10.1.1 OPERATING PROCEDURE PROGRAM

The ConocoPhillips operating procedure program will be used to establish the minimum requirements for developing and revising operating procedures for the Parsons Lake field, including the gas conditioning facility. The program:

- describes the principles and responsibilities associated with writing operating procedures
- provides guidance for operations and maintenance staff to determine the content and format for preparing site-specific operating procedures

10.1.2 SITE-SPECIFIC OPERATING PROCEDURES

The purpose of a site-specific operating procedure is to provide clear, written instructions for safely conducting higher-risk jobs or tasks. Procedures clearly explain the consequence of deviation outside the normal operating parameters and the actions required to correct or avoid deviation. The site-specific operating procedures also provide the basic information necessary for employee training.

Site-specific operating procedures are important to enable employees operating equipment to carry out a given task or job consistently. There is less likelihood of incidents if written operating procedures are developed and followed. When properly trained and oriented, even a new or relatively inexperienced employee can respond to a given event safely in a predetermined and prescribed manner.

In some cases, operating procedures are required by government regulations. In other cases, risk assessment might determine that an operating procedure is required to mitigate risk, to achieve the basic safety objective. Local supervisors might also choose to develop site-specific operating procedures to maintain consistency of operation throughout their areas. In all cases, the operations and maintenance team managing the fields and facilities will determine which tasks and operations require operations procedures to be developed and implemented.

10.1.3 RESPONSIBILITIES

10.1.3.1 Parsons Lake Operation Team

The team operating and maintaining the Parsons Lake field is responsible for:

10.1.3.1 Parsons Lake Operation Team (cont'd)

- identifying the tasks and operations that require written procedures. This might include process and non-process related tasks and operations.
- developing and implementing written operating procedures that provide clear instructions for safely conducting activities consistent with process safety information
- developing an authorization process to ensure that the information contained in each procedure is accurate and technically correct
- ensuring that employees and contractors are trained to use approved operating procedures
- ensuring that operating procedures are readily accessible to employees and contractors who work in or maintain a facility
- developing a review process to ensure that operating procedures are accurate, including reviewing operating procedures annually and certifying that they are current and accurate
- identifying relevant legislative requirements and recommended industry practices, and ensuring that operating procedures comply with the requirements

10.1.3.2 First Level Supervisor

The First Level supervisor must ensure that procedures are accurate and readily accessible, and that all operators have been trained in and are competent to carry out or perform site-specific operating procedures.

10.1.3.3 Production or Facility Engineer

Engineering staff provide technical input into the development or change of the site-specific operating procedure, especially where regulations stipulate that procedures are to be developed by a professional engineer.

10.1.3.4 Operator or Maintenance Technician

Employees or contractors who operate a facility must understand operating procedures and recognize that these procedures are the required methods for performing tasks.

10.1.3.5 Business Unit Managers

The business unit manager provides resources to support developing, implementing and maintaining operating procedures.

10.1.4 PRINCIPLES OF OPERATING PROCEDURES

Operating procedures will be written if:

- an operating task or job is determined to be above the basic safety objective according to the risk management program, and is determined to be the best way to achieve the basic safety objective
- a task performed improperly can result in personal injury, damage to equipment, an economic loss, or damage to the company's reputation

10.1.5 DEVELOPING OPERATING PROCEDURES

Operating procedures will be developed and written in a way that provides explicit, clear and accurate instruction for safely conducting a task or operation. The information contained in each procedure will be consistent with process safety information, such as flow diagrams, process and instrumentation diagrams, and manufacturers' instructions or operating manuals. Operating procedures must be technically accurate, understandable, and accessible to the users.

Operating procedures, when required by this program, are the only approved methods of performing tasks and are not optional guidelines.

During the development of operating procedures, personnel involved in this task will review and use information from:

- task risk assessments
- government regulations
- manufacturers' instructions or operating manuals

Each site-specific operating procedure manual will consist of a set of procedures applicable to a facility or field. Each operations team will determine those tasks that require operating procedures and will manage those tasks through the document control process. An electronic filing system is the preferred way to manage these documents. If it becomes necessary to have hard copy versions, the operations team will ensure that procedures are:

- readily accessible at all times to the appropriate personnel operating the facility or performing the job or task, but that versions remain in a controlled state
- stored in a manual or three-ring binder titled the *Operating Procedures Manual*
- assigned to a document owner

The document owner will be responsible for ensuring that the hard copy of each procedure is the most recent version available and that the old version is removed and destroyed. The manual will not necessarily contain all of the procedures

10.1.5 DEVELOPING OPERATING PROCEDURES (cont'd)

applicable to the facility. It might only reference other procedures, such as an existing hot work procedure in an existing safety manual.

