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July 10, 2007

Chris Hoidal
Director, Western Region
Pipeline & Hazardous Materials Safety Administration
U.S. Dept. of Transportation
12300 W. Dakota Ave., Suite 110
Lakewood, CO 80228

Re: OQ @ Battle Creek Compressor Station in Montana (Chinook Pipeline)
CPF 5-2007-1009M

Dear Mr. Hoidal:

This letter is in response to the Notice of Amendment that you sent to Clark Storms in our Ft. Worth, Texas office dated June 8, 2007 that he received on June 12, 2007.

Attached for your review are the necessary revisions to our O&M manual and Operator Qualification Plans.

Items 1-17 from your June 8, 2007 letter which address our O&M manual were previously sent to Jerry Davis via email on June 1, 2007 addressing a March 22, 2007 email I received from Mr. Davis pointing out the amendments needed. I have included a hard copy for your convenience.

Items 18-23 which pertain to the Operator Qualification Plans are also enclosed. These are also available electronically. We have made our OQ Plan specific to the Chinook pipeline rather than for our parent company so it was when Jerry Davis reviewed the plans.

If you wish to receive any of these items electronically, please email me back at ken_prior@omimexgroup.com with your email address and I can email these items back so you have them electronically.

Sincerely,

A. Kenneth Prior III
Operations Manager

Enclosures

cc: Clark Storms

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DISTRIBUTION OF MANUALS, ANNUAL REVIEW & REVISION LOG

The Senior Operator shall maintain applicable construction records, maps, drawings and operating history for the appropriate operating personnel. 192.605 (b) (3)

This Plan must be reviewed and updated at least once each calendar year at intervals not exceeding 15 months. This review will include an evaluation of work done under Section 3 of the manual since the last review to determine the effectiveness and adequacy of procedures used in normal operations and maintenance. Procedures will be modified accordingly if deficiencies are found. Records of the annual review shall be kept using the OM&E Plan & Procedures Annual Review Log in the Form Index or similar form.

The Company will review the manual, and if necessary, revise and re-distribute the manual at least once per calendar year, not to exceed 15 months. Revisions will be recorded below. 192.605 (b) (8)

Date	Reviewed By	Revisions — Description
July 19, 2004	Douglas M. Lee, P.E.	Final Manual Review
November 3, 2004	Jerry Davis, DOT & Ken Prior	Inspection Review & Revisions
February 7, 2005	Ken Prior	Annual Review & Revisions
February 15, 2006	Joseph F. Lehner, Jr., P.E.	Annual Review & Revisions
February 27, 2007	Jerry Davis, DOT & Ken Prior	Inspection Review & Revisions
May 15, 2007	Joseph F. Lehner, Jr., P.E.	Annual Review & Revisions

CONTINUING SURVEILLANCE

With the goal of continued safe and reliable operation of the pipelines, Omimex management will annually review records of repairs, corrosion and corrosion control monitoring, patrols, leakage surveys, class location surveys, equipment inspections, abnormal operations, safety-related conditions, leaks and failures.

Appropriate investigations and action will be undertaken when records indicate class location changes, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.

If a pipeline segment or component is found to be in unsatisfactory condition but no immediate hazard exists, Omimex will schedule repair or replacement of the segment or component involved. If repair or replacement is not feasible, then the maximum allowable operating pressure of the affected segment or component will be reduced to a safe level.

A safety-related condition that could lead to an imminent hazard, the pipeline pressure will be reduced by 20% or more of the operating pressure or the pipeline shutdown.

Any unsafe pipe will be replaced, repaired or removed from service and any hazardous leaks will be repaired immediately in accordance with 192.703.

MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP)

PURPOSE

This procedure outlines the responsibility for establishing the MAOP of each jurisdictional pipeline segment and the related operating requirements.

DATA OF EXISTING PIPELINE

The design pressure of the pipeline is 1,572 psig with a design factor of 0.72. The MAOP of the pipeline is 1480 psig.

PROCEDURE

Control operating pressures below established MAOP for all jurisdictional segments at all times. No person in Operations shall operate or cause action, which will operate any segment in excess of the MAOP established from the following:

(1) Establish the MAOP of all pipeline segments and Compressor Station piping. For MAOP of jurisdictional lines see; Pipeline Data Section 2.A

(2) Engineering Design or the constructing location, as applicable, will determine MAOP on new facilities.

(3) The pressure obtained by dividing the pressure to which the segment was tested after the construction as follows:

(a) For plastic pipes in all locations, the test pressure is divided by a factor of 1.5.
(b) For steel pipe operated at 100 psi (689 kPa) gage or more, the test pressure is divided by a factor determined in accordance with the following table:

	Factors, segment		
Class Location	Installed before (Nov. 12 1970)	Installed after (Nov. 11, 1970)	Covered under CFR 192.14
1	1.1	1.1	1.25
2	1.25	1.25	1.25
3	1.4	1.5	1.5
4	1.4	1.5	1.5

(4) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

No person may operate a segment to which paragraph (4) of this section is applicable, unless overpressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded.

EMERGENCY VALVE MAINTENANCE

PURPOSE

This procedure provides guidelines for emergency valve inspection and maintenance.

GENERAL

Inspect and partially operate emergency valves at least once each calendar year, not to exceed 15 months.

Each location shall maintain a list of its emergency valves.

PROCEDURE

The valve inspection and maintenance should include:

- Lubricate valve as necessary.
- Fully operate the valve, if not possible; partially operate the valve to check its operation.
- Ensure the valve environment will not interfere with the operation of the valve or prevent safe access at any time.
- Maintain valves and operators in good condition.
- Protect normally closed valves from conditions that could affect proper operation or cause deterioration.
- Perform inspection and maintenance on frequently operated valves more often if needed.
- Secure valves requiring securing.
- When valves are in boxes, sumps, pits or similar locations, check to see if it may be a confined space and take any precautions determined necessary.
- If a valve is found inoperable, evaluate the necessary repair. Plan for pipeline shut-down for valve repair. Repair or replace valve as necessary.

RECORDS

Company shall maintain a record of the inspections and operations required by this section for at least five years.

PRESSURE LIMITING & RELIEF DEVICES

PURPOSE

This procedure covers requirements for design, inspection and capacity verification of pressure limiting and relief devices.

PROCEDURE

Pressure limiting and relief devices shall be design to comply with the following:
Be designed and installed so that it can be readily operated to determine if the valve is free, can be tested to determine the pressure at which it will operate, and can be tested for leakage when in the closed position;

Have discharge stacks, vents, or outlet ports designed to prevent accumulation of water, ice, or snow, located where gas can be discharged into the atmosphere without undue hazard;

When installed in a district regulator station must be such that a single incident does not affect the operation of both the pressure limiting and the relief device

Except for the inlet valve, be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure-limiting device inoperative.

Annually, with intervals not to exceed 15 months, inspect and test each pressure limiting relief device as outlined below. Calculate the required capacity, or review a previous calculation, of each relief device. Note that the design capacity of the relief device must be based on the capacity of the compressor or regulating device to protect the system.

Town border or city gate sales facilities, compressor stations, pipelines and similar facilities, are to be inspected each calendar year with intervals not to exceed fifteen months.

OPERATING PRESSURES LIMIT CRITERIA

PURPOSE

This procedure establishes recommended maximum pressures at which a pipeline should be operated while excavation, maintenance, repairs, or other such activities are being performed.

GENERAL

The condition of the pipeline as referred to in Table 1 is the condition of that segment of the line in the immediate surroundings where the activities described in Table 1 are taking place or are to take place.

A pipeline is considered to be damaged if a defect is believed to exist, or has been identified, which requires repair according to Repair Procedure 4.0.2. If a damaged pipeline is identified it will retain this classification until it is repaired.

A pipeline is considered undamaged if no defect exceeding the limits of the Repair Procedure has been found, or after all known defects have been repaired.

