

Service Provider EH&S Expectations Manual

V 3.5 May, 2017

Forward

If we can't do the job safely, we won't do it.

At Encana, safety is not just a priority; it is a core business value, it is part of our culture, and it is built into every job we perform.

As a partner in our success, we expect all of our Service Providers to take safety as seriously as we do by ensuring your company's work is performed as safely as possible and in a manner consistent with Encana's standards and practices. Our philosophy is, *"if you can't do it safely, don't do it."* We also believe that, as individuals, each of us is responsible for our own safety as well as that of our co-workers. Exercising our responsibilities will help to ensure we all go home to our families at the end of the day in the same condition that we arrived in.

Encana's safety philosophy goes beyond hard-hats, steel-toed boots and other personal protective equipment. It's a mental commitment that is reflected in the decisions we make every day about how we approach and perform our work. This is the only way we can conduct our business responsibly.

We are counting on each of you to embrace our safety culture, not just on the jobs you do for us, but on the jobs, you do for other companies. And, remember: safety is free; take some home with you.

Best regards,

A handwritten signature in black ink that reads "Byron R. Gale". The signature is written in a cursive, flowing style.

Byron Gale
VP, EH&S, Regulatory, Security

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1.0 Overview

This Service Provider Expectations Manual (SPEM) has been designed to provide Service Providers (and by extension their sub-contractors) with a clear understanding of Encana's Environmental, Health and Safety (EH&S) expectations. This document applies to Encana US operations and replaces all previous versions of the Service Provider Expectations Manual and/or the Contractor Expectations Manual.

The information in this manual is intended for general use and may not apply to every circumstance. It is not a definitive guide to government regulations and does not exempt the Service Provider from their responsibilities under applicable regulations. While performing services on Encana locations, Service Providers will be expected to comply with applicable regulations.

If any doubt arises as to the meaning or interpretation of these expectations, or any conflict identified between your company's policies/protocols and those of Encana, the Service Provider shall consult with your Encana representative.

This document summarizes EH&S expectations for Service Providers providing onsite services in the field. The term **"Service Providers" as used in this document includes but is not limited to the service provider's employees, consultants, contractors and sub-contractors; and collectively will be referred to as staff.** Additional requirements may exist in Service Orders, Master Service and Supply Agreements, master contracts or other agreements.

Note: This document does not apply to offshore activities and operations.

Acknowledgement

Service Providers shall:

1. Review and communicate the key points of this manual, as they apply to your business, to your staff who will be working on Encana locations;
2. acknowledge your understanding of the EH&S expectations contained in this manual by providing electronic acknowledgement in ISNetworld (ISN), as requested.
3. for auditing purposes, maintain a record of staff acknowledgements.

2.0 Encana EH&S culture and systems

At Encana, we believe that to effectively execute our strategy and to achieve our vision and goals, we must strive to share, uphold and embody a set of ethical and business principles that clearly guide our behavior and keeps us moving in the right direction. Encana's company values define what we should expect of ourselves and each other in the work place. We uphold seven values that guide our actions, policies, practices and business philosophy. Encana believes these actions will distinguish us as a company where our pride is reflected not only in what we achieve, but also in how we achieve it. These values are One, Agile, Driven, Safety, Trust, Integrity and Respect.

Ethos



Encana standards for operational excellence, including Service Provider Management, are defined in Ethos®, our operational management system. Service Providers will be identified, evaluated and selected based upon an analysis of strong EH&S management practices and performance.

Courtesy Matters

Encana's Courtesy Matters® program is focused on respectful and courteous conduct in the communities and at worksites where we operate. The program is designed to minimize the everyday disturbances that can come along with our activity.

Courteous conduct is a prerequisite for performing work on behalf of Encana and our efforts to minimize daily impacts are critical to our ongoing development. Service Providers are expected to understand and model the actions and behaviors as described in Encana's Courtesy Matters documentation, <http://www.encana.com/business/contractors/courtesy-matters.html>

When working for Encana, remember to:

- always promote respectful behavior
- manage your trash and other waste materials; use appropriate and licensed facilities for waste disposal
- minimize impacts on area residents and property while on lease and while traveling to and from work sites
- be familiar with all gate requirements for the area you're working in
- minimize noise disturbance whenever possible
- watch for livestock and wildlife along roads and ditches

If unsure about our Courtesy Matters program, ask your Encana representative

Courtesy Matters Phone: 1.888.568.6322
Email: courtesymatters@encana.com

Integrity hotline

Encana maintains an Integrity hotline so that internal and external stakeholders can confidentially or anonymously report any unethical, illegal or otherwise inappropriate behavior they observe.

Please contact us below to report any unethical, illegal, or otherwise inappropriate behavior:

Phone: 877.445.3222
Email: integrity.hotline@encana.com
Mail: Integrity Hotline
c/o Encana Corporation
500 Centre Street SE
P. O. Box 2850
Calgary, AB, Canada T2P 2S5

ISNetwork

All Service Providers shall subscribe to ISNetwork (ISN) and maintain an acceptable grade (www.isn.com). Service Providers shall complete the ISN questionnaire, as well as additional requirements as specified by Encana. To be cleared for work, Service Providers shall maintain an acceptable grade of "C" or higher. Conducting work with anything short of an acceptable grade may jeopardize your company's ability to work for Encana, potentially resulting in "Restricted Status". Accountability for maintaining your status within ISN lies solely with your organization.

To view your current grade and any outstanding items required by Encana, please follow the steps below:

1. select 'My Clients' from the navigation bar
2. search for Encana Corporation
3. click and review your grade in the 'Grades/Requirements' column

ISN Customer Service Team - 800.976.1303 or CustomerService@isn.com.