Operating procedures will address the following:

- steps for each operating phase
- the consequences of deviating from safe operating limits and the steps necessary to correct or avoid deviation
- health, safety and environmental considerations
- safety systems, including unique features and their functions
- safe operating practices
- the maximum intended inventory of hazardous material, when inventory will significantly increase risk
- concurrent operations

10.1.6 CONTENT FOR EACH OPERATING PHASE

Operating procedures provide a step-by-step set of instructions to guide the operator in safely maintaining the facility or well for the following operating phases:

- start-up
- normal operations
- temporary or emergency operations
- normal and emergency shutdowns

10.1.6.1 Start-Up Operations

Operating procedures for start-up address every type of start-up associated with a process, including:

- initial start-up
- start-up following a normal shutdown
- start-up following an emergency shutdown

If an existing process has already undergone an initial start-up, an operating procedure for initial start-up is not required.

10.1.6.2 Normal Operations

Procedures for normal operations document the specific steps required to maintain safe operations for wells and process equipment. The procedures outline routine tasks that need to be performed to avoid process incidents, such as checking normal valve positions, liquid levels, interface levels and temperatures.

10.1.6.3 Temporary Emergency Operations

Procedures for temporary or emergency operations address the unique steps that might have to be taken to manage the process properly, such as bypassing process equipment, redirecting flow and controlling product releases or fires.

10.1.6.4 Shutdown Operations

Shutdown operating procedures cover every type of shutdown at a well or facility, including normal and emergency shutdowns.

10.1.7 SAFE OPERATING LIMITS

Safe operating limits are intended to define the unit's ultimate safe operating conditions, based on the most constraining of either physical equipment limits or process limits. Operating procedures address the consequences of deviations and the steps required to correct or avoid deviations.

Safe operating limits are limited to operating scenarios where operators perform an activity that is required to achieve an adequate level of safety for the particular process parameter, such as responding to a high-level alarm in a tank. Safe operating limits do not include operating scenarios in which automatic shutdown systems respond to an upset condition without operator interference.

During a risk assessment, safe operating limits are identified as being the administrative controls necessary to prevent hazards. These administrative controls might include an operator response to a process alarm, such as a high-pressure alarm, or it could be a procedure to periodically check an equipment item, such as a tank level. Each safe operating limit is accompanied by information on the consequences of deviating from the safe operating limit, and the steps that the operator takes to avoid or correct a deviation. Safe operating limits are incorporated into the appropriate steps of the operating procedure, depending on the operating phase or type of activity performed by the operator.

10.1.8 SAFETY AND HEALTH CONSIDERATIONS

The operating procedures contain or reference safety and occupational health information, including any inherent hazards, such as:

- the properties of, and hazards presented by, the chemicals or materials used in the facility

10.1.8 SAFETY AND HEALTH CONSIDERATIONS (cont'd)

- the precautions necessary to prevent exposure to a hazard, including engineering controls, administrative controls, and personal protective equipment
- the control measures to be taken if physical contact or airborne exposure to a hazardous substance occurs
- any special or unique hazards

The materials hazards addressed in the operating procedures are limited to cautions about appropriate personal protective equipment or special hazards. Detailed information on the specific hazardous materials are documented in the material safety data sheets and are only referenced in the operating procedures.

10.1.9 SAFETY SYSTEMS AND FUNCTIONS

The operating procedures reference information on safety systems and their functions that might not otherwise be apparent to the operator. The information provided describes the logic of the control, shutdown and safety systems.

10.1.10 SAFE OPERATING PRACTICES

Safe operating practices provide for the control of hazards, such as lockout and tagout, confined space entry, opening process equipment and hot work. These practices are referenced, as necessary.

