

# 2013

## CONTRACTOR SAFETY MANUAL

---

NEW DOMINION LLC



## **[CONTRACTOR SAFETY MANUAL]**

THIS CONTRACTOR SAFETY MANUAL HAS BEEN DESIGNED TO PROVIDE CONTRACTORS WITH A CLEAR UNDERSTANDING OF NDL'S ENVIRONMENTAL, HEALTH, SAFETY, AND SECURITY (EHS&S) EXPECTATIONS OF THIRD-PARTY CONTRACTORS AND THEIR SUB-CONTRACTORS.

# CONTRACTOR SAFETY MANUAL

---

At New Dominion LLC, safety is not just a priority; it is a core business value, part of our culture, and built into every job.

Our philosophy is, "Safety is something we can all live with." We also believe that each of us is responsible for our own safety and that of our co-workers so we can all go home to our families at the end of the day.

This philosophy goes beyond hard-hats, steel-toed boots and other personal protective equipment. It is a mental commitment to safety that is reflected in the decisions we make every day about how we approach our work.

We are counting on each of you to embrace our safety culture. Safety is free; take some home with you.

Best Regards,

Kevin Easley

President and CEO

# CONTRACTOR SAFETY MANUAL

---

<b>TABLE OF CONTENTS</b>	<b>i</b>
<b>ABBREVIATIONS</b>	<b>ii</b>
<b>1.0 OVERVIEW</b>	<b>1</b>
1.1 HOW THE MANUAL IS ORGANIZED	2
1.2 ACKNOWLEDGEMENT	2
<b>2.0 NDL EHS&amp;S CULTURE AND SYSTEMS</b>	<b>3</b>
2.1 NDL RESPONSIBILITIES TO ITS CONTRACTORS	3
2.2 COURTESY MATTERS	3
2.3 CONTRACTOR EH&S PROGRAM EVALUATION AND AUDITS	3
2.4 INTEGRITY NUMBER	4
<b>3.0 GENERAL REQUIREMENTS</b>	<b>4</b>
3.1 ACCESS AND EGRESS	4
3.2 CONCURRENT OPERATIONS	4
3.3 CONTRACTOR RESPONSIBILITIES	4
3.3.1 EHS&S STANDARDS AND COMPLIANCE	5
3.4 DRUGS AND ALCOHOL	5
3.5 EMERGENCY RESPONSE	6
3.6 FITNESS FOR DUTY	6
3.7 HAZARD ALERTS	6
3.8 HAZARD IDENTIFICATION	6
3.9 HAZARD ASSESSMENT	6
3.10 HAZARD ELIMINATION AND CONTROL	7
3.11 INCIDENT REPORTING	7
3.12 JOB KNOWLEDGE	7
3.13 MANAGEMENT OF CHANGE	7
3.14 REGULATORY INSPECTIONS	7
3.15 RISK ASSESSMENT	8
3.16 SECURITY AND SECURITY INVESTIGATIONS	8-9
3.17 SHORT SERVICE EMPLOYEES	9
3.18 WEAPONS	10
<b>4.0 SAFETY REQUIREMENTS</b>	<b>10</b>
4.1 COMPRESSED GAS CYLINDERS	10
4.2 CONFINED SPACE	11
4.3 DRIVING	11
4.3.1 DRIVER DISTRACTION	11
4.3.2 SPEED LIMITS	11
4.3.3 BACKING	12
4.4 ELECTRICAL REQUIREMENTS	12
4.4.1 GROUNDING AND LABELLING	12
4.4.2 INTRINSICALLY SAFE EQUIPMENT	12
4.4.3 WORKING NEAR OVERHEAD POWERLINES	12-13

# CONTRACTOR SAFETY MANUAL

---

4.5	EQUIPMENT AND TOOLS.....	13
4.6	FLOOD-PRONE OR LOW-LYING AREAS.....	13
4.7	FIRE PREVENTION AND EQUIPMENT.....	14
4.8	FIRST AID REQUIREMENTS.....	14
4.9	GROUND DISTURBANCE.....	14
4.10	HAIR, JEWELRY, AND LOOSE CLOTHING.....	15
4.11	HOT WORK.....	15
4.12	HOUSEKEEPING.....	16
4.13	JOB SAFETY ANALYSIS (JSA) .....	16
4.14	LOCKOUT/TAGOUT (LOTO) .....	16
4.15	MANLIFTS, FORKLIFTS, AND CRANES.....	17-18
4.16	MINIMUM PPE REQUIREMENTS .....	18
4.17	PRE-JOB SAFETY MEETINGS.....	18-19
4.18	SMOKING/OPEN FLAMES.....	19
4.19	TRENCHING AND EXCAVATION.....	19-20
4.20	WALKING AND WORKING SURFACES.....	20
4.20.1	PORTABLE LADDERS.....	20
4.20.2	FIXED LADDERS.....	20
4.20.3	ELEVATED WORK SURFACES.....	20-21
4.20.4	SCAFFOLDING.....	21
4.21	WORKING ALONE.....	21
<b>5.0</b>	<b>OCCUPATIONAL HEALTH REQUIREMENTS.....</b>	<b>21</b>
5.1	BENZENE.....	21-22
5.2	ERGONOMICS.....	22
5.3	HAZARD COMMUNICATION (HAZCOM) AKA “RIGHT TO KNOW” .....	22
5.4	HEAT-RELATED ILLNESS.....	23
5.5	HYDROGEN SULFIDE (H <sub>2</sub> S) .....	23
5.6	NATURALLY OCCURRING RADIOACTIVE MATERIAL (NORM) .....	24
5.7	OCCUPATIONAL EXPOSURE RISK ASSESSMENT.....	24
5.8	RESPIRATORY PROTECTION.....	24-25
5.9	SANITARY AND WASHING FACILITIES.....	25
<b>6.0</b>	<b>ENVIRONMENTAL REQUIREMENTS.....</b>	<b>25</b>
6.1	MATERIALS AND WASTE MANAGEMENT.....	25-26
6.2	SANITARY AND WASHING FACILITIES.....	26
6.3	SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) .....	26
6.4	SPILL REPORTING AND RESPONSE.....	26-27
6.5	VEGETATION MANAGEMENT.....	27
6.6	WATER USAGE AND GROUNDWATER PROTECTION.....	27
6.7	WILDLIFE AWARENESS.....	27
6.7.1	GENERAL WILDLIFE.....	27
6.7.2	MIGRATORY BIRDS.....	27
<b>7.0</b>	<b>DRILLING, COMPLETIONS, AND WORKOVERS.....</b>	<b>28</b>
7.1	ANCHORING.....	28
7.2	AUXILIARY EQUIPMENT .....	28
7.2.1	BLOWOUT PREVENTER (BOP) .....	28
7.2.2	ACCUMULATOR.....	29
7.2.3	BOILERS.....	29

# CONTRACTOR SAFETY MANUAL

---

7.2.4	MUD PUMPS.....	29
7.2.5	MUD TANKS/SHALE SHAKER AREA.....	29
7.2.6	PIPE RACKS.....	29
7.2.7	PORTABLE HEATERS.....	30
7.3	AUXILIARY ESCAPE.....	30
7.4	BACK-UP POSTS AND TONG SAFETY LINES.....	30
7.5	CAT LINES AND DERRICK.....	30-31
7.6	COMPETENT DRILLING AND COMPLETION SUPERVISORS.....	31
7.7	DEPRESSURIZING/DE-ENERGIZING EQUIPMENT.....	31
7.8	DERRICK RAISING OR LOWERING.....	31
7.9	DIESEL ENGINES.....	32
7.10	DRAWWORKS BRAKES.....	32
7.11	DRILL STEM TESTING (DST) .....	32
7.12	DRILLING, COMPLETIONS, AND SERVICE RIGS.....	32-33
7.13	FUEL TANKS AND FUEL LINES.....	33
7.14	GUARDS.....	33
7.15	HAULING OVERWEIGHT OR OVER HEIGHT LOADS.....	33
7.16	INSPECTIONS.....	34
7.17	RIDING HOISTING EQUIPMENT.....	34
7.18	RIG MOVE GENERAL SAFETY.....	34
7.19	RIGGING.....	34-35
7.20	ROTARY TABLE.....	35
7.21	STORAGE AREAS.....	35
7.22	SUBSTRUCTURE AND CELLAR.....	35
7.23	SCR AND GENERATOR HOUSE.....	36
7.24	TRAVELLING BLOCKS.....	36
7.25	WEIGHT INDICATOR.....	36
7.26	WORKSITE TRAILERS.....	36
<b>8.0</b>	<b>WELL SERVICING OPERATIONS.....</b>	<b>37</b>
8.1	GENERAL REQUIREMENTS.....	37
8.2	PULLING RODS OR TUBING.....	38
8.3	SWABBING OPERATIONS.....	38
8.4	WELL STIMULATING OR CEMENTING OPERATIONS.....	39
8.5	WIRELINE OR SLICKLINE OPERATIONS.....	39
<b>9.0</b>	<b>PRODUCTION AND PIPELINE OPERATIONS.....</b>	<b>39</b>
9.1	DOT OPERATOR QUALIFICATION (OQ) REQUIREMENTS.....	39-40
9.2	HOT TAPPING.....	40
9.3	HYDRATES.....	40
9.4	ISOLATION AND PURGING OF EQUIPMENT.....	40
9.5	PIPING SYSTEMS.....	41
9.6	WELDING RIGS AND WELDERS.....	41
9.7	WELL CHEMICAL TREATMENTS.....	41
<b>APPENDIX A CONTRACTOR ACKNOWLEDGEMENT FORMS</b>		

# CONTRACTOR SAFETY MANUAL

---

## ABBREVIATIONS

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
API	AMERICAN PETROLEUM INSTITUTE
BBP	BLOODBORNE PATHOGEN
BOP	BLOWOUT PREVENTER
BU	BUSINESS UNIT
DOT	DEPARTMENT OF TRANSPORTATION
DST	DRILL STEM TESTING
EHS&S	ENVIRONMENTAL, HEALTH, SAFETY, AND SECURITY
FRC	FIRE-RESISTANT CLOTHING
GPS	GLOBAL POSITIONING SYSTEM
H <sub>2</sub> S	HYDROGEN SULFIDE
HAZCOM	HAZARD COMMUNICATION (IN REFERENCE TO OSHA 29 CFR 1910.1200)
HAZID	HAZARD IDENTIFICATION
HAZWOPER	HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE
JSA	JOB SAFETY ANALYSIS
LOTO	LOCK OUT TAG OUT
MAOP	MAXIMUM ALLOWABLE OPERATIONAL PRESSURE
MOC	MANAGEMENT OF CHANGE
MSA	MASTER SERVICE AGREEMENT
MSDS	MATERIAL SAFETY DATA SHEET
NDL	NEW DOMINION LLC
NORM	NATURALLY OCCURRING RADIOACTIVE MATERIAL
NFPA	NATIONAL FIRE PROTECTION AGENCY
OQ	OPERATOR QUALIFICATION
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PED	PERSONAL ELECTRONIC DEVICE
PFD	PERSONAL FLOTATION DEVICE
PPE	PERSONAL PROTECTIVE EQUIPMENT
PPM	PARTS PER MILLION
PRV	PRESSURE RELIEF VALVE
SBU	SUB-BUSINESS UNIT
SCBA	SELF-CONTAINED BREATHING APPARATUSES
SOP	STANDARD OPERATING PROCEDURE
SPCC	SPILL PREVENTION, CONTROL, AND COUNTERMEASURE
SSE	SHORT SERVICE EMPLOYEE
USADIVSEC	USA DIVISION SECURITY

# CONTRACTOR SAFETY MANUAL

---

## 1.0 OVERVIEW

This Contractor Safety Manual has been designed to provide contractors with a clear understanding of NDL's Environmental, Health, Safety, and Security (EHS&S) expectations of third-party contractors and their sub-contractors.