Orientation/training & competency management

All Service Providers working on behalf of Encana must fulfill minimum training requirements prior to beginning work on Encana locations. Encana expects all Service Providers to have relevant (job-specific) training as required by the Occupational Safety and Health Administration (OSHA) or other regulatory agencies. It is the responsibility of the Service Provider management and ownership to ensure that their staff are properly trained for the specific job duties and tasks associated with work contracted to Encana. Formal training beyond awareness/orientation level is not provided.

Service Providers will identify all non-English speaking individuals on their work crews and assign at least one fully bilingual interpreter to communicate pertinent information (e.g., JSAs, emergency response information, and pre-job safety meetings). Service Providers will also verify this information is understood prior to initiating work activities.

All Service Providers have the authority and responsibility to stop work on any site for any suspected hazard, unsafe work or unsafe behavior.

Minimum training and orientation requirements

All Service Providers working on behalf of Encana shall possess the minimum training requirements listed below prior to beginning of any work on an Encana location or project area.

- general safety awareness training as satisfied by one of the following:
 - Occupational Safety and Health Administration (OSHA) 10
 - OSHA 5810
 - PEC SafeLand USA
 - IADC Rig Pass
- first Aid I CPR I AED - minimum of one crew member per work location
- Encana EH&S general safety orientation
- site-specific EH&S orientation (if provided)

Encana's EH&S and site-specific orientations are provided to ensure minimum expectations and awareness of hazards are communicated prior to the start of work. The Encana Safety Orientation Program can be accessed [here](#).

NOTE: Evidence of completion of the minimum training requirements and Encana EH&S Orientation shall be made available upon request

Short service employees

Encana defines a short service employee (SSE) as a service provider staff with less than six months' experience in their assigned job. Encana expects that service providers have a written SSE program that includes the following requirements:

- distinguish SSEs from other employees on location (e.g., green hard hat)
- assign a seasoned mentor to each SSE that is fluent in the language the SSE best understands
- assess job skill competency for removal of SSE status; and
- ensure that SSEs do not make up more than 50% of a single crew at one time

Exceptions to these requirements require a plan to mitigate the risks and written approval of the Encana site supervisor.

Job competency

Encana expects Service Provider staff to have proficient knowledge, experience and understanding pertaining to the work to be performed. Assuring competency of its employees is the Service Provider's responsibility. Encana considers competency to be the knowledge, experience, and understanding of the work to be performed as well as knowledge of safe and environmentally sound processes for completing the assigned task.

Fitness for work

Service Providers shall develop and enforce fit-for-work practices to ensure staff are fit-for-work and remain so when:

- on scheduled on-call for Encana
- on Encana premises, and during all business activities undertaken during Encana's operations, whether conducted on or off company premises

Service Provider staff are considered unfit for work if injury, fatigue, illness, physical or psychological health issues or the use of alcohol or drugs results in, or could result in, a reduced ability to perform assigned duties and responsibilities safely or effectively.

Incident reporting

All incidents including illnesses, injuries or spills that occur on an Encana location must be immediately reported to the Encana representative. Further information and expectations regarding incident management may be found in Section 3 of this document.

3.0 Safety

Alcohol and drugs

Encana prohibits the use, possession, distribution and sale of illegal drugs, drug paraphernalia and alcoholic beverages as well as the misuse of prescription and over-the-counter medications on or at its work locations. This includes substances which may be legal in some states, but is still prohibited by federal law or Encana policy. Encana expects the Service Provider to develop, implement, maintain and enforce a substance abuse policy consistent with this prohibition.

All Service Providers must be enrolled in an Encana-approved drug and alcohol consortium. It is the Service Provider's responsibility and obligation to keep its staff rosters updated and to ensure employees are current on random tests. New staff will not be allowed to perform work on behalf of Encana until their initial pre-employment drug test has cleared as negative. Any staff found to be in violation of this policy will be required to leave the location. At all times, your company's testing forms shall be kept on location or at a nearby collection site/clinic in numbers sufficient to test your site crew(s).

Encana expects the Service Provider to prohibit any worker from entering or remaining on an Encana site while their ability to work is affected by alcohol or drugs. The possession or use of these substances on an Encana site will result in disciplinary action, up to and including dismissal. Any Service Provider staff found in violation of this requirement, or who refuses to cooperate with the searches and tests included in this program or the Service Provider's policy shall be removed by the Service Provider from Encana property and from performing work for Encana at any time in the future. Companies who refuse to cooperate with Encana's drug and alcohol requirements may be subject to termination of their contract.

Service Provider staff are required to be fit for duty. Service Provider staff should consult with their medical provider if use of medication (prescription and/or over-the-counter) could have a negative impact on work performance. Fit for duty means being able to perform work duties in a safe, efficient, productive manner.

On property owned or leased by Encana, Encana reserves the right to search or inspect Service Providers, and their property at any time, at our discretion and with or without notice. Such searches may include personal effects and vehicles.

Service Provider staff directly involved in an EH&S incident or near hit may be subject to a drug and alcohol test for determining whether the staff member was fit for duty at the time of the incident or near hit.

Confined space

Entering a confined space is considered a last resort task associated with a work activity. Service Providers must make every effort to reduce hazardous atmospheres prior to opening manways, access hatches, etc. associated with a confined space. This can be achieved by using tools/procedures such as flooding/spray tools, vacuum trucks, H₂S scavengers and chemical additives.

Service Providers involved in confined space entry must have their own confined space practice that meets or exceeds all regulatory requirements.