10.1.11 MAXIMUM INTENDED INVENTORY

The maximum intended inventory is the maximum amount of a given hazardous material that is allowed on site for safety reasons. The maximum intended inventory is not equal to the maximum storage capacity available in process equipment or storage tanks. It is addressed in operating procedures because the inventory is controlled by a procedure.

Any maximum inventory is identified during a risk assessment and documented. Few, if any, cases of maximum intended inventory occur in upstream operations like those planned for the Parsons Lake field development.

10.1.12 ENVIRONMENTAL CONSIDERATIONS

Environmental considerations include the required actions in the operating procedures to enhance environmentally sound operations.

The site-specific operating procedures include:

- any relevant steps necessary to protect the environment and to ensure that the operator is aware of the possible environmental issues that might arise when conducting the job or task

- references to other documentation on the continuous and periodic discharge into the environment of hydrocarbons, contaminates, or undesired byproducts that are restricted by regulations

10.1.13 PROCEDURE AUTHORIZATION PROCESS

The Parsons Lake operations team will establish a process for authorizing procedures. The procedure authorization process will be used to control, approve, and authorize the written operating procedures for the equipment or job tasks within a facility. It will also provide a means to introduce the written operating procedures and to address the requirement that procedures be technically accurate, understandable, and reviewed and revised periodically. The key elements of the authorization process for each procedure are as follows:

- the title of the operating procedure being described, i.e., normal start-up
- the date of the most recent review and revision
- the signature of the designated approver

The assigned owner of the operating procedure reviews the procedure to ensure that it is complete and accurate. The procedure is then forwarded to a higher level of supervision for an approval signature. This approval signature confirms that the procedure was reviewed and that the requirements for the written procedure were met. The level of authorization depends on the organizational structure and on the type of procedure. However, at a minimum, approval is required from the senior supervisor's level. Procedures are authorized and signed by the person with the authority to accept the residual risk associated with the job or task. The site-specific operating procedure will be reviewed as often as necessary to ensure that it reflects current operating practice and will include changes that result from changes in technology, equipment and facilities. At a minimum, procedures are reviewed and certified annually to confirm that they are current and accurate. Operating procedures are reviewed and revised as a result of changes to the facility.

10.1.14 PROCEDURE CHANGE MANAGEMENT

Situations arise in all operations where unforeseen conditions develop that were not expected when the operating procedures were written. The ConocoPhillips management of change process explains the procedures necessary to ensure that deviations required for maintaining operations are properly documented and incorporated into the written operating procedures for the process equipment or facility.

10.2.1 LOCATION FACTORS

Winter and summer models for production operations at the Parsons Lake north pad have been constructed for all systems because of seasonal effects on equipment capacities and geothermal considerations. The main contributors to production losses are:

- process cooling and refrigeration
- the dehydration system
- gas compression

Production losses result from both planned activities and unscheduled failures, and occur while:

- mobilizing equipment to the site
- repairing equipment

Production losses as a result of scheduled activities currently account for the equivalent of 2.5 days of shutdown per year. As it is early in the project design, maintenance schedules have not yet been produced. Therefore, other planned shutdowns might occur in addition to the downtime already considered. Planned maintenance has been considered for:

- emergency shutdown testing
- flare inspection
- planned maintenance on compressors
- planned maintenance on gas turbines

The maintenance schedule has been offset for parallel units to reduce the impact of work. For example, where there are two 100% units, maintenance is only started on the second unit when the first unit is operational, after its planned maintenance work has been completed. Work on different critical areas is done concurrently to reduce the impact.

10.2.2 SUPPLY LOGISTIC FACTORS

Because of the isolated location and the relatively high value of the production throughput, an extensive array of consumables, minor parts and spare components are expected to be stocked at the Parsons Lake north pad.

10.2.2 SUPPLY LOGISTIC FACTORS (cont'd)

Maintenance materials and spare parts needs will be assessed and supplied according to:

- ConocoPhillips' evaluation of the reliability, availability and maintenance study
- manufacturers' recommendations
- experience
- cost
- acquisition time
- transportation time
- risk exposure
- the benefits plan and agreements

10.3.1 SCOPE

Operation of the Parsons Lake field development will require extensive access to transportation services, including significant use of air transport for moving personnel, parts and materials. This need might extend to the services of a heavy-lift aircraft or other suitable equipment for the urgent transportation of heavy components, with loads weighing from 5,000 to 20,000 kg.