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 contractor from their responsibilities under such applicable regulations.

The information provided in this manual is not intended to replace your company's policies or protocols, but to supplement these with NDL's general requirements where a company's policies or protocols may not provide specific information.

While performing services on NDL locations, all contractors will be expected to comply with all applicable regulations; conform to NDL's expectations; and, at a minimum:

- Report all EHS&S incidents to NDL's supervision;
- Complete all hazard assessments as well as JSAs for job task;
- Know which NDL Job Site Supervisor to call for injuries or illnesses;
- Wear NDL appropriate personal protective equipment (PPE) on field locations at all times;
- Know how your job potentially impacts the environment;
- Know which NDL Job Site Supervisor to call to report a spill;
- Submit Material Safety Data Sheets (MSDSs) for all chemicals brought onto NDL locations and know where to find MSDSs on NDL locations; and
- Maintain currency on all EHS&S competency training concerning the job(s) for which you are responsible.

NDL will continue to perform work site observations at our facilities.

Should any doubt arise as to the meaning or interpretation of these expectations or any conflict be identified between your company's policies or protocols and NDL's expectations, the contractor shall consult with the NDL Job Site Supervisor and or NDL EHS Representative.

## 1.1 How this Safety Manual is Organized

After providing an overview and an introduction in this section, this manual:

- Describes NDL's EHS&S culture and the systems that define it in Section 2.0;
- Provides the general requirements in Section 3.0 that span all EHS&S topics, such as hazard identification (HazID) and risk assessment;
- Specifies safety, occupational health and environmental topics in Sections 4.0, 5.0 and 6.0, respectively; and
- Describes safety requirements for specific operations:
  - Drilling, Completions and Workovers in Section 7.0;
  - Well Servicing Operations in Section 8.0; and
  - Production and Pipeline Operations in Section 9.0

In addition, the acknowledgement forms are provided in Appendix A: one for the contractor to maintain and one to sign and forward to NDL.

## 1.2 Acknowledgement

NDL expects all contractors and their sub-contractors to:

1. Review this manual;
2. Communicate the key points of this manual as they apply to its business, to its employees who will be working on NDL locations, its respective consultants and sub-contractors; and
3. Acknowledge its understanding of the EHS&S expectations contained in this manual by signing the Contractor Acknowledgement Form in Appendix A.

Keep a copy of this form in your files for auditing purposes along with a copy of each employee's acknowledgement. Forward the signed original to the NDL EHS&S Director.

## 2.0 NDL'S EHS&S CULTURE AND SYSTEMS

NDL is committed to providing a safe, healthful, secure, and environmentally conscious workplace, core values around which our business revolves. We accomplish these principles through teamwork, open communications and training. The safety of our employees, contractors, visitors and neighbors is vital to our success.

## 2.1 NDL's Responsibilities to its contractors

It is NDL's responsibility to provide contractors with a workplace free of known hazards and to address any identified hazard or EHS&S issue promptly.



# CONTRACTOR SAFETY MANUAL

---

## 2.2 Courtesy Matters

NDL's reminder to all of its contractors is that we are guests in the community and we have a shared responsibility to treat each operating area and its residents with respect. When working for NDL:

- Do Not litter;
- Watch for livestock or other animals;
- Respect posted speed limits;
- Act in a professional manner (e.g., language, attire, etc.);
- Treat others as your neighbor; and
- Remember you and your company are representing NDL.

## 2.3 Contractor EH&S program evaluation and audits

Contractors working for NDL will be identified, evaluated and selected based upon an analysis of strong EH&S management practices and performance criteria that includes EH&S practices and programs.

A contractor's EH&S programs are first evaluated during the hiring process by scoring your responses to the questionnaire provided by NDL. These requirements are given in Section 3.3. The contractor's resulting score enables evaluation of the contractor's risk to NDL.

The EH&S performance of contractors is verified in the field and monitored through audits for conformance to NDL requirements. The audit process includes a summary of the findings during the tabletop review and field observations. A score card is then issued to enable evaluation of the contractor's risk to NDL, based on its EH&S programs.

## 2.4 Integrity

NDL is committed to engaging communities, operating ethically and continuing to meet the requirements of all applicable laws and regulations. To help meet this commitment, we provide contact information for internal and external stakeholders to confidentially or anonymously report any unethical, illegal, or otherwise inappropriate behavior they observe. Please contact us below to report any such behavior:

Phone: Fred Buxton (918) 587-6242

MAIL: Integrity Issues  
Attention: Fred Buxton  
1307 South Boulder Avenue  
Tulsa, Oklahoma 74119

## 3.0 GENERAL REQUIREMENTS

The following are general EHS&S requirements. Specific health, safety and environmental requirements are given in Sections 4.0-6.0. The topics are arranged alphabetically.

### 3.1 Access and Egress

All exits from building(s), facilities or sites must be clearly identified and kept clear of obstructions at all times. Obstructions include vehicles, equipment, trash, power and phone

# CONTRACTOR SAFETY MANUAL

---

lines, temporary quarters and other materials. All vehicles should be parked properly, pull-through parking (rather than back-in) being the preferred method of parking.

## 3.2 Concurrent Operations

Concurrent operations occur when contractors are conducting work on/near an NDL site in the presence of other contractors. The NDL Job Site Supervisor will conduct a pre-job safety meeting with all contractors present to address this situation. In this pre-job safety meeting, the person who has ultimate control of the site will be determined and communicated to all contractors on location. Each contractor will discuss their assigned tasks and be made aware of the hazards associated with other contractors in or around the work area, and how their work could impact other ongoing operations.

NDL expects contractors and their sub-contractors working concurrently on operation sites to have a mutually agreed upon plan for handling emergencies and evacuations at the site. This shall be addressed in the Job Safety Analysis (JSA) and will include emergency responders' contact information as well as other emergency response actions, such as muster point, method of accounting for all personnel and any other applicable information.

## 3.3 Contractor Responsibilities

### 3.3.1 EHS&S Standards and compliance

Contractors are expected at all times to meet or exceed the practices and safe practices outlined in this manual, the contractor's own safety manuals, and any applicable federal, state, and local regulation – whichever are most stringent. You are responsible for ensuring your sub-contractors also do the same.

All contractors and their employees must complete NDL Contactor Orientation prior to becoming an approved NDL vendor. This orientation is refreshed on an as-needed basis. Please contact your NDL Job Site Supervisor to arrange this training.

NDL expects contractors to comply with all regulatory requirements pertaining to the work or its performance of work for NDL pursuant to the terms and conditions of the agreement between NDL and the contractor. It is the contractor's responsibility to ensure that its sub-contractors meet all contractual, regulatory and drug and alcohol requirements.

**Contractors will identify all non-English speaking individuals on their work crews and assign at least one fully bilingual interpreter to communicate all pertinent information (e.g., JSAs, emergency response information and pre-job safety meetings). Contractors will also verify this information is understood. If this is not adhered to, the identified work cannot proceed.**

**STOP WORK AUTHORITY:** Any NDL employee, contractor or sub-contractor has the authority and responsibility to stop work on any site for any suspected hazard or unsafe work.

# CONTRACTOR SAFETY MANUAL

---

## 3.4 Drugs and Alcohol

NDL 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 its sites. NDL expects the contractor to develop, implement, maintain and enforce a substance abuse policy consistent with this prohibition.

All contractors must be members of DISA Inc. or another NDL approved drug and alcohol consortium. NDL will provide information to the contractor for DISA Inc. and NDL-approved equivalents. It is the contractor's responsibility and obligation to keep its employee rosters updated and to ensure employees are current on the random tests. New employees must not be allowed on NDL property until their initial pre-employment drug test has been cleared as negative. Any personnel found to be in violation of this policy will be asked to leave location. Your company's testing forms must be readily accessible to perform drug and alcohol testing when requested.

NDL expects contractor to prohibit any worker from entering or remaining on NDL premises while his/her ability to work is affected by alcohol or drugs. Contractor's employees are required to notify their supervisors of any medication they are taking that may affect their work performance. The possession or use of these substances on a NDL site will result in severe action, up to and including dismissal. On property owned or leased by NDL, New Dominion reserves the right to search or inspect contractors, sub-contractors and their property at any time, at our discretion and with or without notice. Such searches may include personal effects and vehicles. Any personnel found in violation of this requirement, or who refuses to cooperate with the searches and tests included in this program or the contractor's policy shall be permanently removed from NDL property and from performing work for NDL. Companies who refuse to cooperate with NDL's drug and alcohol requirements may be subject to termination of their contract.

## 3.5 Emergency Response

New Dominion, LLC expects the contractor to develop, implement and enforce its own emergency response plans for work it performs. However, it is critical that the contractor provide "bridging documents" and understands its responsibilities under NDL's Emergency Response Plan, both for site specific and area-specific incidents. The contractor will be briefed by the NDL Job Site Supervisor regarding NDL's site-specific Emergency Response Plan. Some sites use the Site-Specific Evacuation Plan, which will be made available upon request.

The contractor is expected to have available all emergency responders' contact information in addition to all pertinent NDL emergency contact names and numbers. Availability of cell phone coverage should be determined prior to job start. If no cell phone coverage is available, personnel shall be appointed to drive to the closest cell phone coverage area to make the emergency phone call. This shall be addressed as a part of the JSA.

Any media inquiries related to an incident will be directed to the on-site NDL Incident Commander. No photos or videos shall be taken on any NDL site (including with personal electronic devices [PEDs]) without explicit NDL permission. PEDs may be confiscated if such media is found.

# CONTRACTOR SAFETY MANUAL

---

## 3.6 Fitness for Duty

New Dominion LLC expects the contractor to ensure the fitness of its workers to perform their job functions. NDL expects contractor's supervisors to be alert to such impairments as fatigue, physical disability, emotional state, cold/heat-related conditions, drugs or alcohol and hours worked, which may only be noticed by closely working with or supervising workers. Drive time should always be factored into the work day, including the return trip.

## 3.7 Hazard Alerts

Periodically, New Dominion will issue alerts related to an EHS&S hazard or incident that has occurred in our operating area. These alerts are a knowledge-sharing or lessons-learned effort and we expect that you share these with all workers.

## 3.8 Hazard Identification

Contractors shall use a Hazard Identification (HazID) program. Serious or frequently identified hazards should be brought to the attention of the NDL Job Site Supervisor, who will have New Dominion's report form.

## 3.9 Hazard Assessment

It is the contractor's responsibility to perform a hazard assessment for tasks to be performed and to ensure proper protective measures are taken (e.g., proper PPE for chemical handling). Any questions regarding hazards should be directed to the NDL Job Site Supervisor and/or EHS Representative.

## 3.10 Hazard Elimination and Control

Types of hazard elimination or control include:

- Engineering controls (ventilation, site spacing, flares, etc.)
- Administrative Controls (procedures, training, etc.)
- Personal Protective Equipment (hearing protection, safety glasses, etc.)

As a rule, effort should be made to engineer or administratively control hazards; PPE should be the last line of defense.