Under no circumstances will any Service Provider staff be allowed to enter a permit-required confined space (PRCS) without proper authorization from a trained Encana site supervisor. Authorization for entry can only be given to those individuals who have received proper training as required by their employer's practice.

Any Service Provider entering a PRCS shall have a confined space entry plan.

Authorization for entry into PCRS must appear on the confined space entry permit. Any Service Provider or subcontractor who enters a PRCS without proper authorization will be subject to disciplinary action.

Electrical hazards

All Service Providers designing electrical systems shall design systems in conjunction with industry standards and engineering best practices.

Only Qualified Persons (as defined in the NFPA 70 E and CSA-Z 462) shall interact with electrical equipment while it is energized, including operating of electrical equipment while exposed to energized components. If acting as a Qualified Person, Service Providers shall provide credentials of qualified status if requested by Encana.

Emergency preparedness and response

Service Providers shall follow Encana location-specific Site Safety Plans and/or Emergency Response Plans when conditions dictate. Although development and communication of the Encana

Site Safety Plan is the responsibility of the Encana site supervisor, Service Providers are required to ensure that the contents of the Site Safety Plan are effectively communicated to their staff. In addition, Service Providers shall have their company specific emergency response plan (ERP) available at the worksite with appropriate contact information and emergency procedures.

Service Provider staff shall participate in any tabletop exercises or drills held on Encana worksites if and when requested. The Service Provider shall refer all media or outside inquiries to their Encana representative in the case of an incident or emergency.

ENCANA 24-HR. EMERGENCY NUMBER
Operations Control Center (OCC): 866.244.0062

Equipment and tools

With respect to equipment and tools, Service Providers shall ensure:

- damaged tools are taken out of service, and discarded or repaired as per manufacturer's recommendations
- all equipment and tools are kept in good condition and operated as per manufacturer's recommendation
- the equipment and tools necessary to complete the work (unless stated otherwise in the work order) are supplied
- the use of home-made tool or cheater bars are prohibited
- appropriate guards are always in place and without modification as per manufacturer requirements; and
- interlock safety devices are prohibited from being disabled.

Excavation and trenching

All Service Provider staff performing excavation work shall be trained in accordance with OSHA guidelines for excavation and trenching. In addition, all Service Provider staff involved with excavations and trenching must receive Encana's Ground Disturbance Orientation (see Ground Disturbance Orientation) prior to excavating, trenching or shoring.

Any Service Provider staff performing activities such as trenching, shoring, ditching, etc. on behalf of Encana must be proficient in, and follow the regulatory requirements around excavations, trenching and shoring.

Any excavation, earth moving, soil stripping, brush clearing and other earthwork shall be conducted in a manner that preserves the soil and allows for the segregation of soil types to facilitate land reclamation in the future. Where necessary, measures to prevent excessive soil erosion by wind or water shall be utilized.

Fire and explosion hazard management

For all work in which the potential for fire or explosion exists, Service Providers are required to:

- identify fire and explosion hazards through JSAs, SOPs, risk assessment and/or safety permits (Hot Work Permit, Energized Electrical Work Permit, Confined Space Entry Permit, Ground Disturbance Authorization, and Lockout/Tagout procedures) and then consider alternative methods to the hot work (where practical)
- conduct work in accordance with the Service Provider's fire and explosion hazard management SOPs and any site safety permits
- eliminate the potential hazard or implement administrative controls including the following considerations:
 - control fuel and ignition sources
 - move work to a location that is free from combustibles. If work cannot be moved, move the combustibles to a safe distance or have the combustibles properly shielded or protected against ignition
 - schedule hot work so that operations that could expose combustibles to an ignition source are not present
 - continually be aware of, evaluate, and manage fire and explosion hazards
- provide properly selected, inspected, and maintained fire extinguishers in accordance with local Encana requirements (typically a 20-pound ABC)

Bonding and grounding – control of static electricity

To control static electricity as an ignition source, Service Providers must maintain and follow specific procedures for bonding and grounding, provide equipment that meets all regulatory requirements and must demonstrate clean, dedicated, and labelled bonding sites, if required.

These procedures must be made available at the worksite.

The following specific controls must also be in place:

- tanks storing hydrocarbon products shall not be splash-filled
- trucks transporting flammable/combustible liquids shall be electrically bonded to the loading or unloading lines before hoses are connected and hatch covers are opened
- trucks transporting flammable/combustible liquids shall be bottom loading or shall be filled by means of a downspout that extends from the loading arm to near the bottom of the truck tank to prevent splash loading
- loading racks shall be designed to dissipate static charge
- vacuum trucks shall use bonded loading hoses or a separate dedicated, low-resistance bonding strap between the truck and tank. Hoses shall not have added segments (or stingers) made of non-conductive materials such as ABS or PVC
- if steam or water is used to clean oil storage tanks and separators, nozzles shall be bonded to the vessel first. Steam shall flow into the vessel at a low velocity through as large a pipe as possible until most of the air in the vessel has been replaced by steam.
- sandblasting hoses shall be of the antistatic type or the nozzle shall be electrically bonded to the vessel being blasted
- bond or ground connectors shall be suitably conductive and have adequate mechanical strength, corrosion resistance and flexibility for the service intended
- electrical continuity of bonding and/or grounding conductors shall be verified by using an intrinsically safe ohm-meter or measuring device

Hot work

Hot work is any work that could cause sufficient spark or flame to ignite flammables or combustibles that are present or could be present at a work location. Examples of hot work include, but are not limited to, welding, cutting, brazing, grinding, use of non-intrinsically safe power tools, sandblasting, and steam cleaning. Some tasks other than those listed above would be classified as hot work. Ask the area Encana Representative for more information on whether your task is hot work and requires a Hot Work Permit