Large loads associated with major maintenance, such as an annual resupply of consumables, material or equipment, might be moved seasonally using river barges and by land, when winter roads, constructed for drilling operations, are available.

10.3.2 INFRASTRUCTURE

Operations and maintenance (O&M) infrastructure refers to the nonprocess installations that are required to support an effective operation. These installations include:

- site amenities
- telecommunication and business systems
- maintenance facilities
- transportation provisions

The overall operations philosophy, strategy and plans, incorporating environmental considerations and community concerns, are considered when determining the requirements for O&M infrastructure, including:

- personnel safety
- human factors
- O&M demands of the system
- such factors as:
    - climate
    - geography
    - distances
    - existing infrastructure

10.3.2 INFRASTRUCTURE (cont'd)

The Parsons Lake facility will be equipped with a helicopter landing pad and airstrip equipped with instruments and lighting suitable for use in adverse weather and in periods of darkness.

In addition to process, mechanical, power generation and control modules, operations infrastructure at the north pad will include:

- living quarters
- a workshop
- a warehouse
- storage space
- tools
- vehicles
- equipment

10.3.3 O&M ORGANIZATIONS

10.3.3.1 Functions and Roles

The O&M function and roles include activities associated with managing, operating and maintaining the development's surface facilities, which include:

- wellheads and well pads
- flow lines and other piping
- the central production facility and associated infrastructure

10.3.3.2 Front Line O&M Personnel

A small team of front line operations and maintenance personnel will work at the Parsons Lake location, as required. These workers will perform a variety of routine and first-response maintenance and operations-related tasks. Areas of specific responsibility include:

- process monitoring and optimization
- routine and minor mechanical maintenance and repair
- piping
- instrumentation
- electrical maintenance and repair

10.3.3.3 Management, Administrative and Specialist Personnel

A small staff of management, administrative and specialist personnel will likely provide business operations, leadership and administrative support to the front line O&M personnel.

These people will have working knowledge of the facility, equipment and its operations, and will be able to provide detailed advice and support, either on a remote basis or by undertaking on or off-site activity.

10.3.3.4 Technical Support

A second level of technical and engineering support will be drawn from ConocoPhillips' specialist technical and engineering staff or from third-party specialists. These resources are likely to be based in southern Canada or the United States. They would not be expected to have facility-specific expertise, but would provide expertise and knowledge within their specific responsibilities or product areas. It will be rare for these people to travel to the production site.

Specialized services and skills might also be required from vendors of major equipment, original equipment manufacturers or third parties. Some of these services might be delivered at a distance, such as advice analysis or engineering and operations support. Materials and components might be shipped out for repair, overhaul or analysis. At times, it might be necessary to bring a specialist or advisor to the site for hands-on activity or observation.

10.3.3.5 Technical Service Providers

ConocoPhillips will use contractors to provide much of the on-site maintenance and service work, including:

- transportation
- major mechanical work
- electrical and instrumentation maintenance
- site maintenance
- camp support

10.3.3.6 Business Services

The Parsons Lake operation will receive business and corporate support services from ConocoPhillips, such as:

- accounting
- procurement
- legal
- regulatory
- community relations
- information technology
- safety and environment
- human resources

10.4.1 LINKS TO CORPORATE OFFICES

A telephone link between the Parsons Lake gas conditioning facility and ConocoPhillips' head office in Calgary will be established with either a satellite system or a microwave radio network, and will include a backup system.

A satellite system will provide the main outside communication link for construction camps. A satellite terminal can provide numerous telephone lines and various Internet connections, which will allow telephones, facsimiles and e-mail to be used at each camp and associated offices.

10.4.2 LOCAL COMMUNICATION

Radio repeaters will be installed at each production pad to provide voice communication for crew coordination and work activities. These repeaters will be connected to become a trunked radio system. Repeaters can be accessed by hand-held or vehicle radios. The radio repeater system's range will be at least 20 km from the production pad.

10.4.3 REMOTE WELL MONITORING AND CONTROL

Remote well monitoring and control is required at the Parsons Lake field.