## 3.11 Incident Reporting

Every illness, injury or spill that occurs on an NDL location, shall be immediately reported to the NDL Job Site Supervisor and EHS Representative.

The Contractor shall not disturb the scene of an incident except to rescue personnel, secure the area or to control damage. New Dominion expects each contractor to document contractor-caused incidents including near misses, injuries, fatalities, and spills. Contractor will efficiently inform its employees, sub-contractors and other interested parties of circumstances resulting in an incident. Contractors will also provide guidance on methods of prevention of similar incidents in the future. Contractors will perform a thorough investigation (to include determination of the root cause) and take corrective actions to prevent reoccurrence.

# CONTRACTOR SAFETY MANUAL

---

In the event of an injury, all parties who were involved in the incident shall be required to be drug and alcohol tested. These personnel shall not be allowed to drive themselves for testing or for medical treatment.

## **3.12 Job Knowledge**

New Dominion expects contractor to have proficient knowledge, experience, and understanding pertaining to the work to be performed, as well as knowledge of safe and environmentally sound processes for completing the assigned task.

## **3.13 Management of Change (MOC)**

New Dominion manages change by way of the MOC process. This process is a systematic way to track changes in processes, equipment, personnel, chemicals and all other “not-in-kind” changes. While contractors are rarely involved in this process, it is important to know that any deviation from drawings, instructions or standard operating procedures (SOPs) may involve the MOC process. If you have any question whether MOC is applicable to the task at hand, ask your NDL Job Site Supervisor.

## **3.14 Regulatory Inspections**

New Dominion expects contractors to inform the NDL Job Site Supervisor immediately if a contractor or its workers are approached or contacted by a regulatory agency at any time regarding any aspect of the work. The contractor should cooperate and allow ingress (if safe to do so), but the NDL Job Site Supervisor will address all questions upon arrival.

## **3.15 Risk Assessment**

In order to conduct business safely and identify or mitigate associated risks, New Dominion has a risk assessment process. Tasks that are high risk or do not have an SOP will be assessed for risk.

Risk assessment is a process by which the job is analyzed for probability of failure and the impact of that failure on people, the environment, New Dominions’ reputation and company assets. High risk/high probability tasks are to be mitigated to lower risks and the determination is made whether this risk level is acceptable.

## **3.16 Security and Security Investigations**

New Dominion asks for your help in reporting suspicious activity and controlling access to property owned, leased or operated by New Dominion. Unauthorized persons should be questioned and reported. Persons on our premises – including staff, contractors, vendors, and approved visitors – are required to possess and present a valid federal- or state-issued driver’s license or another acceptable identification card with a full-face photograph. An acceptable photo identification card also includes an identification card issued by an approved contractor, vendor or a valid New Dominion access card.

Contractors, vendors and visitors are required to sign in and out at NDL access-controlled offices, facilities and field locations particularly where construction, drilling, completions and production work are being performed. Gates at field locations and exterior doors at NDL offices and facilities should be closed upon exiting. We ask that you also watch for unauthorized “tailgaters” either on foot or in a vehicle that try to follow you into an NDL card access

# CONTRACTOR SAFETY MANUAL

---

controlled or gated location. Tailgaters should be politely questioned if they are not recognized or known.

You are the eyes and ears of New Dominion and suspicious activity or packages should be reported with enough detail to enable timely investigation. Contact your NDL Job Site Supervisor if you have any questions or concerns.

Incidents that occur on New Dominion property with a nexus to criminal activity – such as theft, trespassing, vandalism/destruction of property, illegal dumping and threats – shall be reported immediately to an NDL Job Site Supervisor. If so instructed, please report these types of incidents to law enforcement and subsequently to your NDL Job Site Supervisor. Reporting parties should provide in their notification to the NDL Job Site Supervisor the name and telephone number of the law enforcement agency's assigned incident number and, if possible, a copy of the Incident Report generated by the responding officer/deputy.

Care should be taken not to alter or destroy any potential evidence, such as tire impressions, clothing and tools. You should keep notes of your actions taken and observations made, including date and time. You may be interviewed by law enforcement and your notes are important in the development of an incident time line.

As an approved contractor or vendor you are also required to report to your NDL Job Site Supervisor incidents of potential fraud to include submission of fraudulent invoices or field tickets or possible violations of NDL's Business Conduct and Ethics Practice (e.g., conflicts of interest, solicitation, paying of bribes or kickbacks, acceptance of gifts and misuse of NDL property).

Field tickets and invoices should be legible and reviewed for accuracy before they are submitted to NDL for payment and conform to agreed-upon work orders and documented rates. These documents should clearly list, at a minimum, details describing the work performed or material provided, date(s), start time and ending time with total hours, and the New Dominion job location(s). New Dominion does not pay for contractor's lunch hour. If your services include transportation of material or product, the field ticket that supports the submitted invoice should have the date, pick-up/deliver locations, truck number, driver's name, product description, weights and hours. If an allegation arises warranting an inquiry, your company's assistance may be required in the review of supporting documentation or in the conduct of a forensic audit. No material or product should be dropped off at or removed from an NDL storage yard without authorization from an NDL Job Site Supervisor.

Heavy equipment parked on NDL locations, including bulk fuel tanks, should be locked and secured when not in use. At no time should the equipment be left unattended with the keys in the operator's station.

Contractors, vendors and guests, if provided or issued NDL property, are to return that property upon completion of the assigned task or work. This includes laptops, digital cameras, gas monitors, cellular phones, access cards, tools and keys.

Signs are posted at gates and entrances to field offices, plants, compressor stations, water disposal/treatment facilities, storage/fabrication yards, central or consolidated tank batteries and liquids natural gas/compressed natural gas depots or fueling stations. NDL's standardized signage includes generally accepted pictograms to prohibit drugs, knives over 4 inches in blade length, smoking only in designated areas, alcohol, firearms, wildlife poaching and speeding on NDL sites. The signage also posts requirements for PPE, fire-resistant clothing (FRC), no

# CONTRACTOR SAFETY MANUAL

---

trespassing, no unescorted visitors and a hydrogen sulfide (H<sub>2</sub>S) warning if H<sub>2</sub>S may be encountered on location. Please become familiar with these standardized signs, their messaging, warning, and the pictograms.

## 3.17 Short Service Employees

The Contractor shall have a short service employee (SSE) program and should distinguish SSEs from other employees on location (e.g., green hard hat). The contractor will assign a mentor and have a system in place to determine length of SSE services and a means to ensure job skill competencies for removal from SSE status. An appropriate ratio of SSEs vs. seasoned crew members shall be determined based on the risk of the job task. An Employee and Variance Form shall be completed before the pre-job safety meeting. NDL will provide these forms.

## 3.18 Weapons

The possession or use of dangerous weapons is strictly prohibited on NDL owned, leased or operated property including, but not limited to field locations, offices, buildings, parking structures or vehicles. All exceptions to this policy require advance written authorization obtained from the President and CEO of New Dominion. Persons requesting such authorization will need to obtain an authorization form from the NDL Job Site Supervisor. This policy applies regardless of whether an individual is licensed by a governmental authority to carry a concealed weapon.

Dangerous weapons include, but are not limited to:

- Firearms of any type,
- Archery,
- Explosives,
- Knives with a blade greater than 4 inches
- Electroshock or Tasers or stun guns,
- Martial arts instruments.

Staff members who observe another person in possession of a dangerous weapon as described above on or in NDL premises are obligated to immediately report the occurrence to an NDL Job Site Supervisor or other New Dominion authority. If an immediate threat to life or safety exists, the individual is obligated to notify law enforcement immediately. NDL reserves the right to conduct reasonable cause searches or inspections of people or property at any time, at its discretion, and with or without notice. Such searches may include personal effects and vehicles if they are on or in NDL premises.

Law enforcement officials who are on duty or official business are excluded from this policy.

## 4.0 SAFETY REQUIREMENTS

Specific safety requirements are described in this section, arranged alphabetically.

### 4.1 Compressed Gas Cylinders

The contractor will properly label, handle, store, transport and inspect cylinders to ensure compliance with regulations and industry standards

All cylinders must be returned promptly to their storage area after use. Protective caps must be placed over the cylinder valves when not in use or when the cylinders are being transported by



# CONTRACTOR SAFETY MANUAL

---

any means. Cylinders must be stored in the upright position and secured to a stationary object or structure. Regulators shall be removed during cylinder transport.

Cylinders must be kept away from heat including direct sunlight, fire, molten metal or electrical lines. Cranes may not be used to transport cylinders unless a carrier designed for that purpose is used.

Acetylene or liquid gas cylinders should never be operated in a horizontal position, as the liquid may be forced out through the hose causing a fire hazard or explosion. Flammables, oxygen and inert gases shall be stored separately with proper barriers between, as required by OSHA 1910.253.

## 4.2 Confined Space

New Dominion LLC expects that where confined spaces have been identified and entry into the space may be required, contractors, at a minimum, (1) will follow applicable regulatory standards, (2) will have a written confined space program, and (3) will be up to date on annual training required for your personnel.

Prior to entry, the contractor shall determine if the confined space is a permit-required confined space or a non-permit-required confined space. The contractor will then assess the hazards specific to the entry, develop and implement hazard control measures, and provide for emergency rescue of workers if needed (calling 911 alone is not an acceptable means to meet this requirement). Contractors must have a documented entry plan or an equivalent permit approval. In addition to the contractor using its own permit and program, contractor will be required to sign the New Dominion-issued confined space permit. Only personnel trained in specific levels of confined space – including entrant, attendant, rescue, and supervisor levels – can conduct permit-required confined space entries.

Additional training and certification-such as Confined Space Rescue, Lock Out/Tag Out, High Angle Rescue, NORM Hazards or Detection and Control of Flammable Substances-may be required depending upon the nature of the work being performed. All of these aspects must be identified and discussed in the pre-job safety meeting and JSA.

NOTE: No confined space entry will be performed without prior approval from the NDL Job Site Supervisor and EHS Representative. Participation from New Dominion EHS Representative during pre-job planning and permitting is required for confined space entry.

## 4.3 Driving

Driving is the most dangerous task that personnel perform on a daily basis. More fatalities occur annually due to driving than any other single activity we perform. To help mitigate this risk, NDL has developed policies with which contractors should reasonably comply for driver distraction, speed limits, and backing.

### 4.3.1 Driver Distraction

New Dominion has implemented a Driver Distraction Policy that prohibits using cell phones, texting, emailing, programming Global Positioning System (GPS) devices, video games and DVD players while driving. Other distractions are required to be kept to a minimum while driving, including, but not limited to using hands free devices, conversations with passengers, eating/drinking and grooming. Contractors are expected to follow this policy when on NDL sites. If you must take or make a phone call, please pull over and stop in a safe area.



# CONTRACTOR SAFETY MANUAL

NOTE: Two way radios are exempt from this policy.

## 4.3.2 Speed Limits

Not all New Dominion lease roads have posted speed limits; however, keep in mind that you are likely to meet traffic on these roads, so speed should be kept to a safe limit.

NOTE: Most counties have a County Road speed limit. Contractors are expected to obey all traffic laws including posted speed limits.

## 4.3.3 Backing

When backing up or setting equipment on location, spotters (trained in universal hand signals) shall be used. Extra care shall be taken on sites with multiple concurrent operations on site. Before entry, you should ensure it is safe for you to enter and receive guidance on where your equipment should be located.

## 4.4 ELECTRICAL REQUIREMENTS

All portable electrical equipment used at New Dominion facilities will conform to the National Electrical Code. Installation of electrical systems or modifications to electrical systems must be done under the supervision of a qualified electrician, per OSHA 1910.331.