The pressures outlined by this procedure should be considered recommended maximums. Operating pressures for listed activities should be limited to the minimum necessary to maintain delivery requirements and be kept below the recommended values, if possible. However, good judgment and common sense may indicate the need for higher or lower pressures depending on the extent of damage to the pipeline, deliverability requirements or other circumstances. The Senior Operator has the authority to use pressures above the recommended levels after making appropriate evaluations and receiving Regional Director approval.

The pressure criteria in this procedure are based upon Company and industry experience as opposed to mathematical analysis or empirical expressions predicting pipeline behavior. Such experience indicates that a pipeline that has been damaged and does not subsequently fail (rupture) probably will not fail during the course of repair activities if the actual pressure in the pipe, i.e., the stress in the metal, is reduced. With this premise, the greater the pressure reduction, the lesser the probability that a pipe failure will occur. Consequently, to maximize the reduction of risk, activities should be accomplished at the lowest operating pressure possible if the opportunity exists to do so without having to implement extraordinary measures.

PROCEDURE

Select the lowest maximum operating pressure from Table 1 corresponding to the activities planned and the presence or absence of damage. Pressures higher than those listed should not be maintained unless the activity can be conducted without compromising the safe operation of the pipeline and the safety of operating personnel.

EXCAVATIONS

When working in excavated trenches where unsafe accumulations of gas may occur, adequate emergency rescue personnel and equipment must be provided including breathing apparatus and rescue harnesses and lines, if necessary.

Protect personnel from flammable and toxic gases when ventilation is inadequate.

- Observe barricading rules of the local governing authority when excavations are at road crossings. Provide high visibility vests for all personnel exposed to traffic.

- Make available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line, 192.605 (b) (9).

Design of Protective Systems

- Follow OSHA requirements for sloping and for trench shoring requirements.

- Design all support systems using accepted engineering principles or local state requirements. Use the most stringent. Definitions and detailed explanation of trench safety requirements may be found in OSHA Regulation 1926, Subpart P.

RECORDS

None required by this procedure.

OPERATING PRESSURES LIMIT CRITERIA

TABLE 1	
TYPE OF ACTIVITY	% MAOP
No Activity	100
Pipe Backfilled	50 - 100
Pipe Exposed / Excavation	50 - 100
Welding	0
Hot Tapping	20
Any Other Activity	65

Notes:

(1) For lowering of in-service pipelines, contact the Operations Manager..

ABNORMAL OPERATIONS

PURPOSE

The purpose of this procedure is to provide guidelines for responding to, investigating and correcting the cause of abnormal operations.

GENERAL

Abnormal operations may include the following:

- Unintended closure of valves or shutdown.
- Increases or decreases in flows or pressures that are outside the normal operating limits.
- Loss of communications.
- Operation of a safety device.
- A malfunction of a component, deviation from normal operation, or personal error that could be hazardous.

PROCEDURE

Operations personnel should be alert for indications of abnormal operating conditions that may occur on the pipeline system. Recording charts, pressure gauges, communications equipment and safety devices may indicate abnormal conditions.

Unusual noises, abnormal equipment temperatures, odors and vibrations may also signal trouble.

Response, Investigation and Correction

Whether abnormal operations are discovered or caused by operating personnel, the response should be to **stay calm**, **investigate and evaluate** the situation, **plan** the appropriate response, and **take corrective action** as soon as possible to protect the public, operating personnel and property. Five scenarios involving abnormal operations are described below to help personnel think through and plan appropriate responses.

Case 1: A valve is accidentally closed or a normally-open valve is discovered in the closed position.

- **Stay calm**
- **Investigate/Evaluate** - Has another operator closed the valve for maintenance or other purposes? How does this valve affect flows and pressures in the pipeline or station? Must the valve be reopened to restore service? Will sudden reopening cause a pressure or flow surge that might exceed operating limits or damage downstream equipment?
- **Plan** - If the valve must be reopened, what is the best way to accomplish this without exceeding operating limits? Should supervisory personnel be consulted? Are additional field personnel needed? How soon must corrective action be taken?
- **Corrective Action** - Carry out the plan developed above.

Case 2: An increase or decrease in pressure or flow rate outside normal operating limits is observed.

- **Stay calm**

- **Investigate/Evaluate** - What is causing the unusual flow rate or pressure? Are nearby valves in the proper position? Are automated valves or regulators functioning properly? Are other operating personnel performing maintenance which could cause the abnormal condition? Could upsets in separation equipment or hydrate formation be causing the problem?
- **Plan** - After determining the cause of the abnormal operating condition, how can it best be corrected? Should supervisory personnel be consulted? Are additional field personnel needed? Must service be interrupted? How soon must corrective action be taken?
- **Corrective Action** - Carry out the plan developed above.

Case 3: Communications are lost (telephone, radio, etc.).

- **Stay calm**
- **Investigate/Evaluate** - What is causing the loss of communications? Weather? Equipment malfunction? How does the loss of communications affect operating personnel?
- **Plan** - What must be done to restore communications? Are alternate means of communication available? How soon must the problem be corrected?
- **Corrective Action** - Carry out the plan developed above.

Case 4: Operation of a safety device is observed or discovered.

- **Stay calm**
- **Investigate/Evaluate** - What has caused the safety device to operate (relief valve, monitor regulator, safety shutdown valve, etc.)? Are nearby valves in the proper position? Are automated valves or regulators functioning properly? Are other operating personnel performing maintenance which could have caused the safety device to operate?
- **Plan** - After determining the cause of the safety device operation, what must be done to prevent recurrence? Should supervisory personnel be consulted? Are additional field personnel needed? Must service be interrupted? How soon must corrective action be taken?
- **Corrective Action** - Carry out the plan developed above.

Case 5: Potential hazards are caused by equipment malfunctions, deviation from normal operation, or personnel error.

- **Stay calm**
- **Investigate/Evaluate** - What has caused or is causing the potential hazard? How will the malfunction, deviation from normal operation, or personnel error affect continued operation of the system?
- **Plan** - After determining the cause of the problem, what must be done to correct it or to **prevent** recurrence? Should supervisory personnel be consulted? Are additional field personnel needed? Must service be interrupted? How soon must corrective action be taken?
- **Corrective Action** - Carry out the plan developed above.

Post-Correction Safety Inspection

After correcting the abnormal operating condition, the pipelines that may have been affected or damaged by the condition must be inspected to see that they have maintained their integrity and are operating properly and safely. This inspection will include piping, meters and recording gauges, pressure gauges, regulators, overpressure protection devices and other system components as appropriate.

Notification

Omimex management will be notified as soon as practicable when abnormal operating conditions are discovered or reported. If the condition may constitute an emergency situation or safety-related condition, go to Section 5 of this Plan.

Procedural Review

The response of operating personnel to abnormal operating conditions will be reviewed by Omimex supervisory personnel at least once each calendar year at intervals not exceeding 15 months along with the annual review of this Plan to determine the effectiveness and adequacy of the procedures. Procedures will be modified accordingly if deficiencies are found. Records of the annual review shall be kept using the OM&E Plan & Procedures Annual Review Log in the Forms Index or similar form.

ABNORMAL OPERATIONS

If monitoring indicates that a leak or rupture has occurred, the Senior Operator or his designee must be notified immediately.

If the line integrity is maintained and the condition causing the abnormal operation corrected, the line may be re-started using normal operating procedures.

Loss of Communications

When field personnel determine that communications systems are inoperative or impaired, the Senior Operator or his designee must be notified immediately.

The Senior Operator or his designee will evaluate the situation to determine if a threat to the safety of personnel or equipment exists. If a threat exists, operations may be halted or shutdown until the problem is fixed.

Operation of a Safety Device

The operation of a safety device designed to protect the pipeline system shall be brought to the attention of the Senior Operator or his designee. An investigation will be made to determine what condition caused the safety device to operate. In addition, pressure readings will be examined to see if MAOP plus the allowed build-up have been exceeded. If MAOP plus the allowed build-up have been exceeded, the line will be isolated and monitored to determine if line integrity has been compromised.