Service Providers performing hot work shall ensure that:

- hot work is relocated to a “safe area” at least 75-feet away from potential flammable or combustible sources when possible. If relocation is not possible, a Hot Work Permit shall be used
- Hot Work Permits are issued, explained and witnessed by an Encana Permit Authorized Individual
- the appropriate personal LEL monitor is used
- potential combustibles (e.g., weeds and paper) are removed within a 35-foot radius of the hot work performed
- a fire watch (where required) trained in atmospheric monitoring and fire extinguisher use is appointed and notified of its duties, which include monitoring the hot work area for 30 minutes after work concludes (one hour in Colorado)
- permits are displayed during the hot work and that readings are taken and recorded, as required; and
- Encana representatives are notified when hot work has concluded

Hot tapping

Service Providers conducting hot tapping work shall:

- have an Encana-approved critical task procedure and be competent in that procedure
- determine safe flow and pressure rates prior to commencing hot tap work
- discuss emergency response plan of action in the pre-job safety meeting, with a muster point established and communicated
- complete a Hot Work Permit when hot tapping is anticipated
- have hot work requirements such as fire watch, adequate fire extinguishers, etc. in effect
- ensure non-essential staff are within a safe area away from the hot tap operation; and
- perform a risk assessment if hot tapping involves a sour service line

Open flames

Service Provider work activity involving the use of open flame will ensure that:

- the presence of any open flame is prohibited within 75-feet of potential sources of hydrocarbon or flammable liquids or vapors
- welding or cutting within this restricted area is only permitted once Hot Work Permit requirements are met, controls implemented and the area properly secured

- smoking or vaping is not allowed on Encana work locations except within designated areas

First aid requirements

First aid resources must be made available and meet applicable regulatory requirements. A basic first aid kit approved by the American National Standards Institute (ANSI), including eye wash, must be available on the work location and at least one individual per crew must be certified in first aid and CPR procedures.

Forklift and powered industrial truck operations

Only certified, trained Service Provider operators shall operate forklifts and powered industrial trucks. All forklifts and powered industrial trucks shall have a pre-use inspection completed.

Ground disturbance

All Service Providers performing ground disturbance activities shall:

- ensure all Service Provider staff involved in ground disturbance activities have completed the Encana Ground Disturbance Orientation prior to the initiation of ground disturbance activities
- submit a One-Call locate request for the proposed ground disturbance excavation
- follow all the requirements when performing the function of a Ground Disturbance Supervisor, equipment operator and/or spotter
- seek clarification concerning any Encana practice through their Encana representative
- initiate work only after a Ground Disturbance Authorization has been completed (with a signed Ground Disturbance Authorization Form in place) approved by Ground Disturbance Supervisor
- ensure internal competency requirements are established and followed for equipment operators and spotters
- if multiple Service Providers are supervising ground disturbance work at a single Encana location, each Service Provider shall be responsible for ensuring locates are performed for their specific ground disturbance work

The ground disturbance supervisor

If acting in the role of a Ground Disturbance Supervisor, the Ground Disturbance Supervisor shall:

- maintain Ground Disturbance Supervisor training
- oversee the execution of the ground disturbance activity in the field
- ensure the necessary third-party crossing agreements are in place or that information and requirements specified on a line locate ticket are recognized and adhered to, when working near third-party buried facilities
- ensure that a line locate is requested from the One-Call Center (“Call before you Dig”) and that all buried facilities in the search area have been located and identified through site walkovers, as-built drawings, maps, survey records, etc., prior to beginning ground disturbance work

- complete and sign the Ground Disturbance Authorization Form and ensure any required Encana Safe Work Permits/Job Safety Analyses (JSAs) are in place prior to the initiation of ground disturbance activities
- incorporate emergency response to a buried facility contact as part of the Safe Work Permit/JSA
- ensure that a search area and Hand Expose Zone have been established at the worksite and the limits of these areas have been communicated to affected staff
- ensure that the depth and direction of buried facilities within the Hand Expose Zone are defined on the Ground Disturbance Authorization Form
- ensure that all staff involved with the ground disturbance activity understand and comply with Encana's requirement that mechanical equipment may not be operated within the Tolerance Zone (see exception bullet below)
- ensure that the equipment operator uses a competent spotter when conducting ground disturbance in a Hand Expose Zone
- communicate to affected staff to STOP WORK and immediately contact the Encana representative upon any buried facility being contacted, or if an unidentified buried facility is encountered, AND that all work will remain stopped until a new Ground Disturbance Authorization is completed
- report any contact with or any discovery of an unidentified buried facility to the Encana representative and an EHS representative
- ensure that if mechanical excavation is required within a Tolerance Zone, it is only performed:
 - after first exposing the facility by hand digging or hydrovac excavation; and
 - with direct supervision of a representative of, and with permission from, the buried facility owner

Equipment operator

The equipment operator performing ground disturbance activities shall:

- adhere to the specified requirements and limitations of the established Tolerance Zone
- use a competent spotter when performing ground disturbance in the Hand Expose Zone and maintain continuous communication with the spotter
- perform hand digging or hydrovacating prior to mechanical excavation in any Hand Expose Zone, and perform hand digging or hydrovacating ONLY within a Tolerance Zone
- work within the conditions of the Ground Disturbance Authorization Form
- STOP WORK and immediately contact the Encana representative upon any buried facility being contacted, or if an unidentified buried facility is encountered, AND that all work will remain stopped until a new Ground Disturbance Authorization is completed
- understand and comply with the locate ticket information provided; and
- ensure exposed buried facilities are properly supported

Hazard identification, elimination and control

It is the Service Provider's responsibility to perform a hazard assessment prior to tasks being performed on Encana locations and ensure proper protective measures are taken. Service Providers shall control hazards in the following priority of methods:

- engineering controls (ventilation, site spacing, flares, etc.)
- administrative controls (procedures, training, etc.)
- Personal Protective Equipment (PPE) (e.g., hearing protection, safety-toe boots, safety glasses, etc.). PPE shall be the last line of defense

Service Providers shall have a Hazard Identification (HazID) reporting program. Serious or frequent identified hazards shall be brought to the attention of the Encana representative.