A master radio station will be installed at the pad. Each well will have a remote terminal unit and various instruments to monitor and control the well. A microwave outstation radio will provide communication with the master radio station.

10.5.1 SYSTEMS DESIGN

Control and monitoring systems will be designed to comply with all regulatory requirements and to achieve the following objectives:

- Facilities must be able to achieve safe start-up, operation and shutdown.
- There will be as few people on site as possible.
- Facilities will be fully automated, so that no local intervention is required during normal operation. The control system will ensure safe shutdown when required.
- Instrumentation and control systems will be designed for high availability, given environmental and other conditions at the Parsons Lake facility. To minimize downtime and repair time, consideration will be given to the:
  - level of redundancy
  - quality of equipment
  - spare parts inventory
- Instrumentation and control design will use proven technology.
- Remote instrumentation, controls, and mechanical equipment diagnostics will be designed for remote troubleshooting and preventive maintenance applications.
- A remote programming capability will be provided.
- Local controls will be provided on rotating equipment to facilitate maintenance.
- If communications fail, the pad and its safety systems will continue to operate. Local controls will operate independently.
- The control system design will allow for expansion.

10.5.2 SAFETY SYSTEMS

10.5.2.1 Fire and Gas Detection

Specifications, Codes and Standards

ConocoPhillips specifications cover the technical requirements for designing, installing and maintaining fixed combustible gas and fire detection systems for all ConocoPhillips operated assets. These specifications are based on, and reference, recognized and generally accepted good engineering practices and industry standards and codes, including:

- Canadian Standards Association (CSA)
- Instrument Society of America (ISA)
- American Petroleum Institute (API)
- National Association of Corrosion Engineers (NACE)
- American National Standards Institute (ANSI)
- Canadian Electrical Code (CEC) National and Provincial
- Combustible Gas, H_2S and Fire Detection Specification Canada
- National Fire Protection Association (NFPA)
- Canadian Association of Petroleum Producers (CAPP):
    - Occupational Health and Safety of Light Hydrocarbons Guideline
    - Occupational Health and Safety Hydrogen Sulphide Code of Practice
- Applicable Occupational Health and Safety regulations and guidelines
- Applicable Workers' Compensation Board regulations and guidelines

Other related ConocoPhillips specifications and standards are also followed.

Design Philosophy

Fixed combustible gas monitors will be used for personnel safety and facility protection. Personal protective equipment (personal monitors) will be used to meet Health, Safety and Environment and occupational health requirements. Combustible gas detected at 20% lower explosive limit (LEL) will activate audible and visible alarms and ventilation fans, where practical. Combustible gas detected at 40% LEL will shut down all process equipment, including the ventilation fans, in the affected process area. This area will be depressurized if it is compatible with the overall facility control philosophy.

Fire detection will activate an alarm or a process equipment shutdown and possibly, depressurizing, depending on the facility control philosophy. A key criteria is a staffed versus unstaffed operation. Shutdown and depressurizing might not be required in a staffed facility. An alarm will be activated when a fire detector malfunctions. Combustible gas and fire sensors will be designed to operate in a fail-safe mode, and will be powered from a power source that is unaffected by the loss of utility power.

Maintenance and Calibration

Site-specific maintenance and calibration procedures will be developed and used. A copy of the system-specific maintenance and calibration procedures will be kept on site for reference. Calibration records will also be maintained on site for three years.

Equipment in the processing facility will be depressurized automatically if sensors or any other major safety system are activated. Sensors will be activated when they detect dangerous situations, such as:

- leaks
- over-pressure
- low process temperature
- low voltage
- station valve misalignment
- fires

An operator-initiated emergency shutdown, from the control room or from an outdoor push button, will also initiate depressurization.

Facility depressurization is expected to be minimal. It will be justified in design development through the preliminary engineering and detailed design phases, to meet the availability, environmental and safety concerns of the project.

The facilities will be designed in sections. Each section will have shutdown valves to isolate its inlet and outlet and a blowdown valve to depressurize that section and minimize the:

- environmental concerns of flaring and venting
- amount of work required to bring the facilities back into operation

10.5.2.2 Alarm System

All process alarms, including fire and gas detection, will be sent to the process operator located in the control building. The process operator will be responsible for:

- taking the necessary action to maintain the process within normal operating conditions

- responding to process upsets

10.5.2.3 Emergency Shutdown Devices

Safety-instrumented functions will be connected to the programmable safety system, which will automatically and safely shut down the facilities, when required, and as defined on cause and effect diagrams. Safety-instrumented functions will also provide an alarm to the process operator. All safety-instrumented functions will be defined as fail-safe.