If monitoring indicates that a leak or rupture has occurred, the Senior Operator or his designee must be notified immediately.

If the line integrity is maintained and the condition causing the abnormal operation corrected, the line may be re-started using normal operating procedures.

Malfunction of a Component, Deviation From Normal Operation, or Personal Error That Could Be Hazardous.

The Senior Operator or his designee will be notified immediately when a malfunction of a component, deviation from normal operation, or personal error that could be hazardous occurs. An investigation into the cause of the incident and potential effects on the system will be made and the conditions corrected.

The Senior Operator or his designee will periodically review the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking corrective action where deficiencies are found.

PIPELINE MARKING

PURPOSE

This procedure establishes a marking system for pipelines.

PROCEDURE

Line markers for buried pipelines are not required in Class 3 and Class 4 locations covered by a damage prevention program.

Line markers shall be installed and maintained over the pipeline or at a minimal offset along the pipeline at road and railroad crossings, aboveground piping, at fence and property lines (where practical), and other locations as needed to identify the location of the line and to reduce the possibility of damage or interference. Line markers shall state "Warning," "Caution" or "Danger" followed by the words "Gas Pipeline" in letters at least one inch high with one-quarter inch stroke, and shall bear Omimex's name and 24 hour telephone contact information. The line markers shall be properly spaced along the pipeline so that the when standing at any given line marker, the marker before and the next marker can be seen. Large cultivated fields do not require line marker except at field edges.

At Fence and Property Lines:

- Place a sign at existing fence lines in Class 1 and Class 2 locations.
- Place a sign at visually identifiable unfenced property lines, in Class 1 and Class 2 locations unless the sign will interfere with land usage.

On Public Road and Railroad Crossings:

- Unpaved roads - Place one sign on the downstream side of the crossing at the ROW line.
- Paved roads and railroad crossings - Place one sign on each side of the crossing at the ROW line.
- Residential streets - Place a sign on the downstream side at the ROW line or curb.

Waterways - Review individual crossings to determine if markers are needed for protection of the pipeline from possible damage.

- Sign Visibility - Install signs on each side if single sign crossings are not easily visible.

Public ROW - For pipelines that are within and paralleling public ROW, place signs:

- On the ROW line where the pipeline enters and exits.
- With sign facing towards ROW, at spacing appropriate for excavation frequency.
- Adjacent to each drive or access road.

Aboveground Pipelines - Install signs at aboveground pipeline facilities in areas accessible to and used by the public.

DAMAGE PREVENTION PROGRAM

- Advise the outside party of the requirement and prohibit approaching the unexposed pipeline closer than 18" from the side with mechanical equipment.
- All excavation within 18" of the unexposed pipeline shall be by hand. Excavation up to 12" from the side of the exposed pipeline may be by mechanical means if the Company representative approves.
- If an outside party is seen approaching or working over the Company's pipeline, immediately delay the excavation activities until Company facilities have been located.
- Delay excavation activities that are not allowed by the pipeline easement or permit agreement through mutual agreement with the outside party.
- Advise the outside party that the Company does not allow encroachments without prior agreement.
- Advise the outside party that if the excavation activities caused damage, he can be held responsible for current and future damages.
- If a mutual agreement cannot be agreed upon or excavation activities continue, contact the Company's Legal Department.

Excavation Site Inspection form is to confirm communications between the Company representative and the excavator. The form original shall be given to the excavator's representative on the site.

If Omimex has reason to believe that damage could occur from excavation activities, personnel will be furnished to inspect the excavation activities and the inspections shall be carried out as often as necessary during and after excavation activities to verify the integrity of the pipeline. In the case of blasting, leakage surveys shall be used to verify the integrity of the pipeline

RECORDS

After receiving Locate Request from Montana One Call requiring field markings or investigations, sign and date when work was completed. Retain a copy for the records.

Maintain factual records when Company representatives request that excavation activities be delayed or stopped.

Complete "Pipe Condition Report" each time a buried pipeline is inspected or an above or below grade pipeline is damaged or hit by an outside party.

Complete an "Excavation Site Inspection" form for each excavation site. Retain for one year.

Complete a "Near Miss Report" when damage is narrowly avoided by excavation activities.

The times shown for record retention are not applicable for Incidents that result in damage, or other events that may end in litigation. These records are to be retained until litigation is completed.

UPRATING MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP)

PURPOSE

The MAOP of the pipeline is set at the highest possible pressure rating for 600 ANSI class valves and fittings. An up rating in MAOP would require the replacement of all 600 ANSI class equipment with 900 ANSI Class equipment.

In the event the MAOP would need to be up-rated, a plan would be designed and prepared by management and engineering. This improvement to the pipeline would require special procedures and will not be covered in this Operations, Maintenance and Emergency plan.

ABANDONMENT OF FACILITIES

PURPOSE

This procedure establishes minimum requirements for the abandonment of facilities.

GENERAL

Abandoned facilities are those, which have been determined to have no present or future use. Abandonment of transmission facilities must be approved by FERC. Inactive facilities are those, which have ceased operation, but may be returned to service in the future.

PROCEDURE

Facilities abandoned in accordance with this procedure shall be disconnected and isolated from all sources of gas by physical separation. Open ends of pipelines shall be sealed by a permanent type closure or fitting. Branch connections or taps on the facility shall be plugged or sealed.

Abandoned facilities shall be purged of gas unless the volume of gas remaining is so small that no potential hazard exists. If air is used as a purging medium, precautions shall be taken to ensure that a combustible mixture is not present after purging.

Purge the pipeline of gas using air introduced into one end of the line in a moderately rapid and continuous flow. If a potentially hazardous amount of gas is to be vented, remove all sources of ignition from the venting area, post warning signs, where appropriate, and provide a fire extinguisher in case of accidental ignition. If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas shall be released into the line before the air. A pipeline shall not be purged in such a manner that permits gas to enter a building or confined space. After purging a disconnected pipeline, test the contents of the line using a combustible gas indicator to insure that a combustible mixture is not present, then cap or effectively seal the open ends.

Protect inactive facilities, as they were protected before inactivation, from corrosion using cathodic protection or other means to prevent deterioration. Generally, pipelines should remain filled with natural or inert gas and be pressurized above atmospheric pressure. All Operating Procedures Manual requirements must be carried out on inactive facilities.

Pipeline segments shall be pigged when applicable, prior to or as part of purging to ensure that no liquid hydrocarbons remain in the line.

Environmental Protection Agency rules must also be considered when abandoning pipe. Consult the Company Environmental Department for guidance.

BLOW-DOWN AND PURGING SAFETY

PURPOSE – Purging Gas from Pipeline

This procedure establishes criteria for identifying a blow-off with an obstruction and also establishes safety practices to follow when purging or blowing down gas facilities.

PROCEDURE

Identify blow off locations where precautions should be taken during a blow down such as under electric lines and near buildings.

- Mark each such location with a sign indicating "Controlled Blow Down Required Due to Overhead or Adjacent Structures".

- During each subsequent periodic inspection verify that the location is properly marked.

Prepare a plan and review it with the crew prior to purging or blowing down a gas facility. Discuss any hazards involved, such as power lines, public highways and railroads. Follow the steps listed below.

Notify the following regarding the time and place before blowing pipeline gas to atmosphere:

- Upstream and downstream compressor station operators.
- People living in the area.
- Public agencies such as the County Sheriff, local police or fire department as required.
- Gas customers whose service will be interrupted.

Local law enforcement officials on all pre-planned activities, if required, should perform traffic control.

Station manned fire-extinguishing equipment at strategic locations.

Do not begin work until communications have been established with personnel diverting traffic and among personnel at the ends of pipeline sections being blown down or purged.

Control gas pressure using experienced personnel. Do not allow unauthorized contractor employees or Company construction inspectors to operate valves.