Hydrate handling

Hydrates, a combination of water and hydrocarbons, are a dangerous condition. These unexpected ice plugs can cause overpressure, equipment failure, or potential serious injury and shall be addressed in the JSA. If Hydrates are or could be expected to be encountered as part to the Service Provider's work, they shall be brought to the attention of the Encana representative and addressed as part of the JSA.

Incident management

Service Provider shall:

- ensure all incidents including, but not limited to, illnesses, injuries or spills that occur on an Encana location are immediately reported to the Encana representative
- not disturb the scene of an incident, except to rescue staff, secure the area or to control damage
- document Service Provider incidents including hazard IDs, near hits, injuries, and spills MVIs and property damage
- perform and or support a thorough investigation (to include determination of the root cause) and generate and complete corrective actions to prevent reoccurrence
- inform its staff of circumstances resulting in an incident and provide guidance on methods of prevention of similar incidents in the future

Encana encourages all Service Providers to retain a case management service to ensure proper medical treatment, accurate injury record keeping and a managed care process that ensures the appropriate level of care is delivered and received.

All parties whose actions were involved in the incident, where the potential exists that drugs or alcohol could have been a contributing factor, shall be required to submit to a drug and alcohol test and shall not be allowed to drive themselves for testing or for medical treatment. Failure to submit to a drug and alcohol test under such conditions may lead to further consequence up to and including dismissal from the job site and prohibition from working on an Encana location or on behalf of Encana in the future.

Job safety analysis (JSA)

Encana's Job Safety Analysis (JSA) program is in place to ensure staff on Encana worksites are prepared to safely respond to an on-site emergency, that work has been planned and communicated, and to assess, identify and control potential worksite hazards.

A Safe Work permit:

- describes specific work tasks at specific locations for a specific timeframe

- identifies potential hazards associated with the worksite and tasks and addresses them, as applicable, through an appropriate hierarchy of controls beginning with substitution/elimination and subsequently followed by engineering controls, administrative controls and finally personal protective equipment (PPE)
- identifies the need for other required documents, forms, or permits (e.g. management of change, hot work, lockout/tagout, etc.); and
- becomes incomplete when conditions change or new hazards are identified

Service Providers shall:

- have a JSA/hazard assessment practice or program in place that meets or exceeds Encana's standards
- prior to initiating work, prepare or revise, and sign a JSA
- conduct work in accordance with their own company's JSA program
- follow established practices and procedures
- ensure that all staff onsite have reviewed and acknowledged/signed a JSA applicable to the work task prior to initiating work
- seek clarification from the Encana representative concerning job hazards related to the specific job scope of work or procedure; and
- stop work if requirements of the JSA are not met, or if a hazard or condition not covered in the JSA is identified

JSAs shall be communicated in a manner that enables all staff to comprehend the scope and steps of work (e.g., language barriers shall be addressed with an interpreter provided by the Service Provider).

SIMOPS (simultaneous operations)

Encana expects Service Providers performing simultaneous or concurrent operation on the same Encana location or job site to have a mutually agreed upon plan for communicating hazards, emergencies and evacuations at the site. Service Providers shall participate in:

- hazard identification and/or risk assessments
- ad hoc pre-job planning
- attend "kick off" meetings
- follow the execution requirements of the SIMOPS plan coordinated by Encana

Flood-prone or low-lying areas

Caution shall be observed in flood-prone or low-lying areas. Excessive rainfall accumulations shall be reported to the Encana representative and the need for preventative action shall be evaluated. Protection of staff and the environment shall be the priority.

If the area is deemed unsafe, work will be postponed until water recedes and the area is inspected for road damage, location erosion, pipeline exposure or other potential hazards.

If determined that services are critical to operations, the Service Provider shall provide approved personal flotation devices (PFD) and staff will be trained on any motorized equipment used to access sites (e.g., boats, amphibious vehicles, and 4-wheelers).

Operators of watercraft shall have valid certification or training to operate vessels.

Hair, jewelry and loose clothing

During the JSA process, hair, jewelry and loose items of clothing that could cause harm or the potential for an incident during operations shall be identified, removed or controlled. The Service Provider shall enforce a policy requiring staff to tie back, contain or cover excess hair when working around moving equipment.