The contractor must determine if the area it will be working in requires equipment rated for hazardous atmospheres (i.e., intrinsically safe or explosion proof). See American Petroleum Institute (API) RP 500 for more information on Electrical Classification for Oilfield Installations.

### 4.4.1 Grounding and Labeling

Electrical equipment, including control panels, main rig power packages and driller consoles, shall be properly grounded and labeled with electrical ratings. At a minimum, grounding rods shall meet National Electric Code requirements (20-30 ohms). Rubber mats with the appropriate electrical rating shall be located in the switch panel area. Contractor lockout/tag out procedures shall be used when working with electrical or mechanical equipment.

### 4.4.2 Intrinsically Safe Equipment

In recognition of the potential for flammable or combustible materials to create a hazardous atmosphere in the vicinity of oil and gas drilling and production, only equipment marked or designated intrinsically safe or explosion proof by the manufacturer shall be permitted, unless Hot Work permitting requirements are met.

Intrinsically safe does not produce spark or enough heat to ignite any flammables present.

Explosion Proof equipment is designed in such a manner as to contain any ignition that might occur within.

NOTE: No Cell Phones or other PEDs will be allowed inside Class 1 Division or Class 2 Division areas (e.g., tank battery dikes, rig floor and vents/reliefs).

## 4.4.3 Working near Overhead Power Lines

The contractor must ensure that workers near overhead power lines know the voltage of the line and the safe approach distance. If voltage is unknown, the minimum clearance is 10 feet. The contractor must place warning signs at or around overhead power lines. Whenever passing underneath power lines with equipment, a spotter is required. The contractor must abide by the current electrical code regulations for the jurisdiction in which work is being performed. The contractor will be aware of and take precautions to prevent build-up of static electricity, which can cause sparks. Contractor must ground and bond all equipment properly while working on New Dominion's site. This includes the loading and unloading of products.

## 4.5 Equipment and Tools

Equipment and tools necessary to complete the assigned tasks must be in good condition and operated per manufacturer's recommendation. Unless otherwise stated in the work order, the contractor will supply equipment and tools necessary to complete the work. All moving parts within 7 feet of the ground will be guarded and guards must be in place at all times and not modified. No interlock safety devices will be disabled. Any damaged tools will be taken out of service and discarded or repaired per manufacturer's recommendations. Factory-installed equipment guards will not be removed during operation.

## 4.6 Flood-Prone or Low-Lying Areas

Caution should be observed in flood-prone or low-lying areas. Excessive rainfall accumulations should be reported to the NDL Job Site Supervisor and the need for preventive action should be evaluated. Protection of personnel and the environment shall be the first 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.

Hazards that could be present include:

- Water current and debris flow,
- Drowning,
- Poor visibility,
- Heat stress or hypothermia,
- Water-borne disease, and
- Wildlife.

If the NDL Job Site Supervisor determines that your services are critical to operation, contractor will provide approved personal flotation devices (PFD) and personnel will be trained on any motorized equipment used to access sites (e.g., boats, amphibious vehicles, and 4-wheelers). All New Dominion required PPE will be used in addition to PFDs. Equipment used for transport on bodies of water must meet regulatory requirements or industry standards, and operators of watercraft must have valid certification or training to operate vessels.

## 4.7 Fire Prevention and Equipment

The contractor will supply fire suppression and protection equipment appropriate for the work being performed and the environmental conditions in which the work is being performed. The

# CONTRACTOR SAFETY MANUAL

---

most effective media for hydrocarbon fires is Purple K. The *minimum* acceptable fire extinguisher is a 20-pound ABC. Fire extinguishers must be properly inspected and tagged, and contractor personnel must be trained in their use. Contractor must have the appropriate fire extinguisher on each vehicle on location. Contractor is expected to provide dedicated fire extinguishers for Hot Work fire watches.

The contractor's vehicles and generators on site will be in a safe operating condition and must have an exhaust system in good operating order (manifold, muffler, and tail pipe).

## 4.8 First Aid Requirements

Contractor's first aid resources will meet all applicable regulatory requirements, and those resources will be available at the site during all aspects of the work. These resources include a basic first aid kit approved by the American National Standards Institute (ANSI) and at least one individual per crew certified in first aid and CPR procedures. The nearest medical facility shall be identified and documented on the JSA, and it shall be determined if 911 service is available in the area. If 911 is not available, the medical facility contact information will be recorded on the JSA.

NOTE: First aid training must cover blood borne pathogen (BBP) exposure treatment and protective measures.

## 4.9 Ground Disturbance

A ground disturbance is defined as any work that results in a disturbance of the earth, including, but not limited to drilling, boring, grading, auguring, blasting, topsoil stripping, clearing and fencing.

Contractors shall ensure that no utility exists within the work area, which includes the ground disturbance area plus a 100-foot radius. The utility location system (811) shall be notified, surface indicators noted; as-builts reviewed, and ground disturbance area denoted by white marking. Hand exposure or hydro-vacating shall be used to confirm the exact location of underground utilities. No mechanically assisted subsurface work will be conducted within 15 feet of a known or suspected utility. If at any time during the job an underground utility is contacted, all work will STOP and the NDL Job Site Supervisor will be notified.

All contractor personnel shall receive orientation on ground disturbance requirements.

## 4.10 Hair, Jewelry, and Loose Clothing

During the JSA, hair, jewelry and loose items of clothing that could cause harm during operations must be identified, removed or controlled. The contractor will enforce a "no facial hair" policy for workers who may be required to wear respiratory protection equipment. The contractor will enforce a policy requiring workers to tie back, contain or cover excess hair when working around moving equipment or spraying hazardous materials in order to prevent entanglement, absorption of large quantities of sprayed hazardous materials or burning.

# CONTRACTOR SAFETY MANUAL

---

## 4.11 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.<sup>1</sup>

Whenever possible, hot work shall be relocated to a “safe area” at least 75 feet away from potential flammable or combustible sources. If relocation is not possible, a Hot Work Permit must be used. The Hot Work Permit will be issued or witnessed by an NDL Job Site Supervisor and will be valid for one shift or 12 hours, whichever is shortest. If at any time conditions are outside the permitted parameters, the permit is voided and must be reissued when conditions meet the allowable limits. For hot work performed outside 75 feet of the well (safe area), potential combustibles (e.g., weeds and paper) should be eliminated or removed within a 35-foot radius of the work.

A fire watch (where required) trained in atmospheric monitoring and fire extinguisher use must be appointed and shall be informed of its duties, which include monitoring the hot work area for 30 minutes after work concludes. The permit shall be displaced during the hot work and periodic reading shall be taken and recorded. The NDL Job Site Supervisor will be notified when hot work has concluded. If the Contractor uses the NDL Hot Work Permit, a copy of the permit shall be turned in with daily tickets.

NOTE: In drought conditions, hot work may be banned or limited in certain areas or specific procedures may be required by county fire departments. Extra care should be taken to minimize fire danger.

## 4.12 Housekeeping

Slips, trips and falls the most common injuries in our industry. Many of these injuries can be prevented by keeping walkways clear, cleaning up oily surfaces, picking up tools, parts and trash, and reporting any stairways, catwalks or other working surfaces in need of repair. In inclement weather, care should be taken to assure proper footing. Other measures may be required to mitigate slip/trip/fall hazards due to wet or icy conditions. The contractor will inform the NDL Job Site Supervisor should it feel precautionary measures necessary.

## 4.13 Job Safety Analysis (JSA)

The contractor must conduct a site and task assessment JSA to:

- Identify the major job steps and any potential safety or environmental hazards related to performance of the work, including environmental impacts and consequences related to deviation from processes and procedures;
- Eliminate or implement controls for the potential hazards;
- Identify proper PPE required for the task;
- Identify appropriate emergency response coordinates, evacuation plan and emergency contact information; and
- Document the process using a JSA form or other suitable document.

---

<sup>1</sup> Some tasks other than those listed require a Hot Work Permit. Ask the New Dominion Job Site Supervisor for more information.

# CONTRACTOR SAFETY MANUAL

---

A JSA is required in the following scenarios:

- Immediately prior to commencing unfamiliar or non-routine work, work that has significant risk, and familiar work that may lead to complacency;
- Shift change;
- Work conditions change;
- Environmental change;
- Manlift, forklift, crane work;
- Permitted work (hot work, confined spaces, etc.); and
- Non-routine tasks (tasks outside the normal scope of work).

JSAs shall be communicated in a manner that enables all personnel on site to comprehend the scope and steps of work (e.g., language barriers will be addressed with an interpreter by the contractor).

## 4.14 Lockout/Tagout (LOTO)

When machinery is shut down for servicing, repairs, tests or adjustments, the equipment will be locked out and tagged out and equipment isolation will be verified. The Contractor must ensure that the requirements for a written site-specific LOTO procedure are met. The site-specific LOTO procedure will be determined by the NDL Job Site Supervisor and the Contractor Representative during the pre-job safety meeting and JSA. The contractor performing the work will have the opportunity to verify isolation and install its lock. Only authorized personnel will perform LOTO and all affected personnel will be notified prior to work commencement.

## 4.15 Manlifts, Forklifts, and Cranes

Before working with power mobile, lifting and hoisting equipment, the proper JSA and daily inspections shall be completed along with any required inspection/documentation. Any noted deficiencies will be repaired before the unit is placed back in service.

New Dominion expects contractor's vehicles – including, but not limited to all-terrain vehicles, forklifts, and winch trucks – to be operated and maintained in a safe and responsible manner and in compliance with the manufacturer's instructions and applicable regulations.

**DANGER:** When forklift operator is not occupying the unit, the forks must be fully lowered with the engine off and the brake set.

When required by regulation, vehicles will be equipped with back-up alarms and rollover protection. Seatbelts must be worn at all times.

New Dominion expects the contractor to provide suitable training and certification where required, and to demonstrate the competency of its workers in operating any type of mobile equipment, hoisting equipment, forklifts or all-terrain vehicles.

**NOTE:** Back-up alarms or interlock safety devices shall not be disabled (e.g., driver must be seated for vehicle to operate).

For equipment with regulatory-required training, a certification card will be carried by the operator.

**NOTE:** Operators must be certified on the type of powered equipment they are operating. For example, training on a warehouse-type forklift does not qualify personnel to operate a 4-wheel drive unit. Any forklift incident will require evaluation of operator's training and determination if refresher training is warranted. All forklift incidents will be reported to NDL and, if no damage or injury occurs, will be reported as a near miss.

# CONTRACTOR SAFETY MANUAL

Only competent, trained, certified, and authorized workers may operate lifting equipment. Before performing the lift, the equipment operator must determine the weight of the object to be lifted and ensure that cables, lifting equipment, slings, wire ropes, chains and hooks are of sufficient rating and in proper condition to support the weight of the load. For critical lifts, written lifting procedures complete with load charts must be prepared and reviewed by the contractor. Tag lines must be used whenever loads require guiding or stabilizing.

**DANGER:** At no time will any personnel be allowed to stand or pass under an elevated load.

Equipment with reduced visibility to the rear should be equipped with a back-up alarm. A spotter must be used when backing up unless the individual is alone on the site. The spotter should always be in the line of sight of the driver. If visual or hand signal communication is lost, the driver will stop until communication is re-established. Workers shall not approach mobile equipment until eye contact has been established with the operator. A worker pulling a trailer must ensure that the trailer has appropriate brakes, brake lights, warning lights and a hitch with a safety chain.

