work to be performed, the weather and working environment based on the Hazard Assessment.

Clothes to protect the body will fit snugly, cover the upper arms and legs and be free of loose straps and strings (no muscle shirts/tank tops or short pants). Torn, ragged, or loose clothing should not be worn near machinery that has rotating parts. Defective and damaged PPE shall not be used.

Fire Resistant Clothing (FRC)

The use of fire resistant clothing (FRC) will be determined by the BUs Hazard Assessment. When FRC is required, LEG will provide work clothing that is compliant with regulatory requirements. FRC is required but not limited to the following work tasks unless a documented Hazard Assessment has established controls that mitigate risk to LEG Team Members/contractors:

- Below-grade work
- Manual lighting of gas-fired equipment (e.g., dehydrators)
- Hot tapping operations
- Opening process equipment containing hydrocarbons.
- Gauging tanks
- Hot oiling or truck treating
- Sampling
- Leak repair to hydrocarbon lines or vessels
- Pigging operations
- Maintenance or repairs that require disconnecting piping or valves
- Bleeding or venting hydrocarbons to atmosphere, including atmosphere venting of plunger lift
- Starting a compressor
- Entering an enclosed area with process or piping equipment
- Performing permitted hot work
- Loading or unloading trucks from storage tanks or drips that contain hydrocarbons
- Swabbing
- Unloading a well
- Blowing down a wells
- Flow back operations
- Pipeline tie-ins
- Working in facilities containing hydrocarbons
- Cavitation and coal stimulation operations
- Underbalanced drilling
- Wire line work
- Purging a well
- Circulating or cleaning out a well
- Pulling wet string containing hydrocarbons

Disposable Coverall/Chemical Aprons

When working around chemicals, a chemical resistant coverall or apron will be worn over approved work clothing. Do not cut extra holes in the garment. Wear the garment fully zipped up with the sleeves all the way down, the same way approved work clothing should be worn. When wearing a chemical apron, be sure to wear it high on the chest so there is no gap in coverage between the face shield and apron. Reference the safety data sheet (SDS) for more information about different types of protection.

Fall Protection

The general industry standard for fall protection requires some form of fall protection when working at heights greater than 4 feet when signage is posted, and where there is a danger below regardless of fall height. Working from portable and fixed ladders less than 20 feet high do not require fall protection. Working from fixed ladders over 20 feet high that are caged does not require fall protection.

Some conditions require the use of a fall arrest system and body harness. Before each use, inspect the full body harness for excessive wear or damage that could cause failure. Defective components will be removed from service. Destroy and discard any harness and lanyard that are worn, damaged or have been involved in a fall.

Fall arrest system components must be from one manufacturer (do not mix brands). Do not use fall arrest systems and components to hoist materials. Fall protection equipment will be used for fall protection only.

Vertical lifelines and each anchor point must have a minimum breaking strength of 5,000 pounds.

Horizontal lifelines will be designed, installed and used under supervision of a qualified person, as part of a complete personal fall arrest system, which should maintain a design factor of at least two. Steel cables are recommended for horizontal anchor lines with a minimum breaking strength of 5,000 pounds. Each person will be attached to a separate life line.

Team Members/contractor personnel must maintain 100% tie-off when working at heights. This includes working from a manlift basket or while the manlift is mobilized.

Radiation Protection

At LEG, no special PPE is required for potential exposure to Naturally Occurring Radioactive Material (NORM). Lewis Energy Group (LEG) uses the ALARA (as low as reasonably achievable) principle to control potential exposures to NORM sources. The ALARA principle effectively uses time, distance and shielding as the best protection for potential radiation exposures.

Lewis Energy Group (LEG) has operations where radiation exposures are possible. Naturally Occurring Radioactive Material (NORM) may be found in used equipment and piping that has been in contact with produced liquids or gases. The NORM will be found in scales inside the equipment and piping. If PPE becomes contaminated while working on this equipment and piping, care must be taken to carefully clean or dispose of the PPE to prevent exposure through inhalation, ingestion or direct contact. If assistance is needed to determine the presence of NORM, the LEG radiation safety officer will be available. The safety department also has detection equipment. Any equipment, piping or other items identified to be contaminated above the permissible exposure limit (PEL) will be isolated and barricaded with proper signage.

Sabino Completion Services uses radioactive sources during some operations. Sabino has assigned radiation safety officers (RSO) to monitor the transportation, use and storage of the sources. The RSOs have a tracking and accountability system for monitoring the use of radioactive sources.

Other sources of radiation within LEG are third party non-destructive testing (NDT) companies that perform X-ray services for welding operations on equipment and pipelines. Third party companies may also provide services that require the use of radioactive sources during well logging operations. These companies will have their own RSO and the necessary monitoring equipment to provide quality control for the sources used on LEG property and locations.