Pre-job safety meetings

Pre-job safety meetings should at a minimum discuss the following:

- assessment of the hazards involved in each task (via the JSA)
- controls put in place
- cold/heat or inclement weather conditions
- recent incidents whether related to Service Provider's operations or to similar operations of other Service Providers and the corrective actions taken to prevent similar incidents
- work permits required for performance of the work (e.g., Hot Work Permit)
- PPE required
- any Safety Data Sheets (SDSs) for hazardous materials brought onsite
- lockout / Tagout (LOTO) requirements
- emergency response measures, including evacuation routes and muster points
- occupational health hazards
- environmental hazards

Lockout/tagout

Service Providers shall:

- never initiate work when the control of energy or energized equipment is involved (Encana is the first lock on and the last lock off. This applies to all Encana-owned and operated equipment, processes and machines)
- have equipment-specific LOTO procedures for Service Provider equipment to be isolated
- protect its workers while working with Encana during control of hazardous energy
- provide their own locks to participate in LOTO
- inform Encana of their respective lockout or tagout procedures
- ensure that staff understand and comply with all requirements of the Service Provider's energy-control program(s)
- have appropriate tools to safely do their part of LOTO (e.g., locks, tags for all affected staff)
- verify that the LOTO task is indeed safe to start and the energy is effectively controlled to ensure the safety of their staff
- stop work if any issue with the LOTO is identified and discuss with the Encana representative
- train all affected staff and deemed competent in the Service Provider's LOTO policy

Personal protective equipment

In addition to the requirements below, Service Providers must provide their staff with personal protective equipment (PPE) suitable to any identified chemical, physical, biological, ergonomic or electrical hazard.

NOTE: Encana may allow exceptions to PPE requirements on a project-specific basis if supported by a PPE or risk assessment.

Service Providers must:

- provide and pay for task-required PPE to their staff, as required by OSHA 1910.132
- ensure their staff are trained in the use and care of appropriate PPE when working with chemicals or other hazardous materials

At a minimum, anyone entering an Encana site shall have:

- safety glasses with side shields or equivalent (ANSI Z87-approved verbiage shall be visible on the lens or frame)
- hard hat (ANSI Z89 Class E)
- safety-toed boots (approved by ANSI or the American Society for Testing and Materials)
- multi-gas personal monitor (4-gas) equipped with detectors for hydrogen sulfide (H₂S), explosive atmospheres, oxygen, and carbon monoxide
- Fire Resistant Clothing (FRC) (National Fire Protection Agency [NFPA] 2112) that shall be:
 - worn appropriately (e.g., sleeves rolled down) and as the outer most layer of clothing
 - FRC rain gear, jackets, or coats worn as outermost layer
 - replaced if torn, damaged, or excessively soiled (if repaired, FRC thread/material must be used)

Additional PPE may be required, based on the nature of the work to be performed, as identified in the JSA. Service Provider staff must meet or exceed Encana's PPE requirements based on contract, task needs, PPE assessment, and/or SDS requirements.

Personal gas monitors

Service Providers shall have combustible gas detection on all Encana field worksites where a fire and explosion risk may exist (e.g., a live site where gas is present). Service Providers shall have H₂S detection on Encana field worksites via personal or fixed monitors where concentrations are equal to or greater than 0.1 percent or when an unacceptable exposure risk exists. The minimum gas sensor requirements for personal gas monitors are as follows:

- Hydrogen Sulfide (H₂S)
- Carbon Monoxide (CO)
- Lower Explosive Limit (LEL)
- Oxygen (O₂)

Personal gas monitors shall be:

- intrinsically safe
- worn in the personal breathing zone (i.e., within one foot of the face)
- set to meet or exceed regulatory guidelines; and
- bump tested and calibrated per manufacturer recommendations, at a minimum

Process safety

Mechanical integrity

Service Providers shall ensure:

- any critical equipment used at Encana locations are designed, installed, operated and maintained per Recognized and Generally Accepted Good Engineering Practices
- equipment, spare parts and maintenance materials are suitable for the application for which they will be used
- Management of Change (MOC) procedures are followed if identical or like-in-kind equipment is not available for repair/replacement

Pre-start-up safety review (PSSR)

Service Providers shall participate in Encana PSSRs, when requested.

Process hazard analysis (PHA)

Service Providers shall participate in Encana PHAs when requested and provide completed PHA reports with recommendations. Furthermore, Service Providers acting as PHA Team leaders shall have the appropriate training, knowledge and experience in the specific PHA methodology being used.

Process safety information (PSI)

Service Providers shall provide appropriate PSI, when requested.

Well control barrier

Service Providers shall supply the appropriate equipment and competent staff to meet Encana's well control barrier expectations.

- for any down-hole well work, a risk assessment shall be done to identify the number and type of well control barriers required for the planned down-hole activities. Risk assessments can be conducted and maintained for similar wells where the risks are the same (e.g., for given well types, plays or areas where the design is the same).
- the risk assessment shall consider the impact of a failure of the primary barrier
- barrier design and usage shall meet any applicable regulatory requirements. It is recommended that in most drilling, completion, and production operations that at least two well control barriers are maintained in place. If a secondary barrier is not possible or practical for the operation, then another mitigation measure shall be included in the risk assessment and work program.

Well control

Service Providers involved in well operations must ensure that they:

- understand the requirements of Encana's well control equipment requirements and well control SOPs

- bring to the attention of the Encana representative any potential conflicts between the Service Provider's practices and procedures and Encana's requirements that have not been addressed in a bridging document
- fulfill their responsibilities for well control incident avoidance (e.g. kick monitoring) and taking appropriate first steps to shut-in and secure a well when warning signs are detected

Service Providers involved with, and having the responsibility for, maintaining well control shall have the appropriate training. The level of training may vary depending on job type. Training includes:

- IADC (via an accredited training provider)
 - WellSharp Drilling Operations (Supervisor or Engineer Level)
 - WellCAP Well Servicing, Coiled Tubing, Snubbing, Wireline, Workover & Completion
- IWCF (via an accredited training provider)
 - Drilling Well Control (Level 4 Well Site Supervisor)
 - Well Intervention Pressure Control (Level 4 Well Site Supervisor)
 - unless otherwise dictated by regulation, renewal frequency for all well control training shall be 2 years.