## 4.16 Minimum PPE Requirements

At a minimum, anyone entering a New Dominion site must have:

- Safety glasses with side shields or equivalent (ANSI Z87 approved);
- Hard Hat (ANSI Z89 Class E);
- Safety-toed boots (Approved by ANSI or the American Society for Testing and Materials); and
- FRC (National Fire Protection Agency [NFPA] 2112) that must be:
  - Cleaned per manufacturer's specifications (no bleach, harsh detergents, or starch) (NFPA 2113),
  - Worn as the outermost layer of clothing,
  - Worn in the appropriate fashion (e.g., sleeves rolled down),
  - FRC rain gear, jackets, or coats worn as outermost layer,
  - Replaced if torn, damaged or excessively stained (if repaired, FRC thread/material must be used).

Additional PPE that *may* be required, as identified in the JSA, include:

- Hearing protection, if 8-hour exposure is 85 decibels or greater (per OSHA 1910.95),
- Personal H<sub>2</sub>S monitor (10 parts per million [ppm] or greater potential),
- Gas detection monitor for atmospheric testing,
- Respiratory protection,
- Goggles or face shield,
- Specialized chemical handling gloves,
- Electrically rated gloves, and
- Fall protection harness.

The following are NOT allowed:

- Cowboy-style hard hats,
- Fiberglass hard hats,
- Metal hard hats, or

# CONTRACTOR SAFETY MANUAL

---

- Ball caps or other headgear worn under the hard hats unless approved for that application (e.g., winter liner).

NDL expects the contractor to provide and pay for task-required PPE to their employees, as required by OSHA 1910.132.

## 4.17 Pre-Job Safety Meetings

Pre-job safety meetings should discuss, but not be limited to the following:

- Assessment of the hazards involved in each task (via the JSA),
- Controls put in place,
- Cold/heat or inclement weather conditions,
- General EHS&S,
- Recent incidents whether related to contractor's operations or to similar operations of other contractors 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 MSDS of materials brought on site,
- LOTO requirements,
- Emergency Response measures, and
- Occupational Health hazards.

## 4.18 Smoking/Open Flames

Smoking is allowed only in designated areas on the worksite which will be determined prior to the start of work by the NDL Job Site Supervisor and the contractor and will be discussed at the pre-job/pre-spud/pre-completion meeting and as part of the JSA.

Matches and lighters of any kind may not be carried within hazardous areas, such as well sites, tank batteries or compressor stations.

Smoking in 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 may be permitted once Hot Work Permit requirements are met, controls implemented and the area properly secured.

## 4.19 Trenching and Excavation

**NOTE:** Prior to any excavation, the ground disturbance requirements must be followed.

If you and any personnel are trenching, shoring, ditching, etc. for New Dominion to enter a 5-foot or deeper trench, there shall be an Excavation Competent Person on site per OSHA 1926.951. Trenches will be sloped, benched, shored or shielded according to regulation.

The following requirements will be followed for trenching and excavation:

- Excavations shall be inspected daily and the inspection will be documented via the Daily Inspection of Excavations and Trenches form (available from the area NDL Job Site Supervisor).
- For trench entry, all soils will be assumed to be Type C unless determined otherwise by the competent person.

# CONTRACTOR SAFETY MANUAL

---

- If the potential for a hazardous atmosphere exists, trench atmosphere will be monitored and appropriate documentation completed.
- All spoil piles will remain a minimum of 2 feet away from the trench.
- No trench will be left open overnight unless barricaded or marked with plastic fence, tape, or some other means of notification.
- For entry into trenches 4 feet or deeper, safe means of egress (e.g., ladders or ramps) must be provided within 25 feet of all workers.

New Dominion expects that any excavation, earth moving, soil stripping, brush clearing and other earthwork will be conducted in a manner that preserves the soil and allows for the segregation of soil types in order to facilitate land reclamation in the future. Where necessary, measures to prevent excessive soil erosion by wind or water must be put in place.

## 4.20 Walking and Working Surfaces

### 4.20.1 Portable Ladders

Portable ladders shall bear manufacturer's tag indicating that they meet minimum requirements. Wooden ladders are not to be used on NDL sites and metal ladders are allowed only when energized equipment is not present in the work area.

Maximum allowable length for a ladder is 30 feet for single ladders or 60 feet for extension ladders. Care should be given to the footing the ladder will rest on and a 4:1 ratio of angle shall be used for setting ladder footing. Worker must face ladder when ascending or descending and three points of contact with ladder shall be maintained.

**NOTE:** Tools should be carried on a tool belt or raised and lowered in a bucket. Never climb a ladder with tools in hand.  
**IMPORTANT:** Any ladder found to be in disrepair shall be immediately removed from the worksite.

### 4.20.2 Fixed Ladders

Any fixed ladder greater than 20 feet high shall provide a cage and comply with all requirements of OSHA 1910.27.

### 4.20.3 Elevated Work Surfaces

Scaffolds or elevated platforms must be constructed, maintained and used in accordance with the applicable regulations and industry standards.

All work areas, walkways and platforms elevated 4 feet or more, whether permanent or temporary, must be safe, sturdy and enclosed by an approved guard rail (proper height, upper, and intermediate rail). All personnel must wear a safety harness when above 4 feet or more. Where there is a hazard to the personnel working below the elevated work area, toe boards must be in place. All floor openings must have a securely installed covering or proper guardrail. When a worker is working overhead, the contractor must have a competent signaler and the area must be roped off or other equivalent measures taken to protect workers on the site. Signs



# CONTRACTOR SAFETY MANUAL

---

reading Danger-Overhead Work must be conspicuously posted. If conditions justify, a watchman must be stationed within sight to warn persons in the vicinity.

NDL expects contractor personnel working at heights greater than 4 feet to be protected using approved guardrails or fall arrest systems.

Full safety harnesses and lifelines or personal fall arrest systems must be supplied by the contractor and worn by all workers when working at heights as required by applicable regulations. All workers 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 contractor must ensure that a professional engineer has certified this equipment. Workers in man baskets must be secured in accordance with applicable regulatory requirements.

## 4.20.4 Scaffolding

Scaffolding shall be designed by a qualified person and shall be installed according to that design. Scaffolds will be constructed of suitable material for intended service. See OSHA 1926.541 for specific scaffolding requirements.

## 4.21 Working Alone

New Dominion recognizes that there are risks involved in working alone or in isolation and the best practices common to these types of situations. Some things to consider when working alone are:

- Inclement weather,
- Vehicle breakdown,
- Temperature extremes,
- Personal Injury,
- Wildlife attacks, and
- Personal safety or security.

To mitigate these situations:

- Let others know of your whereabouts.
- Ensure your vehicle is in proper working condition,
- Know your destination, including GPS coordinates, when possible.
- Carry safety and survival equipment in your vehicle (first aid kit, bottled water, blanket, flashlight, non-perishable food, etc.)

**NOTE:** New Dominion has specific areas where working alone presents a hazard and may not be allowed (e.g., at H2S/sour gas facilities). Circumstances affecting your ability to work alone will be communicated to you prior to job commencement.

## 5.0 OCCUPATIONAL HEALTH REQUIREMENTS

Specific occupational health requirements are described in this section. The topics are arranged alphabetically.

### 5.1 Benzene

Contractors are responsible for minimizing their workers' exposure to benzene. Benzene is a known carcinogen and long-term exposure may increase risks. Every effort should be made to minimize exposure and to educate workers on emergency response and treatment if exposed.

# CONTRACTOR SAFETY MANUAL

---

NDL products that *may* contain benzene include, but are not limited to:

- Condensate,
- Crude oil,
- Glycol,
- Amine (rich/spent),
- Produced water, and
- Tank bottoms.

Please ensure that benzene exposure is covered in your company's Hazard Communication (HazCom) program and training, and that appropriate PPE (per MSDS) is provided.

## 5.2 Ergonomics

Repetitive actions over time can cause musculoskeletal disorders or injury. To reduce or minimize these incidents, use equipment, material and personnel positioning as well as specialized tools, smaller size or weight loads, handles or relocation to enable easier or less personnel bending, twisting, reaching out or lifting motions.

## 5.3 Hazard Communication (HazCom) aka “right-to-know”

All contractor's employees and its sub-contractors shall be provided effective training and information on hazardous materials in their work areas at the time of the initial assignment and whenever a new physical or health hazard is introduced into the workplace.

Contractor employees who work with chemicals or other hazardous materials should be trained in the use and care of appropriate PPE. Contractor will develop, implement and follow a written program that minimizes the risk of injury or spill. The contractor supervisor shall ensure that all workers are aware of the program, where their written program is located and the location of the MSDSs. JSAs shall identify the proper PPE required for the job task and the required PPE will be provided by the contractor unless otherwise stated in the job order.

The contractor will provide MSDSs for any chemical brought onto the site. (MSDSs for NDL products are available upon request.) Ensure you have the MSDS on hand to inform your personnel of hazards, chemical properties, proper PPE for handling, etc. A copy of the MSDSs shall be provided to the NDL Job Site Supervisor.

If the contractor brings a chemical to the New Dominion site to perform work, the container must have proper labels and contractor must take any unused portion or spent containers upon leaving the location. Any chemical taken from its original container and put into a portable container will be properly labeled unless it is for immediate use by the personnel who performed the transfer.

**NOTE:** It is the contractor's responsibility to ensure its employees are made aware of any existing chemical hazards they might encounter on NDL sites and the PPE required to protect employees from those hazards. If you are unsure of the hazards present, ask the NDL Representative.

# CONTRACTOR SAFETY MANUAL

---

## 5.4 Heat-Related Illness

Contractor is responsible for identifying and mitigating heat exposures specific to its work and to adopt controls as required by New Dominion.

Heat illness comes in several forms, the types and basic symptoms of which are as follows:

- Heat cramps: muscle cramps associated with abdominal pain;
- Heat rash: localized skin redness characterized by a prickly sensation and itching;
- Heat syncope/ fainting: a serious heat illness characterized by dizziness and nausea with possible increased core body temperature; and
- Heat stroke: life threatening illness characterized by elevated core body temperature, hot dry skin, unconsciousness, or convulsions.

To minimize heat illness occurrence, prevention measures that include proper hydration, cooling trailers, worker rotation and workload adjustment should be considered.

## 5.5 Hydrogen Sulfide (H<sub>2</sub>S)

Contractor should be aware that hydrogen sulfide (H<sub>2</sub>S) can be present on any of NDL locations. H<sub>2</sub>S is colorless and may have a “rotten egg” odor at low concentrations. It can paralyze the sense of smell at relatively low concentrations. It has a wide flammability range and is heavier than air, so it can collect in low lying areas.

Contractor shall follow regulatory requirements for protecting its employees. When working on any New Dominion location where the potential for H<sub>2</sub>S exists, Hydrogen Sulfide Awareness Level training is required. Each employee shall wear a personal H<sub>2</sub>S monitor.

Unless standard procedure is to evacuate in the event of an alarm, personnel working in an atmosphere that can exceed 10 ppm concentration will have Hydrogen Sulfide Certification training. Medical clearance and respiratory fit testing is required. Workers shall carry their certification card on their person or in their vehicle. The appropriate number of self-contained breathing apparatuses (SCBAs) or face pieces will be present for those contractors that will perform work in atmospheric concentrations greater than 10 ppm.