Purge the pipeline of gas using air introduced into one end of the line in a moderately rapid and continuous flow. If a potentially hazardous amount of gas is to be vented, remove all sources of ignition from the venting area, post warning signs, where appropriate, and provide a fire extinguisher in case of accidental ignition. If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas shall be released into the line before the air. A pipeline shall not be purged in such a manner that permits gas to enter a building or confined space. After purging a disconnected pipeline, test the contents of the line using a combustible gas indicator to insure that a combustible mixture is not present, then cap or effectively seal the open ends.

While gas exhausts to atmosphere:

- Locate personnel a safe distance upwind.

REPAIR PROCEDURES

PURPOSE

This procedure establishes repair procedures for pipelines.

GENERAL

Inspect any pipeline that is "exposed" for any reason.

Expose and inspect any pipeline suspected of leaking or being struck or hit.

Take immediate temporary measures to protect life and property from hazards resulting from a leaking, defective or damaged pipeline with an injurious damage condition.

Repair a pipeline as soon as possible whenever an injurious damage condition is found.

All repair methods established by this procedure are considered permanent. The use of mechanical leak clamps, when not specified as permanent are considered one of the temporary measures that may be taken to protect life and property.

An "injurious damage condition" is one that impairs the safety and serviceability of a pipeline and requires repair.

A "non-injurious damage condition" is one that does not impair the safety and serviceability of a pipeline and therefore it is not required to be repaired. Any action taken to minimize the effects of the condition, or to prevent it becoming injurious, is considered preventive maintenance.

PROCEDURE

Inspection:

- Inspect any exposed pipeline for coating conditions, external corrosion, impact damage and leaks.
- Visually inspect visible buried welds whenever coating has been removed for any reason.

When damage or defects are found make a preliminary assessment to determine the extent of the damage or defect. In most cases a visual inspection is sufficient. Use X-ray or other forms of inspection that could be considered helpful if conditions warrant.

If the inspection reveals that the damage is non-injurious, follow the requirements of the Preventive Maintenance section of this procedure.

If the inspection indicates that the damage may be injurious, initiate a complete evaluation of the damage. Investigate to determine the cause of any leaks that are found. Determine if a Safety-Related Condition exists and whether it should be reported.

REPAIR PROCEDURES

Formal Evaluation of Damage Extent:

- Make a thorough evaluation of the extent of any damage or defect. Take measurements and conduct tests as necessary.
- Make repairs as needed.

Preventive Maintenance:

- Take any preventive measure considered appropriate to minimize the effects of a non-injurious condition or to prevent it from becoming injurious.

General Repairs:

- The segment of gathering line that is taken out of service will be replaced with pipe tested to the pressure required for a new line at this same location. (192.719)
- Document repairs and submit data to the Senior Operator to determine the possibility of a required change in the operating conditions of the line as a result of the repair.
- If a pressurized repair is made, reduce the pressure of the line to the limits established by the procedure on Operating Pressures - Limit Criteria.
- If the leak is due to a corrosion pit, installing a properly designed bolt-on-leak clamp may make the repair.
- Patches, Type A and Type B sleeves are not allowed for repairs.

After repairing a leak verify the leak has been contained and no additional leaks exist in the immediate area.

Removal of Pressurized Repair Sleeves

If a pressurized repair sleeve was encountered on the pipeline and removed, following the removal of pipe with a pressure-containing repair sleeve, which may potentially contain pressurized gas, (for instance, a pumpkin on a Dresser coupling), vent the cavity between the sleeve and pipe before disposal.

REPAIR PROCEDURES

PERMANENT FIELD REPAIR OF WELDS (192.715)

Welded repairs shall be made by qualified welders using qualified welding procedures in accordance with Section 3 of API Standard 1104 and/or Section IV of the ASME Boiler & Pressure Vessel Code. Pipe used in repairs shall meet or exceed the specifications of the original line pipe. This pipe shall be pressure tested to not less than 150% of the maximum allowable operating pressure of the pipeline for at least 4 hours, and installation welds shall be x-rayed to determine their acceptability under API standard 1104, section 6.

Steel pipe used in repairs shall be mill coated with fusion-bonded epoxy, extruded polyethylene or equivalent and field joints shall be completely cleaned, primed and coated using Denso Epoxy coating or Primer D and Densotherm hot applied tape or equivalent. All coating shall be carefully inspected (visually or with an electronic holiday detector) and any damage or defects discovered shall be repaired just prior to backfilling. The coating shall be protected from damage due to adverse ditch conditions, support blocks or other causes using rockshield or double wrapping. If repair pipe is installed by boring, driving or similar method, the pipe coating shall be protected by 20 mils of Powercrete abrasion resistant secondary coating or equivalent.

Welds may be repaired as follows:

PERMANENT FIELD REPAIR OF LEAKS (192.717)

Field repair of welded steel pipelines shall be accomplished by cutting out damaged or defective pipe as a cylinder and welding in a new segment of pre-tested pipe. Welded repairs shall be made only by qualified welders. Small leaks may also be repaired using pipe repair clamps rated for the maximum allowable operating pressure of the pipeline as manufactured by Pipeline Development Company (PLIDCO) of Cleveland, Ohio, or equivalent. Repairs using welded patches are not allowed.

RECORDS

Complete a "Pipeline Condition Report" for each inspection of a buried pipeline, for each leak or repair, or for preventive maintenance other than painting. An escape of gas that can be stopped by tightening bolts, nuts, a packing or some other mechanical device should be classified as "Escape of Gas-No Leak" when coding the "Reason for Report" box. Such an escape is not considered a "Leak".

Document repairs and replacement of valves, relief valves and pipeline components affecting maximum allowable operating pressure (MAOP), and retain for the life of the pipeline.

Insure that changes to the pipeline are incorporated into the as built package for that line.

WELDING & WELDER QUALIFICATIONS

(2) Within the preceding 71/2 calendar months, but at least twice each calendar year, the welder has had—

i) A production weld cut out, tested, and found acceptable in accordance with the qualifying test; or

ii) For welders who work only on service lines 2 inches (51 millimeters) or smaller in diameter, two sample welds tested and found acceptable in accordance with the test in section III of Appendix C of this part.

WELD PROCEDURES

The following pages show tested welding procedures approved for use on the Omimex Canada System.

See the Montana-Dakota Utilities Co. Weldor's Manual Adopted by Omimex Canada Resources for additional information regarding welding and inspection of welds.

Records:

API 1104 Weld Procedure Qualification Destructive Test Report

API 1104 Weldor Qualification Report

§192.231 Welding – Protection from Weather

When preparing to weld, the weld joint shall be sheltered from weather conditions that would be detrimental to the integrity of the weld. Wind breaks, welding tents, etc. are examples for weld protection.

§192.233 Welding – Miter Joints

Miter joints as a practice are not allowed unless no other acceptable means to repair the pipeline is available and approved by the company Engineer.

§192.235 Preparation for Welding

All weld surfaces must be cleaned and cleared of materials that might jeopardize the quality of the weld. The pipe and/or other component must be aligned to allow for the best possible deposition of the root bead.

§192.241 Nondestructive Testing

Inspection of welds shall be performed by a qualified NDT company. Girth welds on pipe shall be radio graphically inspected. Branch welds shall be inspected by magnetic particle or dye penetrant inspection.

TEST REQUIREMENTS

Each segment of a steel pipeline that is to operate at a hoop stress of 30 percent or more of SMYS must be strength tested in accordance with this section to substantiate the proposed maximum allowable operating pressure. In a Class 1 or Class 2 location, if there is a building intended for human occupancy within 300 feet of a pipeline, a hydrostatic test must be conducted to a test pressure of at least 125 percent of maximum operating pressure on that segment of the pipeline within 300 feet of such a building, but in no event may the test section be less than 600 feet unless the length of newly installed or relocated pipe is less than 600 feet. However, if the buildings are evacuated while the hoop stress exceeds 50 percent of SMYS, air or inert gas may be used as the test medium.

In a Class 1 or Class 2 location, each compressor station, regulator station, and measuring station must be tested to at least Class 3 location test requirements.

Except as provided in paragraph (1) below, the strength test must be conducted by maintaining the pressure at or above the test pressure for at least 8 hours.