Well design

Service Providers are responsible for ensuring they have a copy of the most current Encana Well Program and fully understand their responsibilities prior to conducting any work at a wellsite.

Purging

Purging must be performed prior to the execution of repair, modification, inspection or entry of any process equipment that has or may contain a toxic, flammable or corrosive material.

Service Providers shall follow all requirements when performing purging activities on Encana locations, and shall:

- ensure that the Encana lease operator is present and all paperwork (e.g., JSA, Facility or Pipeline Handover Checklist) is completed before pressurizing the system
- control or remove any harmful substance contained (e.g., H₂S) within equipment, pipes and pipelines during repair or modification work and ensure necessary precautions are observed.
- ensure isolation equipment (blind flanges, double block and bleed or other approved methods) used for this purpose have a sufficient rating to withstand 125% of the highest pressure that could potentially be encountered; and
- ensure controls are in place where the possibility exists for combustible liquids to flash-off and accumulate vapors after purging

Rigging and lifting

Service Providers shall follow all requirements when performing rigging and lifting activities on Encana locations, and shall:

- initiate rigging and/or lifting activities only after identifying hazards and associated controls on the JSA and reviewing all site-specific procedures with all those involved with the activity
- develop a lift plan for high hazard lifts that has been reviewed and approved by a qualified professional engineer. A high hazard lift is a critical lift where the load is expensive, involves hard to replace equipment or where the load is maneuvered over people or energized equipment, including power lines

- maintain competency if acting in the role of an equipment operator, signaler or rigger

Safe vehicle operations

Service Providers shall:

- have a driver distraction practice regarding the use of cell phones and other electronic devices while driving and follow State regulations
- avoid the use of cell phones and other electronic devices (including hands-free devices) while a vehicle is in motion while on Encana sites and roadways
- use industry acceptable hand signals for directing vehicles or heavy equipment
- utilize pull-through/drive-through or back-in parking at all locations, where practicable
- use a spotter, if backing a vehicle or heavy equipment on an Encana work site
- use preferred road routes and drive in accordance with Encana's Courtesy Matters program
- properly place and secure all loads

NOTE: Two-way radios are exempt while on Encana sites and roadway. Essential business related communication must be proven to be needed

Welding

Welders and/or Service Providers shall be trained, certified, tested and competent in the required welding procedures and adhere to applicable codes, standards and regulations while performing welding work.

Working alone

Service Providers shall develop and implement a system to monitor the location of its staff and to ensure their well-being in working alone situations. Service Providers must ensure their staff are competent in Service Providers working alone procedures and any associated equipment.

Working at heights

Service Provider staff working at heights greater than four feet shall be protected using approved guardrails or fall arrest systems.

When staff are working at a height near other staff the Service Provider must have a competent signaler and the area must be roped off with conspicuously posted signage or take other equivalent measures to protect staff on the site.

Personal fall arrest systems must be supplied by the Service Provider and worn by all staff when working at heights greater than four feet where staff are not protected by guard rails, as required by applicable regulations.

All staff must be properly trained in the use of fall protection devices. Fall arrest equipment must meet applicable regulatory requirements and shall be inspected daily or before each use.

Where man baskets are required, the Service Provider shall ensure that a professional engineer has certified this equipment. Staff in man baskets must be secured in accordance with applicable regulatory requirements.

Scaffolding shall be designed by a qualified person and shall be installed per that design. Scaffolds will be constructed of suitable material for intended service (per OSHA 1926.541).

4.0 Health hazard assessment and control

Service Providers shall have programs in place that addresses all chemical, physical, ergonomic, indoor air quality, and biological hazards on Encana field worksites. Specifically, Service Providers shall:

- communicate chemical, physical, ergonomic, indoor air quality and biological hazard control procedures for affected staff
- adhere to Encana's Exposure Control Plans and procedures for applicable hazards
- comply with Global Harmonization System (GHS), Transportation of Dangerous Goods (TDG), and/or Department of Transportation (DOT) regulations
- provide current SDSs and a list of hazardous chemicals used at Encana workplaces upon request
- submit an accurate inventory of all chemical, physical, and biological hazards on site, to the Encana site supervisor, when necessary
- ensure appropriate controls are available and used in accordance with manufacturer guidelines for all staff
- respond to staff concerns directly or seek additional information from Encana EH&S representative

5.0 Environmental stewardship

Materials and waste management

Service Providers shall comply with all applicable state and federal regulations governing waste as well as any requirements set forth in their individual MSA. Furthermore, Service Providers shall:

- ensure all chemicals and containers brought onto an Encana location are removed at the completion of the job (disposal of the materials costs are charged back to Service Provider if not removed)
- ensure wastes generated and/or disposed of on behalf of Encana are managed in accordance with instructions from the Encana representative and applicable state and federal regulations
- ensure waste materials generated are segregated and disposed of into their appropriate waste receptacle in a way that minimizes the need and costs for disposal
- ensure recyclable waste or materials are reused onsite or taken to an approved facility for recycling

Wastes generated solely by the Service Provider (e.g., used oil from rental equipment) are the responsibility of the Service Provider to recover and dispose of properly offsite. Waste disposal techniques and facilities shall be subject to Encana approval.