The JSA will address emergency response and muster point(s). Any time a personal or area monitor alarms, work will cease and employees will immediately move upwind or crosswind until the situation can be assessed. The NDL Job Site Supervisor will be notified if alarm sounds or if crew must don respirators to resume work.

Any person who exhibits exposure symptoms shall be taken to the nearest hospital emergency room as a precaution.

**NOTE:** The concentration present in atmospheric storage tanks can be 100 times greater than that in the well stream. Special care shall be taken when opening tank thief hatches or other storage vessels.

# CONTRACTOR SAFETY MANUAL

## 5.6 Naturally Occurring Radioactive Material (NORM)

NORM resides in geologic formations and is often present in production operations. In accordance with regulatory requirements, NDL has conducted baseline NORM surveys on field equipment. If job tasks involve opening any equipment marked with the letter NORM, precautions must be taken to avoid worker exposure and entry is prohibited until equipment is checked. Contractor must be licensed to handle NORM and workers must be trained in accordance with state or federal procedures.

Only companies licensed and equipped to perform approved disposal methods will be contracted to transport and dispose of NORM waste.

All equipment, piping, or other material not marked with NORM will be checked with a survey meter before leaving New Dominion sites.

**NOTE:** This section does not address radioactive materials used in oil and gas exploration (e.g., tracers)

## 5.7 Occupational Exposure Risk Assessment

Contractor is responsible for evaluating and, when necessary, measuring its workers' exposure to physical, chemical and biological health hazards likely to be present in the workplace. Such hazards include, but are not limited to noise, benzene, silica and H<sub>2</sub>S. Safe exposure limits to these and other health hazards are established by NDL to meet or exceed OSHA requirements. Worker exposures that are found to exceed the limits require control measures to reduce exposure(s) to an acceptable level. For a list of exposure limits, contact the NDL Job Site Supervisor.

If respirators or other PPE are chosen to prevent exposure, they must be effective against the maximum reasonable exposure(s) found in the workplace.

## 5.8 Respiratory Protection

If work conditions require contractor's employees to work while wearing air-purifying respirators or supplied air (SCBA), the employee will be medically cleared and fit-tested for the type of respirator supplied, and will have required training.

**NOTE:** No employee in a respiratory protection program shall be allowed to have facial hair that could come in contact with the sealing surface of the respirator face piece, regardless of whether respiratory protection is required for the current task.

All personnel required to wear respiratory protection must be part of a respiratory protection program. It is the contractor's responsibility to have a written respiratory protection program and to comply with all requirements of OSHA 1910.134 including, but not limited to:

- Medical clearance;
- Fit-testing;
- Training in respirator care, maintenance, and inspection;
- Donning and doffing; and
- Emergency Response.

# CONTRACTOR SAFETY MANUAL

**NOTE:** Never will 5-minute escape packs be used to perform work

## 5.9 Sanitary & washing facilities

Contractor must provide access to potable water and sanitary facilities on or reasonably near field work locations. Contractor facilities will be maintained in accordance with health and safety regulatory requirements and with best industry practices. See Section 6.2 for environmental requirements for sanitary and washing facilities.

## 6.0 ENVIRONMENTAL REQUIREMENTS

Specific environmental requirements are described in this section. The topics are arranged alphabetically.

### 6.1 Materials and Waste Management

New Dominion's operations and facilities sometimes require the use of products that are classified as hazardous materials. Improper handling can result in:

- Exposure to your employees or the public,
- Regulatory fines,
- Costly clean-up,
- Harmful pollution of the environment, and
- Harm to company reputation.

Expired, abandoned or spilled hazardous materials can become hazardous waste. All chemicals and containers brought onto an NDL location by a contractor must be removed at the completion of the job. If not removed, New Dominion will dispose of the materials and all costs associated with disposal will be charged back to the contractor.

Wastes generated on behalf of New Dominion must be managed in accordance with instructions from the NDL Job Site Supervisor and applicable laws. Transport and storage of wastes must follow applicable regulatory requirements.

When waste materials are generated, they must be segregated in a way that minimizes the need and cost for disposal. Recyclable waste or materials should be separated from non-recyclable materials. Mixing (e.g., mixing of waste oil with a non-recyclable liquid) may reduce disposal options and increase the disposal cost.

Wastes generated solely by the contractor (e.g., waste oil from equipment) are the sole responsibility of the contractor to recover and dispose of properly off site.

Waste disposal is always subject to NDL approval. Hazardous waste disposal must be coordinated by a certified professional, transported by licensed transporters to an approved facility, and accompanied by appropriate documentation including the Uniform Hazardous Waste Manifest.

The transport and disposal of NORM-contaminated equipment, piping or other material must follow regulatory requirements. Only contractors licensed and equipped to perform approved disposal methods will transport and dispose of NORM-contaminated waste.

**NOTE:** If you have any questions to the proper handling or disposal of waste, please refer to the MSDS or contact the NDL Representative.

# CONTRACTOR SAFETY MANUAL

---

## 6.2 Sanitary and Washing Facilities

The contractor is responsible for ensuring that all required approvals, including permits and licenses, are in place for septic, water diversion and waste disposal systems associated with its facilities, including “gray water” discharge. The contractor must design and maintain facilities to protect surface water and potable groundwater resources. All sanitary facilities shall be properly secured or anchored. All leaks and sewage discharges are considered a spill and must be reported to the NDL Job Site Supervisor immediately upon discovery. See Section 5.9 for health requirements for sanitary and washing facilities.

## 6.3 Spill Prevention, Control, and Countermeasure (SPCC)

The Spill Prevention, Control, and Countermeasure (SPCC) regulation (Federal Clean Water Act) requires secondary containment for hydrocarbon-containing fluids in certain quantities. Contractors will obtain permission before making any temporary opening in a fire wall(s), berm(s) or dike(s). A firewall, berm or dike must not be left open overnight without prior knowledge and permission from the NDL Job Site Supervisor. Any damage to secondary containment (e.g., backing into steel or earthen berms) will be considered a motor vehicle incident with property damage that will be repaired at the contractor’s expense.

**NOTE:** Drilling and some completions operations require an SPCC plan or other spill control measures. Please contact your area NDL Representative if you need assistance making the determination for plan requirements.

## 6.4 Spill Reporting and Response

A spill is any accidental release 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 NDL property must be reported to the NDL Job Site Supervisor and EHS Representative immediately. Contractors are expected to have available all emergency responders’ contact information in addition to all pertinent NDL emergency contact names and numbers. Timely and consistent spill reporting enables NDL to minimize and monitor our impact on the environment and to comply with all regulatory requirements.

All spill response activities must be conducted according to Section 3.11. New Dominion expects contractor to be responsible for the clean-up of any spills it causes, at the contractor’s expense. Clean-up must not occur until the NDL Job Site Supervisor has been contacted.

**NOTE:** Ensure spill response and clean-up personnel have the appropriate task-specific Hazardous Waste Operations and Emergency Response (HAZWOPER) training.

## 6.5 Vegetation Management

New Dominion expects all contractors to follow environmentally acceptable practices and meet regulatory requirements in its vegetation management program. All herbicide contractors must be trained or certified according to regulatory requirements. NDL has designated Surface Land Managers who specialize in location design and mitigation of erosion concerns. If you notice areas of missing vegetation with erosion issues, washouts, etc., please contact the area’s NDL Job Site Supervisor for direction.

# CONTRACTOR SAFETY MANUAL

---

## 6.6 Water Usage and Groundwater Protection

Contractors will obtain all necessary approvals, licenses and permits needed to use water (i.e., surface water for drilling and groundwater wells) before performing work. Prudent use of water resources is expected. Notify the NDL Job Site Supervisor if potential contamination to soil or water is identified.

**NOTE:** To protect surface water, no water will be discharged without prior approval by the NDL Representative, which includes approval by the surface landowner and proper testing or permit (e.g., rainwater and hydrotest water).

## 6.7 WILDLIFE AWARENESS

### 6.7.1 General Wildlife

While working for New Dominion, you may encounter various species of wildlife. Do not approach, feed, intimidate or otherwise harass wildlife. Report any possible dangerous wildlife (e.g., bobcat, coyote, poisonous snakes, etc.) encounters immediately to your NDL Job Site Supervisor. Many species are protected; harming or killing wildlife could result in state or federal prosecution. Violation of this expectation may result in limited access to New Dominion locations or other disciplinary action up to and including termination of the MSA.

### 6.7.2 Migratory Birds

The unlawful “taking” (causing harm of any kind to the bird/eggs/nest) can result in fines starting at \$5,000 with the possibility of imprisonment.

If any contractor observes migratory birds or evidence of migratory birds on location, immediately notify the area NDL Job Site Supervisor. Your cooperation is expected.

## 7.0 DRILLING, COMPLETIONS, AND WORKOVERS

EHS&S requirements are described in this section specific to tasks associated with drilling, completions and workovers. The topics are arranged alphabetically.

### 7.1 Anchoring

Derrick guy-lines and ground anchors must be installed in accordance with either the manufacturer's specifications or approved by a professional engineer. Contractors must verify anchors have been tested prior to work commencing (e.g., pull tested).

Before installing anchors, the contractor must notify the state's utility notification system (call 811) in advance and complete a Ground Disturbance Authorization.

Derrick guy-lines must be secured to adequate ground anchors and marked with flagging tape or some other means for visibility. Vehicle traffic shall be controlled around line anchors.

### 7.2 Auxiliary Equipment

# CONTRACTOR SAFETY MANUAL

---

## 7.2.1 Blowout Preventer (BOP)

Drilling standards for BOP equipment shall be in accordance with API RP 53: Recommended Practices for Blowout Prevention Equipment System. Contractor will enforce the following practices for BOP equipment:

- Inspect daily.
- At a minimum, adhere to a test schedule under API RP 53.
- Keep clean and free of ice.
- When moving the BOP, tag lifting chains/lines.
- Keep pipe rams available to enable closure on the pipe in use.
- When a tapered string is used, fit each string to a set of pipe rams.

**NOTE:** A stand of top string pipe with a crossover should always be accessible.

- Secure choke lines and kill lines to prevent whipping from pressure surges
- Ensure control handles are clearly and correctly labeled and secured to prevent rams from accidentally closing.
- Make sure area has adequate explosion-proof lighting.
- Make available closing arms on blind and pipe rams.
- Securely attach the closing arms and ensure pipe ram size is commensurate with pipe size.
- Pressure test (and document) the BOP upon installation, a minimum of every 14 days thereafter, and whenever pipe rams are changed (rules for BOP pressure testing may vary according to area or state).

## 7.2.2 Accumulator

- Position at least 40 feet from the well.
- Make sure only trained and authorized personnel operate the floor controls.
- Use only intrinsically safe lighting and shield with wire cage (or equivalent) protection.
- Protect hydraulic lines by shielding in metal conduit or equivalent from vehicular traffic.

## 7.2.3 Boilers

When applicable, the contractor will post a copy of the current Boiler Inspection Certificate in the boiler house. Workers must wear proper PPE, as determined by the JSA, at all times when adding chemical mixture to the chemical pot on the boiler. All precautions regarding heat and chemical handling should be observed.

## 7.2.4 Mud Pumps

- All pressurized hoses will have whip checks attached at both ends.
- Mud pump relief systems will be in service at all times, except during maintenance.



# CONTRACTOR SAFETY MANUAL

---

- Manufacturer shear pins will be present in reliefs, nails or other makeshift pins.
- Foot traffic shall be restricted around high pressure hoses.
- Moving parts shall be properly guarded at all times, except during maintenance.