If a component other than pipe is the only item being replaced or added to a pipeline, a strength test after installation is not required, if the manufacturer of the component certifies that

- The component was tested to at least the pressure required for the pipeline to which it is being added; or
- The component was manufactured under a quality control system that ensures that each item manufactured is at least equal in strength to a prototype and that the prototype was tested to at least the pressure required for the pipeline to which it is being added.

(1) For fabricated units and short sections of pipe, for which a post installation test is impractical, a pre-installation strength test must be conducted by maintaining the pressure at or above the test pressure for at least 4 hours.

Due to permits that may be required for water procurement and/or discharge, adequate advance design and planning must be scheduled.

RECORDS

Test records must be retained for the life of the facility.

EXAMINATION OF ABOVE GROUND PIPELINES

PURPOSE

This procedure covers requirements for internal and external inspection and maintenance of above ground piping and components for corrosion.

GENERAL

Corrosion, leaks and defects may be Safety-Related Conditions.

PROCEDURE

As described below inspect all above ground piping and pressure containing components, enclosed by insulation or other protective covering, subject to moisture penetration, to assure detection of atmospheric corrosion before detrimental damage is sustained.

If atmospheric corrosion is present, corrosion removal and painting of the piping shall take place as soon as practical.

External inspections

Inspect all uninsulated and uncovered above ground piping at intervals not to exceed 36 months.

Remove selected areas of insulation or covering to allow inspection of piping or component surface conditions.

Maintain painting or protective coverings based on results of inspections. Surfaces shall be cleaned, primed and repainted as necessary to prevent atmospheric corrosion.

Whenever any pipe section is opened or removed from a pipeline, that pipe section and any other adjacent pipe section must be inspected to determine evidence and or extent of internal corrosion. Vessels shall be inspected when opportunity exists.

Inspect the transition zone of any pipe entering the ground to confirm it is properly coated to prevent penetration of moisture between the pipe and coating.

RECORDS

Complete: Pipe Condition Report

When external corrosion is identified and a repair, or a preventive maintenance action other than painting, is required.

When pipe is opened or a section of pipe is removed or replaced.

When a fabrication or component, e.g., a meter tube, a pressure vessel, a receiver or launcher, is opened and new corrosion or another noteworthy condition is observed.

Complete "Pipe Condition Report" as evidence of the work completed.

EXAMINATION OF BURIED PIPELINES

PURPOSE

This procedure establishes a standard program of examination of buried pipelines for evidence of internal or external corrosion.

PROCEDURE

Whenever buried gas piping is exposed, examine the exposed portion to determine condition. Where the pipe is exposed several times within a short interval, inspect a representative sample.

Inspect the full circumference of piping if any of the following conditions exist:

- Tests, current requirements or surveys indicate corrosion may be occurring.
- Previously unidentified coating deterioration is observed or suspected.
- Continuing corrosion is observed.
- Corrosion is observed which is of a magnitude not previously documented on the piping or that may require repair.

If significant corrosion is found investigate in the vicinity to determine the extent of the corrosion.

Inspect the internal surface for corrosion or other metal loss whenever pipe is removed or opened.

Additional Requirements for Pipelines on Compressor Plant Discharge

When previous operating conditions or inspection of plant piping indicates deterioration of coating due to higher temperatures than recommended for the coating type, determine the condition of the coating and the pipe outside the plant by:

- Conducting applicable tests.
- Exposing the pipeline at several locations to identify deterioration.

If examination indicates corrosion has occurred:

- Determine the acceptable limit. If exceeded, initiate a repair method. Use design calculations in ASME/ANSI B31G or AGA RSTRENG to determine remaining pipe strength of the pipe to determine pressure restrictions, if applicable. If repair is required, limit operating pressure accordingly. Determine if a Safety-Related Condition exists.
- Apply coating and/or additional cathodic protection where "Active" external corrosion is present.

If examinations indicate extensive areas of deteriorated coating or corrosion, send a report to the Technical Staff for review.

RECORDS

Complete "Pipe Condition Report" for each inspection.

EXTERNAL PROTECTIVE COATING AND CATHODIC PROTECTION

PURPOSE

This procedure outlines the practice for the installation of external protective coating and cathodic protection for buried gas pipelines. Cathodic protection systems shall be designed, installed, operated and maintained by, or under the direction of, a person qualified in pipeline corrosion control methods.

PROCEDURE

Existing Coated Pipelines

Apply an external coating to:

- Poorly coated or bare portions that have been exposed.
- Pipeline segments that replace existing pipe.

The coating repair area or new weld locations shall be completely cleaned by either wire brush or sand blasting before applying the coating. Denso North American Epoxy coating or hot applied tape or equivalent shall be used. When using hot applied tape, Denso Primer D or equivalent shall be used. Follow product manufacturer's instructions for proper application.

Inspect all coating on replacement segments and repair defects. Upgrade existing coating or cathodic protection.

New Pipelines

New pipeline shall be installed with Mill applied coating, preferably Fusion Bond Epoxy, 12-14 mils thick. Welds shall be coated per specification above under Existing Coated pipelines.

Inspect all coating and repair defects caused by installation.

Insure all new buried pipelines are cathodically protected within one year of construction.

RECORDS

Document applied coatings and place appropriate as-built information in the As-built package.

EXTERNAL CORROSION CONTROL

PURPOSE

This procedure prescribes the minimum survey and test requirements to monitor the control of external corrosion on steel pipeline. Cathodic protection systems shall be designed, installed, operated and maintained by, or under the direction of, a person qualified in pipeline corrosion control methods.

General & Protective Coating – 192.455, 459 & 461

The pipeline is protected against external corrosion by external coatings and cathodic protection consisting of impressed current systems. Coatings shall be repaired as needed using coating product that meet or exceed the existing coating performance. Coatings shall be applied in accordance to the manufacturer's specifications. Whenever any portion of the buried pipeline is exposed, the coating shall be inspected and condition recorded. Cathodic protection shall be monitored and maintained as indicated below.

External corrosion control: Cathodic Protection & Monitoring – 192.463 & 465

On each pipeline, the pipe-to-soil voltage at each test station shall be measured at least once per calendar year (at intervals not exceeding 15 months) to determine whether the pipeline is adequately cathodically protected. The negative (cathodic) voltage must be at least 0.85 volts as measured between the pipeline surface and a saturated copper-copper sulfate half-cell reference electrode in contact with the soil.

Each reverse current switch, each diode, and each interference bond whose failure would jeopardize structure protection must be electrically checked for proper performance six times each calendar year, but with intervals not exceeding 2-1/2 months. Each other interference bond must be checked at least once each calendar year, but with intervals not exceeding 15 months. Using a multimeter, check the performance of the bond. Replace the bond if found faulty.

External corrosion control: Electrical isolation – 192.467

Flange insulation shall be maintained to electrically isolate pipelines from adjacent facilities, preventing the loss of cathodic protection current. Insulators shall not be installed where a combustible atmosphere is anticipated. Insulators shall be checked annually for proper operation.

Where a pipeline is located in close proximity to electrical transmission tower footings, ground cables or counterpoise, or in other areas where fault currents or unusual risk of lightning may be anticipated, it must be provided with protection against damage due to fault currents or lightning, and protective measures must also be taken at insulating devices.

External corrosion control: Test Stations & Test Leads – 192.469 & 471

Test stations shall be maintained along the pipeline at intervals of approximately one mile or where practical at accessible locations such as roads and trail crossings. Aboveground piping connected to the lines may also be used to check pipe-to-soil voltages. Test lead wires shall be connected to the pipeline by soldering or exothermic welding so as to remain mechanically secure and electrically conductive. Exothermic weld sizes shall be limited to Cadweld #15 or equivalent to minimize stress

concentration in the pipe. Test wire to pipe connections shall be thoroughly coated using an electrically insulating material compatible with the pipe coating and the test wire insulation.