10.6.1 WORKER QUALIFICATIONS

All field workers will have the appropriate technical qualifications and training in flow line control and leak detection.

Workers responsible for controlling product movement in the flow lines will be knowledgeable about:

- the physical characteristics of all products carried in the flow line system, and the hazards created by their release
- operational procedures related to the flow line
- the Parsons Lake Field Emergency Response Plan (see Section 11.4, Emergency Response Plan)

10.6.2 FLOW LINE OPERATION

10.6.2.1 Responsibilities

Once the flow line system is successfully constructed and tested for operation, ConocoPhillips' field production operations personnel will be responsible for ensuring that it is operated and maintained safely and efficiently. Both ConocoPhillips and contract personnel will be responsible for:

- adhering to the safe work practices set forth in applicable regulations and according to ConocoPhillips policies and procedures
- operating and maintaining the pipelines according to applicable regulations and ConocoPhillips procedures
- providing and maintaining records according to regulatory and corporate requirements
- providing input when experience and changing technology or conditions dictate revising procedures, to ensure continued safe and efficient operation

The operations supervisor will be responsible for ensuring that all applicable regulatory requirements and company policies and standards are adhered to at all times.

10.6.2.2 Above-Ground Facilities

Pipelines and above-ground pipeline facilities connecting the south pad to the north pad, and any single well pad pipelines, will be identified by placing warning signs adjacent to them. Facilities include compressor stations, valve stations, field manifolds and line heaters. Information on all above-ground facilities will:

- identify ConocoPhillips as the operator
- name the facility
- display ConocoPhillips' emergency telephone number
- display a warning symbol identifying the hazard as Category I: flammable gas or liquid

10.6.2.3 Overpressure Equipment

Pressure control systems will be installed where a supply from any source makes it possible to pressurize a flow line above its maximum operating pressure. Such pressure-control systems will be set to operate at or below the licensed maximum operating pressure.

Pressure-limiting and pressure-relieving systems or devices will be set at or below the correct pressure, taking into account the accuracy of the devices and test instruments.

All flow line system control and monitoring devices will be inspected annually for proper operation. This includes all pressure-control, pressure-limiting and pressure-relieving systems or devices. A record will be retained of all tests, inspections and corrective actions taken.

Valves and fittings connected to a flow line will have a manufacturer's pressure rating equal to or greater than the licensed maximum operating pressure.

Flow line valves that might be required during an emergency will be inspected and partially operated at least once a year, with a maximum interval of 18 months between inspections and operations.

10.6.2.4 Detecting Leaks and Breaks

All personnel will be trained to recognize the signs of a leak or break in a flow line. Operating personnel who suspect a leak will:

- in a non-emergency situation, notify the supervisor and initiate repair procedures

- in an emergency situation, initiate the appropriate emergency procedures and take immediate steps to isolate, contain and clean up any fluid spill

10.6.3 FLOW LINE CORROSION, INSPECTION AND REPAIR

10.6.3.1 External Inspection

Cathodic protection systems will be inspected at least annually to determine the effectiveness of external corrosion control procedures on the flow line system. Inspection reports will be maintained.

10.6.3.2 Internal Inspection

Pipelines carrying fluids that contain free water, bacteria, carbon dioxide or suspended solids are considered to be prone to internal corrosion. To determine the magnitude of corrosion that might take place and the effectiveness of mitigation programs, a variety of monitoring techniques are being considered, including:

- corrosion coupons
- visual inspection or pipeline cutouts
- non-destructive testing, usually with ultrasonic or radiographic methods
- chemical analysis
- instrumented logging tools

Inspection reports will be maintained.

10.6.3.3 Flow Line Repair

Repairs will proceed as needed when inspections reveal leaks or defects in the pipeline.

Detailed standards for flow line repairs, welding and hot-tapping will be developed and followed.

10.6.3.4 Right-of-Way Inspections

The production supervisor will schedule inspections of all operating flow line rights-of-way, depending on flow line service, flow line condition and other operating or unusual conditions.