## 7.2.5 Mud Tanks/Shale Shaker Area

- Walkways must have no obstructions, no missing or damaged grating.
- Stairs and handrails must be in good condition.
- Electrical wiring must be in good condition and lighting properly guarded.
- Moving parts must be guarded, except during maintenance.
- PPE must be available including face shield, eye wash and chemical gloves.
- A 15-minute eyewash station must be located in near proximity.
- Gas detection must be present and working.
- Gas buster must be properly installed with pins/keepers.
- Flares (if present) must be located in accordance with equipment spacing requirements.

## 7.2.6 Pipe Racks

- Workers are not permitted to step or walk on the pipe or the pipe racks.
- Pipe racks and pipe tubs must be designed and constructed to support any load placed on them and set level on a solid foundation.
- Pipe racks will be chained together to prevent movement.
- Wedges (chocks) must be used to prevent tubular goods from accidental movement.
- Pipe racks must be pinned to prevent pipe movement.
- Spacers must be used between the layers of pipe or other material on the rack.
- Thread cleaning fluid will be contained.

## 7.2.7 Portable Heaters

A heater may be used only for the service for which the manufacturer has approved it. Adequate ventilation must be maintained in order to prevent a build-up of toxic gases. All flammable or combustible material must be removed from the immediate area. If portable heaters are to be used, you must check with local supervision for any applicable permits needed (e.g., Hot Work Permit). The appropriate spacing must be a minimum of 75 feet from all potential flammable and combustible sources.

## 7.3 Auxiliary Escape

On every drilling or servicing derrick where there is a risk of blocking or otherwise compromising a primary escape route, New Dominion expects the contractor to provide an auxiliary means of escape through the installation of a specially rigged and securely anchored escape line, free from obstructions (e.g., Geronimo).

## 7.4 Back-up Posts and Tong Safety Lines

Each rotary tong will be attached to the derrick or a back-up post by means of two wire rope safety lines, not less than 5/8-inch in diameter or one 7/8- inch or 1-inch wire rope safety

# CONTRACTOR SAFETY MANUAL

---

line. Each end must be secured by at least three wire rope clamps or equivalent fittings. Ensure wire rope clamps are installed correctly (e.g., on “live” side of wire).

On single-stand, portable derricks using small tongs, each tong must be attached to the derrick or back-up post by means of two wire rope safety lines, not less than ½ inch in diameter. Each end of the tongs must be secured by a clevis or equivalent fittings with the appropriate tag attached to the wire ropes.

Any fitting used to attach safety lines to the derrick or back-up posts must have a breaking strength equal to or greater than the combined breaking strength of all lines attached to it.

## 7.5 Cat Lines and Derrick

- Derrick will be equipped with an escape trolley line (e.g., Geronimo) and properly installed with a handbrake.
- Only authorized personnel may use the cat line. A contractor must stop the line shaft if the cat line gets tangled.
- Cat lines will not be left around the cathead spool when not in use.
- Cat lines will not be used to lift personnel.
- Contractor employees working 6 feet or more above the next level working surface must wear approved personal fall protection.
- When climbing the derrick, always wear fall protection including during transfer from ladder to tubing board or rod basket.
- If hand tools are needed they must be sent up by the tag line or basket.
- Tools should never be thrown or dropped to the ground.
- When going in hole, the derrick hand must let blocks pass the fingerboard before leaning the next stand against the fingerboard.
- Pipe in derrick will be secured with proper tie-back or equivalent means.

Each trailer shall have local emergency response numbers posted in a conspicuous location and, at a minimum, have a 24-unit first aid kit available.

## 7.6 Competent Drilling and Completion Supervisors

The contractor will appoint a trained, experienced person to supervise all exploration, drilling, servicing, testing or producing operations. At a minimum, the supervisor must have a current well control certification to perform the appropriate task.

The supervisor must be knowledgeable about and experienced in the contractor’s EHS&S program, his/her area of responsibility and the provisions of this manual.

## 7.7 Depressurizing/ De-energizing equipment

The contractor must contact the NDL Job Site Supervisor prior to de-energizing equipment or depressurizing equipment to determine if any site-specific procedures are in place and to identify potential hazards. Hazards may include stored energy including pressure, electrical, hydraulic and pneumatic. See Lockout/Tagout (Section 4.14).

# CONTRACTOR SAFETY MANUAL

## 7.8 Derrick Raising and Lowering

The contractor must hold a pre-job safety meeting and conduct a JSA prior to raising or lowering the derrick. The Tool pusher, or other competent worker (e.g., operator on a workover rig), must make a complete inspection of all of the parts of the rig.

The Tool pusher or a qualified delegate must be present and in charge of the telescoping, raising or lowering of a derrick. For drilling rigs, the contractor's EHS Representative and NDL Job Site Supervisor must be on site before and during derrick raising and lowering activity.

When a mast section is being hoisted, rigging must be attached to designated lifting points clearly marked on each section of the derrick.

Except for the operator at the controls, no worker is permitted on or beneath the derrick during telescoping, raising or lowering of the derrick. An appropriate safe zone radius, visibly marked, must be established to prevent all non-essential personnel from entering this area.

**NOTE:** The area shall be checked for power lines before doing any overhead work.

## 7.9 Diesel Engines

Diesel engine-powered equipment that comes within 75 feet of a wellhead or an oil and gas facility will be equipped with a positive air shutoff. The air shutoff must be installed in such a manner that it is immediately available to the equipment operator. This includes all workover and production operations. If no positive air shutoff is available, a Hot Work permit may be required to perform operations.

**NOTE:** Passenger vehicles do not require a positive air shutoff although vehicles should stay at least 75 feet away from the wellhead.

## 7.10 Drawworks Brakes

Drawworks brakes are to be visually inspected by the contractor at the appropriate manufacturer-recommended intervals to ensure proper operation. The brake linkages and equalizer mechanism must be inspected at the same time and the inspection must be recorded.

Unless the drawworks is equipped with an automatic feed control, the operator must not leave the brake without tying it down. Except during drilling, the operator must not leave the drawworks controls while the hoisting drum is in motion.

## 7.11 Drill Stem Testing (DST)

Drill stem testing (DST) is a hazardous operation. New Dominion expects the DST operator to be responsible for the coordination of the safety of the DST operation and for conducting a pre-job safety meeting and a proper JSA to ensure all safety regulations are complied with during the operation.

The DST operator, under the direction of the NDL Job Site Supervisor, is responsible for the coordination of all other contractor's procedures and operations in order to ensure that all workers involved in the DST operation are not subjected to hazards and unnecessary risks.

**NOTE:** Any workers not required for DST shall vacate the area

## 7.12 Drilling, Completions, and Service Rigs

The contractor will ensure that:

- All derricks are inspected and certified as per API RP 4G and NDL shall be given the documentation.
- Rig floor shall be level and free of excess oil, grease and mud.
- Rotary hoses shall be properly snubbed at each end.
- Operations that may be hazardous in electrical storms, dust storms or other adverse weather conditions shall be postponed until the weather is suitable.
- A full-open safety valve (TIW valve) and wrench will be immediately accessible. The valve should be in the open position and easily accessible with crossovers.
- All wire rope (drill line, winch lines, etc.) is inspected and maintained as per OSHA and API requirements.

## 7.13 Fuel Tanks and Fuel Lines

- Tanks will be properly labeled.
- Tanks will be grounded.
- No Smoking/Flammables signage will be posted.
- Fire extinguishers will be present/mounted/inspected.
- Tanks/line will be located away from ignition sources.
- Adequate leak/spill containment is present and free of liquids or debris.

## 7.14 Guards

Per OSHA standards, all guards and shields must be sufficient and in place during operations, and can only be removed for maintenance or repair. During maintenance or repair, ensure LOTO is utilized (see Section 4.14).

## 7.15 Hauling Overweight or Over Height Loads

Contractors transporting overweight, over height, over wide or long loads must contact the appropriate regulatory agencies or utility companies (within the jurisdiction where work is being performed) regarding special permit requirements. Special care should be given to energized overhead power lines and appropriate warning signs utilized for this operation.

**NOTE:** If the county has requested a specific route for heavy equipment traffic, ensure this is communicated to heavy haulers. Failure to do so could result in fines and road repair costs to the contractor.

## 7.16 Inspections

At a minimum, the contractor will ensure:

- Rig inspections will be performed quarterly;
- Pre-spud inspections will be performed prior to spud;
- All inspections shall comply with API RP 4G inspection requirements, including derrick magnetic particle and Category 4 inspections;
- All equipment covered under API RP 4G shall be inspected; and
- Deficiencies shall be tracked to completion.

# CONTRACTOR SAFETY MANUAL

---

## 7.17 Riding Hoisting Equipment

The contractor will enforce a policy to prevent any worker from riding the travelling block, hook or elevators and to prevent any worker from sliding down any pipe, Kelly hose, cable or rope line. Contractor personnel observed violating this policy will be expected to receive disciplinary action and the contractor may be subject to disciplinary action up to and including termination from working on New Dominion sites.

## 7.18 Rig Move General Safety

Prior to a rig move, the New Dominion Rig Manager, the Toolpusher, and the Truckpusher will hold a joint safety meeting and conduct a proper JSA with the rig and trucking personnel as well as any other workers present.

While conducting the JSA, the NDL Rig Manager, Toolpusher, and Truckpusher will:

- Identify and discuss all areas of concern and potential hazards; and
- Establish procedures to address identified hazards (e.g., live wells on or near the site, power lines, unsafe sections of the route, highway traffic, obstructions, construction, night-time operations and weather).

## 7.19 Rigging

For the purposes of this section, rigging means any combination of rope, wire rope, chain, sling, sheave, hook and associated fittings used in a hoisting operation.

Wire rope, alloy steel chain, metal mesh, synthetic fiber rope and synthetic fiber web slings must meet the requirements of American Society of Mechanical Engineers B30.9-1990, Slings.

Slings, chains, chokers and hoists must be of sufficient strength to withstand the imposed loads, with minimum safety factors, as required by regulation. All must be visually inspected prior to each use. All lifting chains/ropes shall be inspected, tagged and certified annually. Chains with "cold shots", or makeshift fasteners formed from bolts, rods or other such attachments, will not be utilized. Nylon slings will not be used where fumes, vapors, sprays, mists or acidic or caustic liquids are present.

## 7.20 Rotary Table

The rotary table drive must not be engaged until the rotary table is clear of workers and materials.

Hoses, lines or chains must not be handled or used near the rotary table while it is in motion.

Crowbars, pry bars and cheater bars must not be used to shift kelly bushings into place.

When visibility on the rig floor is obscured, no worker may work on the rig floor while the rotary table is in motion.

Non-slip floor material must be used around the rotary table.

## 7.21 Storage Areas

- Flammables will be stored properly, per NFPA.
- No smoking/flammables signs must be posted.
- Good housekeeping must be kept with toe plates/cages where applicable.
- Wiring and outlets must be in good working order.
- Fire extinguishers must be present/mounted/inspected

## 7.22 Substructure and Cellar

- Substructure pins must be in place with keepers.

# CONTRACTOR SAFETY MANUAL

---

- Adequate personnel footing must be free of trip hazards.
- Lighting must be adequately guarded and explosion-proof.
- Ladders must be in good repair.
- Fire extinguishers must be present/mounted/inspected.
- Drill line must be properly installed and snubbed.
- Extension cord use must not be allowed (Class 1, Div. 2 area).
- Cellar must be free of debris and oil.
- Cellar will have a proper cover.