External corrosion control: Interference currents – 192.473
Stray currents shall be monitored on an annual basis if applicable. Readings shall be taken when the annual cathodic protection survey is performed.

Stray currents can be encountered at foreign pipeline crossings and at high power electrical line crossings. If stray current readings are high enough to cause damage to the pipeline or personnel, remedial measures will need to be taken.

At foreign pipeline crossings, the pipelines may need to be bonded together to prevent damage to the pipelines.

If stray current is encountered by electrical lines, Kirk Cells or equivalent devices may need to be added to the ends of the pipeline.

Consult a Company specializing in cathodic protection and stray currents for proper remedial measures.

EXTERNAL CORROSION CONTROL

Cathodically protected pipelines have current applied so that the electrical state of the surface meets one or more of the criteria below.

Unprotected pipelines are subdivided into two categories:

Critical segments are those that are:

- In Class 2, 3 or 4.
- In Class I and meet one of the following:
    - Are within a corridor on each side of the ROW of a hard surfaced road or railroad, whose limits are 100 feet outside of and parallel to the ROW lines.
    - Are within a given distance of a building intended for human occupancy, or an outside area where people periodically meet, or that is open to public use.
    - Warrants survey in the judgment of local and technical staff personnel based upon operating history.

Non-critical segments are in Class 1 and not listed above as critical.

Pipelines with effective external coating and bare or ineffectively coated pipelines, or defined segments thereof, intended to be protected, shall be electrically continuous and meet one of the following criteria:

- A minimum negative voltage of 850 mv.
- A minimum negative voltage shift of 300 mv.
- A minimum negative polarization voltage shift of 100 mv.

1. BACKGROUND

Omimex Canada, Ltd. (Omimex, Operator) operates pipelines for the gathering and transmission of natural gas. Omimex employees and contractors are expected to operate these pipelines effectively and with the utmost regard for the safety of the public and operating and maintenance personnel.

This Operator Qualification Plan outlines the practices required to comply with the Federal Pipeline Safety Regulations contained in Title 49, Code of Federal Regulations, Part 192, Subpart N. These regulations require gas pipeline operators to ensure that all individuals who operate and maintain pipelines are qualified to perform covered tasks and are able to recognize and react appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits.

The intent of this Plan is to ensure a qualified workforce and to reduce the probability and consequence of incidents caused by human error. This Plan outlines how individuals will be evaluated regarding their ability to perform covered tasks and to recognize and react to abnormal operating conditions.

2. SCOPE

This Operator Qualification Plan encompasses all Omimex employees and contractors who perform covered tasks on behalf of Omimex. Following this Plan will ensure that all such individuals are qualified in accordance with the Operator Qualification regulations, and that adequate records to document these qualifications are maintained.

3. DEFINITIONS

Words used in the singular in this Plan, where the context so permits, shall also apply to words when used in the plural and visa versa.

Abandoned means permanently removed from service.

Abnormal Operating Condition is a condition that may indicate a malfunction of a component or deviation from normal operations that could exceed design limits or result in hazard(s) to persons, property or the environment. A deviation from normal operations does not necessarily mean an abnormal operating condition exists as long as conditions are within the pipeline system design parameters.

Construction is an activity that occurs to pipelines on new or replacement components not physically connected to existing pipelines. Tasks that involve construction prior to actual tie-in are not covered tasks.

Covered Task (see Section 4 below).

Evaluation means a process to determine an individual's ability to perform a covered task.

Evaluator means a person who is authorized to assess and document the qualification of an individual and thereby determine if the individual is qualified to perform a covered task.

Existing Pipelines are those pipeline components that are or have been in active service, excluding abandoned pipelines, where they currently reside.

Incident (as defined in 49 CFR §191.3) means:

a. An event that involves the release of gas from a pipeline which results in either of the following:
   i. A death, or personal injury necessitating in-patient hospitalization; or
   ii. Estimated property damage, including cost of lost gas, of the Operator or others, or both, of $50,000 or more.
b. An event that is significant, in the judgment of the Operator, even though it did not meet the criteria of paragraph (a) above.

Individual means a person, either employee or contractor, who performs one or more covered tasks on behalf of the Operator.

Maintenance is an activity performed directly upon existing pipelines that are in operation or are physically connected to the pipeline system at the time the work is performed. Tie-ins of construction work and all work subsequent to the tie-in are maintenance tasks.

Non-Covered Tasks are activities that do not meet the four-part test as described under the definition of covered tasks (see Section 4 below).

Operation is the starting, stopping and monitoring of a pipeline. The operation of the pipeline refers to any changed conditions in the pipeline, such as pressure or flow rate.

Operator means Omimex Resources or its subsidiaries

Performed on a Pipeline means an activity performed by an individual whose performance directly impacts the pipeline. An individual who works on a pipeline component that is physically connected to the pipeline system is performing work on a pipeline.

Pipeline or Pipeline System means all parts of those physical components through which gas moves in transportation, including pipe, valves, and other appurtenances. For the purposes of this Plan, Operator's pipelines begin at the outlet of each production facility.

Qualified Individual means an individual who:

a. Successfully completes an evaluation process; and
b. Can perform assigned covered tasks; and
c. Can recognize and react to abnormal operating conditions; and
d. Maintains current qualification.

Removed from the System means a part of a pipeline is physically removed, disconnected or isolated from the remainder of the pipeline system. Activities performed on a pipeline removed from the system are not covered tasks under this Plan.

4. COVERED TASKS

The Operator will identify covered tasks and abnormal operating conditions that may be encountered while performing a covered task. Identified covered tasks may vary from one operating area to another, depending on the nature of the pipelines and related facilities in each area. Operator will maintain lists of applicable covered tasks for each operating area. New covered tasks will be added to the list as the new tasks are discovered.

A **Covered Task** is a task that meets all four of the following requirements:
a. Is performed on a pipeline
b. Is an operations or maintenance task
c. Is performed as a requirement of 49 CFR Part 192
d. Affects the operation or integrity of the pipeline

The Operator will determine if a task is a covered task by applying the four criteria above to that task. If all four requirements apply to the task, the task is now a covered task and needs to be added to the list of Identified Covered Tasks found in Appendix B. The appropriate personnel will then be required to be qualified for that task.

When new pipelines are constructed or acquired associated with the Chinook Pipeline, the new assets will be evaluated for covered tasks. Any new identified covered tasks will be added to the Identified Covered Task list in Appendix B and the appropriate personnel qualified for those tasks.

5. EVALUATION

The evaluation of an individual's qualifications is an objective, consistent process that documents the ability to perform the covered task. This includes the individual's ability to recognize and react to abnormal operating conditions the Operator reasonably anticipates a qualified individual may encounter while performing the covered task.

Individuals will be evaluated by one or more of the following methods:

a. Written Exam
b. Oral Exam
c. Observation during:

ii. On the job training
iii. Simulations

d. Computer based evaluations or simulations
e. Vendor or Industry validations or certificates

Neither work performance history nor observation of on-the-job performance may be used as a sole evaluation method.

Prior to using contract personnel to perform covered tasks, the Operator will review contract personnel qualifications and the workers ability to perform the covered tasks. The Operator will discuss with contract personnel reasonably anticipated abnormal operating conditions to evaluate the personnel's ability to recognize and react to abnormal operating conditions.

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6. EVALUATION PROCESS

6.1 Qualification Process

Operator and its contractors shall keep documentation for their respective employees certifying that individuals who perform or direct and observe the performance of covered tasks have been evaluated and are currently qualified to perform the required covered tasks under this Plan or another plan approved by the Operator. Each contractor shall provide documentation to the Operator as required by Section 12 of this Plan.

Individuals not qualified to perform a covered task may perform that covered task if under the direct observation of a qualified individual. The qualified individual must take responsibility for the proper performance of the covered task, and must be in a position at all times to observe the performance of the covered task and take prompt corrective action if necessary. The ratio of non-qualified to qualified personnel involved in the performance of any covered task must be minimized and shall not exceed a ratio of 3 non-qualified to 1 qualified personnel. Contractors must notify the Operator before a non-qualified individual may perform a covered task.