Waste management and disposal shall be:

- coordinated and completed by a certified/trained professional

- transported by licensed transporters to an approved facility for the specific waste type
- accompanied with the appropriate documentation or shipping papers (such as the Uniform Hazardous Waste Manifest, if applicable)

Sanitary facilities

The Service Provider shall ensure that all required approvals, including permits and licenses, are in place for septic, water diversion, and waste disposal systems associated with its facilities, including “grey water” discharge. Furthermore, Service Providers shall:

- design and maintain sanitary facilities per applicable regulations and/or permit requirements and to protect surface water and potable groundwater resources
- ensure all sanitary facilities are properly secured or anchored
- ensure all leaks and sewage discharges are treated as spills and are reported to an Encana representative immediately upon discovery

Spill prevention, reporting, and management

A spill is any unpermitted quantity of liquid or solid substance that is partially or wholly outside of its primary containment (e.g., tank, drum, truck, pond, pit, and storage sack), excluding beverages, food items, unused hydraulic fracturing sand (non-coated and natural), and fresh (including potable) water under specified circumstances.

All spills on Encana property shall be reported to the Encana Representative immediately. Service Providers shall have available all emergency responders’ contact information in addition to all pertinent Encana emergency contact names and numbers. Timely and consistent spill reporting enables Encana to minimize and monitor our impact on the environment and to comply with all regulatory requirements.

Service Providers shall be responsible for the clean-up of any spills they cause, at their expense. Spill cleanup shall be managed with Encana representative oversight.

When applicable, drilling and workover rigs must have an SPCC plan in place that is compliant for the operation.

Water quality and quantity

Service Providers shall obtain all necessary approvals, licenses and permits for water use (i.e., groundwater or surface water for drilling) before performing work. No water will be discharged without prior approval by the Encana representative, which includes approval by the surface landowner, obtaining applicable permits, and/or proper tests and documentation prior to discharge (e.g., stormwater and hydrotest water).

Wildlife and habitat

Service Providers shall respect wildlife and habitat on Encana locations and to report potential wildlife and/or habitat impacts identified during field activities to their Encana representative (e.g., occupied bird nests and dead/injured wildlife).

6.0 Regulatory compliance

Service Providers shall be aware of, and maintain compliance with, the applicable regulations, legislation and laws relevant to the jurisdiction they are working in.

If a Service Provider or its staff are approached or contacted by a regulatory agency at any time while working for or on an Encana site, they shall notify an Encana representative immediately. The Encana representative will address all questions related to Encana sites, processes and/or equipment.

Federal motor carrier safety administration

Service Providers working for Encana shall comply with all applicable Federal Motor Carrier Safety Administration rules and regulations; and demonstrate compliance through documentation.

7.0 Risk Management

Service Providers shall:

- have and follow their own risk management process
- engage Encana staff in Service Provider's risk management process when necessary
- ensure high-impact/high-probability tasks are mitigated
- participate in Encana's risk management process as required

8.0 Security and Security Investigations

Service Providers shall:

- report suspicious activity or packages to Encana
- assist in controlling access to property owned, leased or operated by Encana (unauthorized persons shall be questioned and reported)
- possess valid photo identification (i.e., identification card issued by an approved Service Provider or a valid Encana-issued access card)
- sign-in and sign-out at Encana access-controlled offices, facilities and field locations;
- close all gates upon entering and exiting the location
- report all incidents that occur on Encana property such as theft, trespassing, vandalism/destruction of property, illegal dumping and threats to an Encana representative, or if instructed to, law enforcement
- ensure any notification to the Encana representative includes the name and telephone number of the law enforcement agency contacted, the law enforcement agency's assigned incident number, and if possible, a copy of the incident report generated by the responding officer/deputy
- not alter or destroy any potential evidence post-incident (e.g., tire impressions, clothing and tools)
- keep notes of actions taken and observations, including date and time in case you are interviewed by law enforcement or the Encana investigators post-incident
- report to your Encana representative or to the Integrity Hotline incidents of potential fraud to include submission of fraudulent invoices or field tickets, or possible violations of Encana's Business Code of Conduct (e.g., conflicts of interest, solicitation, paying of bribes or kickbacks, acceptance of gifts and misuse of Encana property)
- ensure equipment on Encana locations, including bulk fuel tanks, is secured when not in use. Equipment shall not be left unattended with the keys in the operator's station

- cooperate and support any Encana investigation as requested

Weapons

Dangerous weapons include, but are not limited to: firearms (shoulder weapons and handguns) of any type, archery, explosives, knives with a blade greater than 4-inches, batons, electroshock tasers, stun guns, martial arts instruments, chemical agents.

The possession or use of dangerous weapons is prohibited on Encana-owned, leased or operated property including, but not limited to, field locations, offices, buildings, parking structures, vehicles or aircraft.

Exceptions require advance written authorization from the operating area Vice President.

Persons requesting such authorization must complete the form *Request to Carry/Possess a Weapon* available through Encana Security. This includes individuals licensed by a governmental authority.

Service Providers who observe a person in possession of a dangerous weapon, as described above on or in Encana premises shall immediately report the occurrence to an Encana representative or authority.

9.0 Verification and Audit

Service Provider EH&S programs are initially evaluated during the pre-qualification process by evaluating and scoring ISNetworld entries as well as other pre-qualification requirements.

EH&S performance of Service Providers is also verified in the field on a continual basis by Encana operational and EH&S staff in the form of daily observations, field spot checks and inspections.

Service Providers working for Encana may also be identified and selected to take part in a more thorough and formal EH&S audit. The intent of the EH&S audit is to provide Encana with assurance that the relevant expectations and processes listed in this manual are in place and being implemented. The audit process includes a tabletop review at the Service Providers relevant office and a possible field inspection of active operations.

If selected to take part in an EH&S audit, the Service Provider is responsible for the following:

- be readily available prior to, during and after the audit
- administration and logistics for the audit team including work space, meeting space and access to field locations, operations and staff
- providing relevant EH&S documents and records to demonstrate conformance to the requirements listed in this manual
- address all Corrective Actions identified in the Audit Report