The best protection for potential radiation exposure is time, distance and shielding. Team Members will be trained how to avoid and respond to potential exposure scenarios. This training can be scheduled when potential hazards have been identified and while conducting the Hazard Assessment.

5.0 Definitions

Air-purifying Respirator – a respirator with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the purifying element.

Anchor Pont – a secure point of attachment for lifelines, lanyards or deceleration devices.

Atmosphere Supplying Respirator - a respirator that supplies the user with breathing air from a source independent of the ambient atmosphere and includes supplied air respirators and self-contained breathing apparatus (SCBA) units.

Body Harness – a strap which 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 a means for attaching it to other components of a personal fall arrest system.

Don – to put it on.

Doff – to take it off.

End-of Service Life Indicator – a system that warns the user that a respirator is approaching the end of adequate respiratory protection.

Fall Arrest System – a system used to catch an employee in a fall from a working level consisting of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these.

Hazard Assessment – an assessment in the workplace to demonstrate if hazards are present or likely to be present, which necessitate one of the following control or mitigation methods:

elimination/substitution, engineering or administrative controls or personal protective equipment (PPE).

Hazardous Atmosphere – an atmosphere that may expose employees to the risk of death, incapacitation, impairment or ability to self-rescue, injury or acute illness from flammable gas, vapor or mist in excess of 10 percent of its lower exposure limit (LEL). The atmosphere can also be oxygen deficient or contain toxic materials.

Lanyard – a flexible line of rope, wire rope or strap which generally has a connector at each end for connecting the full body harness to a deceleration device, lifeline or anchorage.

6.0 Document Control

Version	Change Date	Change Description	Changed by	Approved by	Approval Date
1.1	8/26/19	• Capitalize Team Member	Colin Clark	Ken Phillips	8/26/19
1.2	10/17/19	• Update Cover Page • Update TOC • Change Falcon to Sabino	Colin Clark	Ken Phillips	10/17/19
1.3	6/20/24	• Review Only	Colin Clark		6/20/24

NOTE: Changes to this document will be reviewed by the Sub-Committee and approved by the Executive Safety Committee. Any document revisions are to be noted on the Document Review Change Log. This form will be kept current to maintain audit compliance.

Appendix

HAZARD ASSESSMENT

HAZARD ASSESSMENT – LEWIS ENERGY GROUP

HAZARD ASSESSMENT - LEWIS ENERGY GROUP

Name:	Date:

This assessment is based upon the following (check the appropriate box):

Job Class - Assessing the hazards expereinced during normal duties of an individual job class. ☐	**Task** - Assessing the hazards associated with a specific project or task. ☐	**Area** - Assessing the hazards associated with a specific area.
Job Class, Task, or Area assesed:		

Describe each Hazard identified and list hazard type (can list more than one "Hazard Type". Mark with an "X" all Controll Measures that apply as well as each body part affected.
Details for Control Measures will be listed below in Certification of Assessment

Hazard Type	Describe Hazards	Control Measures			Body Part Affected							
		ENG	ADM	PPE	Head	Eyes/Face	Hand/Arm	Feet/Leg	Torso	Ears	Lungs	Other
Impact: Struck by, caught in between, line of fire, pinch points, crushing		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Laceration: Cuts, punctures, scratches, impaled objects		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Slips, Trips, Falls: Three point contact, clutter, uneven surfaces		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ergonomics: Bending, lifting, climbing, twisting, pinch points, caught in between		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pressure: Iron, hoses, equipment		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Chemical Handling: splash, skin contact, inhalation, ingestion		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

CERTIFICATION OF HAZARD ASSESSMENT – LEWIS ENERGY GROUP

Dust, Fumes, Vapors: Confined space, H2S, NORM, acid, chemicals handling, inhalation, ingestion		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Respiratory: Sand, inhalation		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mechanical Lifting: Crane, man-lift, forklift		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Heat/Cold: working temperature, heat stroke, hypothermia		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Flammables: vapors, liquids, chemicals, flashpoints		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Noise: 85dBA or higher		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Electrical: cables, panels, switches, outlets, grounding, energized equipment		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Biological: blood borne pathogens, wildlife		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Driving: backing up, spotting equipment, forklift operations		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

CERTIFICATION OF HAZARD ASSESSMENT – LEWIS ENERGY GROUP

Certification of Hazard Assessment (List all control methods used and/or required)

Hazard Type	Hazard Description	Engineering Control	Administration Control	PPE Required	Responsible Person(s)

HAZARD ASSESSMENT REVISION – LEWIS ENERGY GROUP

Certification of Hazard Assessment (List all control methods used and/or required)

Person Conducting Assessment: (Print Name)	Signature:	Date:
Business Unit Manager: (Print Name)	Signature:	Date:
HSE Manager: (Print Name)	Signature:	Date:

HAZARD ASSESSMENT REVISION – LEWIS ENERGY GROUP

Job Class	Job task	Area	Date of Revision	Business Unit	Revision	Reason for Revision