Exceptions to this provision are covered tasks pertaining to plastic pipe fusion and welding. All plastic fusion and welding personnel **SHALL** be qualified.

6.2 Contractor Employee Identification & Validation

Contractors must assure Operator that the individual who is stated to be qualified for specific covered tasks is in fact the individual who has been qualified. The individual must present valid photo identification or drivers license prior to being evaluated and must be able to present the identification at any time on the job site.

7. PERFORMANCE EVALUATIONS

Operator and its contractors are responsible for ensuring that knowledgeable Evaluators conduct the evaluations. The Evaluator must ensure that evaluations and documentation are in accordance with this Plan.

Evaluators must be able to: 1) ascertain if the individual performs the covered task properly in accordance with the Operator's procedures; and 2) ascertain if the individual understands and is capable of recognizing and reacting to an abnormal operating condition. The Evaluator must be familiar with the resources applicable to the covered task including manufacturer's guidelines and performance checklists.

The Evaluator must be knowledgeable in the proper evaluation techniques identified in Appendix A.

The Evaluator is responsible for documenting the individual's qualifications. Operator and its contractors are responsible for confirming that individual qualification records are current for their respective employees. Evaluators may be required to successfully complete an Evaluator qualification process approved by the Operator.

8. SUBSEQUENT QUALIFICATION INTERVALS

The subsequent qualification interval for any covered task shall not exceed 5 years.

9. VERIFICATION OF CONTINUED QUALIFICATION

Operator and its contractors will evaluate their respective employees if there is reason to believe that an individual is no longer qualified. Operator and contractors must:

a. Evaluate an individual if the Operator or Contractor has reason to believe that the individual's performance of a covered task contributed to an incident.

   Each incident will be reviewed in accordance with the Operator's procedure. If it is not clear whether or not an individual's action contributed to an incident, that individual's qualification on that specific covered task will be immediately suspended. The suspension will continue until that individual is exonerated by the Operator or re-qualified. The Operator reserves the right to determine the method of re-qualification. The individual may continue to perform other covered tasks for which they are qualified.

b. Evaluate an individual if the Operator or Contractor has reason to believe that the individual is no longer qualified.

   An individual's qualification for a covered task will be suspended for reasons including, but not limited to, unsatisfactory performance of a covered task or if the

tract personnel have been qualified according to the changes. Each contractor has the responsibility to ensure that, if required, individuals are re-evaluated and qualified according to the changes prior to the performance of any covered tasks. The contractor will provide documentation of qualification to the Operator prior to performing any covered tasks.

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11. TRAINING

The Operator will provide employee training to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures safe operation of the pipeline facilities. Operator shall also require contractors to provide such training for their employees as appropriate.

Training programs and materials must be consistent with identified covered task training needs. Training may be provided in classroom, computer, simulator, and structured on-the-job sessions. Operator will keep documentation of training including dates, training methods and materials, and names of persons receiving the training.

Operator supervisors will be responsible for reviewing prior education, experience and training of employees and contractors, determining appropriate training requirements, and seeing that training requirements are met.

12. RECORD KEEPING

Qualification records shall include the following:

a. Identification of qualified individuals
b. Identification of covered tasks the individual is qualified to perform
c. Dates of current qualification(s)
d. Qualification methods
e. Evaluator's name
f. Documentation of the Evaluator's qualifications.

Operator and its contractors will be responsible for creating and maintaining records supporting qualifications while an individual is performing the covered tasks. Contractors shall provide the Operator with continual access to the individual's qualification records. Records of an individual no longer performing covered tasks shall be maintained for a period of five (5) calendar years after the individual's last performance of a covered task.

Operator and its contractors may use a record keeping database system, approved by the Operator, to document the qualification of an individual performing covered tasks. The Operator may specify the form and content of the documentation. At a minimum, the documentation must include the following information in either paper or electronic form:

a. Records for written evaluation.
b. Records for oral evaluation. Evaluator's written comments documenting the current qualification will be retained.
c. Observation evaluations. The Evaluator's written comments documenting the current qualification will be retained.
e. Computer-based evaluations, including simulation evaluation. The retention of the evaluation results may differ depending on the computer program. At a minimum, the results documenting the current qualification will be retained.
f. Vendor or Industry validations or certificates.

Contractors shall make qualification documentation, whether in paper or electronic form, accessible to Operator for inspection during normal business hours immediately upon Operator's request.

13. NOTIFICATION OF OPS

If significant changes are made to the Operator Qualification Plan, OPS must be notified of the modifications. A hard copy of the updated plan must be mailed to:

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Gerald Davis
Office of Pipeline Safety, Montana District
Western Power Administration
2900 4th Avenue North, 6th Floor
Billings, MT 59101

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CHINOOK PIPELINE OPERATOR QUALIFICATION PLAN

Omimex Canada, Ltd.

Prepared by:

HT ENGINEERING, INC.
Hydrocarbon Technology Engineering
Grand Rapids, Michigan

October 19, 2006
Revised July 10, 2007

Omimex Canada, Ltd.
Operator Qualification Plan

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APPENDIX A
EVALUATOR ADMINISTRATIVE PROCEDURES

EVALUATOR'S CHECKLIST

Evaluators Preparation for Evaluation:

1. Is the individual ready to be evaluated? Consider time, experience and understanding of the covered task(s).

2. Does the individual know the Task(s) on which they will be evaluated and understand the resources that can be used during the evaluation? Does the individual have the Evaluation Guideline(s) and other resources?

3. Obtain and review the necessary reference material:
   a. Covered Task with Evaluation Guideline, abnormal operating conditions
   b. Manufacturer's Guideline
   c. Construction Specifications
   d. Record keeping and documentation requirements

4. Review, and select a time and location for the evaluation. Consider:
   a. Is the location appropriate?
   b. Does the individual have special needs?
   c. Are the appropriate tools and equipment available?

Preparing the Individual for the Evaluation:

1. Explain the purpose and intent of the evaluation:
   a. The objective is to demonstrate and document your qualifications.
   b. Identify the covered task(s) and material that will be covered in the evaluation. (Evaluation Guideline and other information the Evaluator determines must be reviewed to qualify the individual to perform the covered task.)

2. Explain the evaluation process, including:
   a. Importance of Task performance and evaluation
   b. Evaluator's role during evaluation (e.g., not to coach/not to give answers)
   c. Rules/practices (as established by the individual Operator)

Examples might include:
   a. Can the individual ask questions? Yes, but the Evaluator should not respond to any questions pertaining to the performance of the covered task.
   b. How much time is to be allowed for the Evaluation? A reasonable time should be allotted for the individual to perform, demonstrate, simulate and/or describe the covered task.

c. What use of reference materials is allowed? Any reference materials pertinent to the covered task **except the Evaluation Guideline**.
d. What are the causes for ending the Evaluation - e.g., completed covered task, safety concern, operational concern/problem, or Evaluator's discretion.

EVALUATION PROCESS

1. Begin individual performance, demonstration or description of the covered task.

2. Conduct Evaluation:
   a. Evaluate performance or description of the performance of the covered task. Does the individual demonstrate the understanding of:
      i. Safety procedures
      ii. Use of the correct tools and equipment
      iii. Correct procedures in the correct sequence
      iv. How to complete the covered task in a timely fashion
   b. Evaluator's documentation during evaluation must:
      i. Be thorough and well organized
      ii. Cite specific examples of performance
      iii. Be factual, not subjective
   c. If the Evaluator asks questions during the evaluation, the Evaluator must:
      i. Use questions to verify or clarify only; avoid paraphrasing individual's answer
      ii. Avoid asking "leading" questions
      iii. Ask the same questions of all individuals according to the Evaluation Guideline
   d. Evaluator must avoid:
      i. Making personal judgments
      ii. Comparing one person's performance to another person's performance
      iii. Making snap judgments
      iv. Anticipation (let individual follow through unless problem is a "safety/operations" issue)
      v. Influence of individual's reputation
      vi. Coaching or training during evaluation process
      vii. Unreasonably high or low expectations (instead, maintain consistency and accuracy appropriate for the covered task)
      viii. Distractions or diversions by others and/or the environment

3. Complete the Evaluation by stating, "The evaluation is over."

AFTER THE EVALUATION

1. If qualified:
   a. The Evaluator must advise the individual that they have successfully completed the Evaluation and they are qualified to perform the covered task.

b. The Evaluator is responsible for documenting the individual's successful qualification for a covered task.