The purpose of these inspections is to monitor the condition of the right-of-way, so that quick and appropriate remedial action can be taken when the flow line system is damaged or the integrity of the system is threatened.

10.7.1 SCOPE

ConocoPhillips will review the Parsons Lake facilities to determine the appropriate security devices, procedures and best practices that adhere to regulatory and corporate requirements and are designed to:

- advise people of the dangers within the facility, so that they may voluntarily comply with the processes and procedures within the facility
- deter or delay anyone from committing an unauthorized entry or a criminal act against the facility or the personnel working within it
- detect and provide an opportunity to detain anyone who is in the act of making an unauthorized entry or committing a criminal act against the facility or the personnel working within it
- be practical, cost effective and as minimally intrusive as possible
- protect life, property and the company's competitive advantage

Appropriate mitigation measures will be based on site-specific risk analyses of potential security threats.

10.7.2 SECURITY PROCESS

The security process will have the following interactive components to establish a secure environment:

- a documented security plan and procedures, with roles and responsibilities defined
- assigned responsibility for security administration
- security awareness training for all personnel
- appropriate training for personnel with specific security responsibilities
- a requirement for implementing and reporting all security-related incidents

10.7.2 SECURITY PROCESS (cont'd)

- a pre-employment background check of prospective employees, contractors and subcontractors
- emergency response policies and procedures
- progressive implementation of protective measures based on government threat advisories or other information

10.7.3 PHYSICAL SECURITY

10.7.3.1 Perimeter

The perimeter and access control will be established and might incorporate multiple security elements, such as:

- buildings
- illumination
- closed circuit television
- intrusion detection systems
- access control technology

10.7.3.2 Buildings

The following security measures will be taken for buildings that contain personnel or sensitive, highly valued or critical assets:

- access control systems or intrusion detection systems
- locks on all exterior doors and windows
- controlled visitor access

10.7.3.3 Intrusion Detection Systems

Remote facility buildings located at the south pad and at single well pads will have an intrusion detection or alarm system that is monitored 24 hours a day. A security report will be completed for all alarms, including false and nuisance alarms.

10.8.1 PHILOSOPHY

When the Parsons Lake field has been depleted to a level where further production is uneconomic, the site will be abandoned and reclaimed to a condition similar to surrounding lands, as far as possible and practical. Decommissioning, abandonment and reclamation procedures are discussed in general terms, because technology, industry practices and regulatory requirements, with which the operator will comply, will likely change over the 25 to 30-year life expectancy of the field. In addition, alternatives to planned abandonment and reclamation, if available, might be considered in consultation with local stakeholders and regulators.

10.8.2 APPROVALS

Approvals to decommission, abandon and reclaim wells and the surface components of the Parsons Lake field will be obtained from the appropriate regulatory authorities. Plans discussed in this section will comply with the conditions of those approvals.

10.8.3 DOWNHOLE WELL ABANDONMENT

Downhole abandonment of the production and disposal wells will be achieved by:

- isolating any open formation intervals using bridge plugs and cement plugs, as required
- removing the wellheads
- cutting off the casings and conductor below the surface
- capping the wells with a steel plate or cement plug

10.8.4 SURFACE ABANDONMENT

Surface flow lines and supports will be removed for reuse or recycling. Portions of below-ground flow lines, if any, will either be removed or abandoned in place.

10.8.4 SURFACE ABANDONMENT (cont'd)

Flow lines abandoned in place will be purged and flushed to remove residual hydrocarbon gases and liquids, and capped at all open ends.

10.8.5 DECOMMISSIONING

All other above-ground equipment and facilities will be removed for reuse, recycle or disposal at an approved disposal site. Piles will either be pulled or cut off well below grade to ensure that they are not elevated above the surface as a result of frost heaving or surface subsidence.

10.8.6 RECLAMATION

Where feasible, granular material in pads and access roads will be recycled and reused. Residual granular material will be scarified and revegetated. All disturbed areas will be seeded, fertilized or planted using methods that encourage the re-establishment of appropriate native species. Reclaimed areas will be monitored and remedial actions will be taken if revegetation is not satisfactory or if excessive erosion, slumping or thermokarsting occurs.