## 7.23 SCR and Generator House

- High voltage signs must be posted.
- LOTO must be utilized where required.
- Hearing protection must be available, where required.
- Fire extinguishers will be present/mounted/inspected.
- Non-conductive mats must be in place, properly rated and clean of slip/trip hazards.
- All switches will be labeled.
- Fixtures will be guarded.
- Must be properly grounded.
- Pressure tanks will have relief valves.
- The area will not be used as storage.

## 7.24 Traveling Blocks

Travelling blocks must be equipped with securely attached sheave guards.

Any travelling block hook to which equipment is directly or indirectly attached must be equipped with a positive locking device to prevent accidental release of the load being hoisted or lowered.

## 7.25 Weight Indicator

Every drilling rig will be equipped with a reliable weight indicator. When the indicator is hung above the floor, it must be secured by means of wire rope or chain safety line and must be clearly visible from the driller's position. Weight indicators shall be calibrated at least every 2 years, with supporting documentation available upon request.

## 7.26 Worksite Trailers

Contractor will provide worksite trailers (crew, mud loggers, directional drillers, etc.) for its workers. These trailers must be located a safe distance from the facility, equipment, wellhead, overhead equipment, sewer manholes, operating equipment and safety or firefighting equipment. Electrical wiring, sewage, fixtures and stairs must meet applicable building/electrical codes, OSHA specifications and industry standards. All trailers must be properly grounded and breaker boxes shall be properly labeled. Check with appropriate state and federal regulatory agencies on permitting requirements. A designated smoking area must be established and identified and meet spacing requirements. Gray water (washing clothing or dishes) will not be allowed to discharge onto location.

## 8.0 WELL SERVICING OPERATIONS

EHS&S requirements are described in this section specific to tasks associated with well servicing operations. After covering general requirements, tasks are arranged alphabetically.

### 8.1 General Requirements

When conducting well servicing operations, the following applies:

- Perform a JSA prior to commencing work and any change in scope.
- The air intake and exhaust, if properly fitted with positive air shutoffs for diesel engines, of the pump motor must be located at least 35 feet from the rig tank when circulating hydrocarbons.
- The tank truck must be located at least 35 feet from the rig tank in such a way that the truck will not be impacted by hydrocarbon emissions.
- Keep the area clean and orderly.
- Any personnel not actively involved in operations should remain beyond the guy line jobs.
- Instrument readings for hazardous operations should be observed from safe and remote locations.
- Before rigging up a well servicing unit, visually inspect the guy line anchors. Pull-test and tag guy line anchors as required by regulations.
- Guy lines are installed in accordance with API RP 9B and at least 50 feet from overhead electrical lines.
- Wind streamers are placed on guy lines, but never the Geronimo line.
- All equipment is bonded and grounded to prevent stray currents or static charges.
- All units have four 20-pounds or larger dry chemical fire extinguishers in safe and accessible locations.
- Swivel joints with hammer unions must be of sufficient strength to withstand the stresses to which they may be subjected, and should be marked in such a way that testing records can be provided for each piece of iron (e.g., with a serial or inventory number).

### 8.2 Pulling Rods or Tubing

When pulling rods or tubing, the following applies:

- When erecting a rig, keep all equipment at least 50 feet from high voltage lines.
- When pulling stuck rods or tubing, clear the derrick floor of all unnecessary personnel.
- Only authorized service vehicles are allowed near the well. Park all other vehicles in a designated area at least 75 feet from the well.

### 8.3 Swabbing Operations

During swabbing operations, the following applies:

- Swabbing operations will be conducted during daylight hours, unless approved by the NDL Job Site Supervisor.
- Auxiliary swabbing units must be anchored securely during swabbing operations.
- The swabbing truck must be properly grounded with the engine of the truck turned off when unattended.
- If a "slobber" line is used, it must be 35 feet from the wellhead and have secondary containment to capture any fluids.

# CONTRACTOR SAFETY MANUAL

---

- Rope socket swivels should be inspected before each job and replaced a minimum of every 6 months.
- No used rope socket swivels will be saved as “spare” and reused.
- The fluids must be piped directly to a battery, flare pit, swab tank or mobile trailer tank, located not less than 150 feet from the well bore.
- If a swab tank is used, the swab tank will be grounded.
- If swabbing to a tank battery, New Dominion personnel will bypass the separator, using LOTO, where applicable.
- Swab lines shall be inspected and replaced according to industry best practice

**NOTE:** Any well serving operations on a well containing H2S will require sour service equipment and adherence to H2S requirements.

## 8.4 Well Stimulation or Cementing Operations

During well stimulations or cementing operations, the following applies:

- Equipment located between a pump or sand cementer and the wellhead will be controlled remotely from a location outside the potential danger area.
- Personnel must be clear of the area when the system is pressurized.
- A check valve must be installed as close as practicable to the wellhead except while cementing or selective acidizing is being done.
- A bleed-off valve must be installed between a check valve and the wellhead.
- The mud line from the cement truck must not be used in place of the circulating line.

## 8.5 Wire line or Slick line Operations

During wire line or slick line operations, all equipment will be current on required maintenance and applicable inspections as follows:

- If perforating, all associated activity will be addressed in the JSA including, if applicable, notifications to affected personnel.
- Signage regarding cell phones, radios or other electronic devices will be posted a sufficient distance from the operation to serve as a warning to location entrants.
- During night time operations, additional hazards associated with poor lighting, trip hazards, fatigue, etc. will be addressed and mitigated.

## 9.0 PRODUCTION AND PIPELINE OPERATIONS

EHS&S requirements are described in this section specific to tasks associated with production & pipeline operations. Topics are arranged alphabetically.

### 9.1 DOT Operator Qualification (OQ) Requirements

To ensure pipeline safety, New Dominion is committed to complying with the Department of Transportation Operator Qualification Program (DOT OQ) requirements. In general, personnel who will perform “Covered Tasks” on NDL property are full-time New Dominion employees. From time to time, contractor employees or others may be used to perform certain tasks.



# CONTRACTOR SAFETY MANUAL

---

Therefore, contractors who may perform Covered Tasks (e.g., pipeline operators, technicians, welders, electricians or others) will be qualified via proper documentation provided by the contractor. Contractor's OQ programs are subject to audit or other verification by the pipeline supervisor, and must, at a minimum, be consistent with New Dominion's OQ program.

Non-qualified personnel will not operate equipment or perform covered tasks for which they are not qualified unless under the direct supervision of a qualified individual.

## 9.2 Hot Tapping

Contractors conducting hot tapping work will have a critical task procedure. Workers will be competent in that procedure and will identify all hazards in a pre-job safety meeting and JSA. Safe flow and pressure rates will be determined before commencing hot tap. An emergency response plan of action will be discussed in the pre-job safety meeting, with a muster point established and communicated. A Hot Work Permit must be completed when hot tapping work is anticipated, with all hot work requirements (fire watch, adequate fire extinguishers, etc.) in effect. Non-essential personnel will be located to a safe area away from the hot tap operation.

**NOTE:** If hot tapping involves a sour service line, a risk assessment shall be performed. Additional precautions shall be taken in alignment with the H2S requirements.

## 9.3 Hydrates

Hydrates, a combination of water and hydrocarbons, are a dangerous condition that should be addressed by NDL Job Site Supervisor. These unexpected ice plugs can cause overpressure, equipment failure or potential serious injury and shall be addressed in the JSA.

## 9.4 Isolation and Purging of Equipment

Purging, as part of commissioning, repair, or decommissioning of lines and vessels, will be conducted in accordance with best industry practice, NDL site-specific procedures (if applicable) and in consultation with the NDL Job Site Supervisor. When putting new, repaired or post-maintenance production equipment back in service, the lease operator will be present and all paperwork (e.g., Facility or Pipeline Handover Checklist) will be completed before pressurizing the system.

Contractor must control or remove any harmful substance contained within equipment, pipes and pipelines to eliminate any possible hazard during repair or modification work. Isolation equipment (blind flanges, double block and bleed, or other approved methods) used for this purpose must be of sufficient rating to withstand 125% of the highest pressure anticipated.

Where equipment or lines could contain a substance that is hazardous to health and safety (e.g., H2S), the contractor must ensure that all necessary precautions are observed.

## 9.5 Piping Systems

Piping systems installed and maintained at a well site must be designed, constructed,

# CONTRACTOR SAFETY MANUAL

---

installed, operated and maintained to safely contain any material at the maximum operating pressures and temperatures anticipated, and in accordance with API and NDL piping standards.

All relief systems will be engineered with the maximum allowable operating pressure (MAOP) plus a safety factor. All pressure relief valves (PRVs) will be installed with a block valve and testing port for isolation and testing purposes. For new construction, all serial numbers for all PRVs installed need to be documented.

## 9.6 Welding Rigs and Welders

All welders are required to perform an inspection on their equipment prior to use and to ensure that equipment is unmodified and used per manufacturer's recommendations. Inspection will be documented and available upon request. Mobile welding rigs will be equipped with appropriate cartridge operated, dry chemical fire extinguishers. All welders and helpers must be trained in the use of fire extinguishers.

The welder is responsible for carrying their qualification card during welding on all New Dominion projects.

**NOTE:** Appropriate flashback/check valve devices must be installed on hoses to prevent reverse gas flows on gas welding equipment. All equipment must be visually inspected daily before work commences.

## 9.7 Well Chemical Treatments

The NDL Job Site Supervisor or lease operator will be informed of any bulk chemical treatments (foamers, de-salt, paraffin cutter, etc.) occurring on NDL sites. Depending on area requirements, the lease operator may be required to be present to perform isolation, LOTO or other procedures. Contact the NDL Job Site Supervisor or lease operator for further information.

If the area does not require a lease operator to be present, any valve turned and left different from the condition found (e.g., open valve left closed for well build-up) will be flagged as a notification to lease operator of changed conditions.

## **Appendix A**

### **Contractor Acknowledgment Forms**

**Contractor Acknowledgement Form- Contractor Copy**

# CONTRACTOR SAFETY MANUAL

---

## Contractor Expectations For Environment, Health, Safety and Security

### Contractor Acknowledgment

This Acknowledgment Form shall not alter or amend the terms of Contractor's written contractual arrangement with New Dominion, nor shall it alter the status of Contractor as an Independent Contractor. Contractor acknowledges its obligation, as reflected in its written contractual agreements with New Dominion, to take responsibility for compliance with all health, safety, security and environmental rules, regulations, ordinances and other laws.

Contractor acknowledges that the expectations contained in this manual are designed to mitigate, to the extent possible, the occurrence of incidents at New Dominion sites. However, New Dominion does not warrant or guarantee that incidents will not occur. Contractor is responsible for ensuring that all its employees, sub-contractors and New Dominion personnel in the contractor's work area comply with these expectations and that persons and property are protected from injury and damage as a result of contractor's operations on the site. Contractor should immediately direct any questions, comments or concerns relating to this manual or any other safety matter to the NDL Job Site Supervisor.

By signing this acknowledgment, I am acknowledging receipt of this material and confirming that personnel within my company have been briefed on its contents. I understand that copies of this manual can be made available to all personnel.

### Acknowledged and Agreed to by Contractor

---

**Signature of Contractor's Authorized Representative**

---

**Date**

---

**Printed Name of Contractor's Authorized Representative**

---

**Contracting Company**

---

**Address**

---

**City, Zip Code, State**

---

**Area Code/Phone Number**

---

**Email Address**

---

**Description of Work Performed**