Individuals are NOT qualified to perform a covered task until the documentation is complete.

2. If not qualified:
   a. The Evaluator must inform the individual of the covered task elements in which they are deficient.
   b. The Evaluator must inform the individual they cannot perform the covered task unless they are under the direct observation and direction of a qualified person.

RE-EVALUATION

1. Depending on the complexity of the covered task, the Evaluator may elect to continue with the session and coach and instruct the individual on the proper performance of the covered task.

2. An Evaluator may re-evaluate the individual at any time after the individual has obtained adequate instruction, knowledge or skills to perform the covered task.

APPENDIX B
IDENTIFIED COVERED TASKS

Following is the Operator's list of identified covered tasks with Evaluation Criteria and potential Abnormal Operating Conditions associated with the covered tasks. References to 49 CFR Part 192 are contained in the heading for each covered task.

Task No.	Description	49 CFR 192 Ref.
CT1	Visual Inspection of Welds	241.b
CT2	Nondestructive Testing of Welds	243.a
CT3	Repair of Unacceptable Welds and Weld Defects	245.a-c
CT4	External Corrosion Inspection	455
CT5	Cathodic Protection Current Requirement Testing	457.a
CT6	Coating Examination on Exposed, Buried Pipe	459
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CT9	Inspect Cathodic Protection Rectifier	465.b
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CT11	Installation of Test Leads	471.a-b
CT12	Internal Corrosion Inspection	475.b.1
CT13	Internal Corrosion Monitoring	477
CT14	Monitor Atmospheric Corrosion	481
CT15	Pipeline Pressure Testing (MAOP > 30% SMYS)	505.a
CT16	Pipeline Pressure Testing (MAOP < 30% SMYS)	507
CT17	Pipeline Startup and Shutdown	605.b.5
CT18	Pipeline Isolation for Purging	605.b.6
CT19	Temporary Marking of Buried Pipelines	614.c.5
CT20	Inspect Excavation Activities	614.c.6
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CT33	Inspect, Maintain and Partially Operate Valves	745
CT34	Odorization of Gas	625
CT35	Prevention of Accidental Ignition	751

CT1 **192.241(b)** Visually inspect welds that are not non-destructively tested.

Evaluation Criteria:

1. Explain steps in and/or perform visual examination of a welding process to ensure welding within parameters and identify unacceptable conditions.
2. If performed by a Welder, the Welder must pass an Operator approved welding test.
3. If performed by any other individual, the individual must have completed an Operator approved welding inspection course per API 1104.

Abnormal Operating Conditions:

Pipeline system damage (mechanical damage, coating damage)
Reaction: Notify designated Operator's representative

CT2 **192.243(a)** Perform non-destructive testing of welds.

Evaluation Criteria:

1. The individual must have Level II NDE Certification to perform this covered task.

Abnormal Operating Conditions:

Pipeline system damage (mechanical damage, coating damage)
Reaction: Notify designated Operator's representative

CT3 **192.245(a), 192.245(b), 192.245(c)** Each weld that is unacceptable under Section 192.241(c) must be removed or repaired. Each repaired segment must be inspected to ensure its acceptability. Repair of a crack, or of any defect in a previously repaired area must be in accordance with written weld repair procedures that have been qualified under sec. 192.225. Repair procedures must provide that the minimum mechanical properties specified for the welding procedure used to make the original weld are met upon completion of the final weld repair.

Evaluation Criteria:

The individual must pass an Operator approved welding test to perform the repair of an unacceptable weld and weld defects.

Abnormal Operating Conditions:

1. Abnormal pipeline condition (Corrosion)
   Reaction: Notify designated Operator's representative
2. Fire or Explosion on the pipeline
   Reaction: Notify designated Operator's representative
3. Pipeline System damage (Pipe defect in area to be welded, arc burn)
   Reaction: Notify designated Operator's representative
4. Pipeline leak

Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT4 192.459 External Corrosion Inspection – Examine any exposed pipe for evidence of corrosion on bare pipe or coating deterioration on coated pipe.

Evaluation Criteria:

1. Describe how and what to look for when performing external corrosion inspection.

    a. Remove soil or dirt from pipe surface
    b. Visual inspect for evidence of corrosion
    c. Pitting
    d. Coating deterioration
    e. Scale
    f. Thinning

Abnormal Operating Conditions:

1. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative
2. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT5 192.457(a) Conduct test to determine cathodic protection current requirements.

Evaluation Criteria:

1. Identify and describe the components used for a Current Requirement Test:

    a. Temporary anode bed - Used to simulate the current output of an installed cathodic protection system
    b. DC current source - May consist of either a storage battery or a DC generator
    c. Current interrupter - Used to cycle the temporary groundbed current On and Off
    d. Test points - Identify the specific points where structure-to-electrolyte potentials will be recorded
    e. Structure - Identify the structure to be cathodically protected pipeline, platform, tower anchors, etc.
    f. Ammeter
    g. High impedance volt meter

2. Perform the Current Requirement Test Procedure:
    a. Setup temporary groundbed
    b. Record static (as found) structure-to-electrolyte potentials
    c. Apply DC current from temporary groundbed, and cycle On and OFF using current interrupter

d. Record new ON and OFF structure-to-electrolyte potentials and record groundbed current output
e. Calculate the apparent current requirement and interpolate the results

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT6 **192.459** For buried pipe that is exposed, examine the condition of the coating and pipe for evidence of corrosion. Take remedial action if necessary.

Evaluation Criteria:
1. When must an inspection of coating on buried pipe be performed?
   a. Whenever the pipe is exposed for any reason
2. What types of defects must be identified during a coating inspection?
   a. Disbonded coating
   b. Cracks
   c. General coating quality
3. What types of defects must be identified during the inspection of the exposed pipe?
   a. Pitting
   b. Scale
   c. Rust
   d. Discoloration
   e. Corrosion by-product
   f. Odor
   g. Any mechanical defect
4. When is additional excavation required?
   a. Anytime the following conditions extend beyond the wall of the excavation:
      i. Continuation of an individual pitting area
      ii. Coating defect
      iii. Significant general corrosion
      iv. Any mechanical defect or exposed metal surface

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT7 **192.461(a), 192.479(b)(3)** Inspect and properly apply approved coatings to above and below ground piping.

Evaluation Criteria:

1. What factors must be considered when selecting proper coating?
   a. Operator's requirements
   b. Temperature of pipeline
   c. Soil conditions
   d. Weather conditions, (temperature, relative humidity, etc.)
2. List the methods of proper surface preparation:
   a. Solvent Cleaning
   b. Hand tool cleaning
   c. Power tool cleaning
   d. Abrasive Blasting (SSPC Standards)
   e. Water Blasting
3. What environmental conditions (above & below ground) may affect the application of the coating?
   a. Dew point reading
   b. Pipe sweating
   c. Ambient and surface temperature
   d. Wind
   e. Dust, airborne particles
   f. Water, rain
4. Identify the terms typically identified in general manufacturer's directions pertaining to the application of coatings:
   a. Pot life
   b. Mixing ratios
   c. Curing and drying times
   d. Re-coating
   e. Shelf life
5. Describe the following coating application methods and use of the related equipment (above & below Ground):
   a. Brush
   b. Roller
   c. Spray
   d. Swab
   e. Flock
   f. Wrap
6. Demonstrate proper surface preparation and the application of selected coating system(s).

Abnormal Operating Conditions:

1. Pipeline System damage (dents, gouges, etc.)
   Reaction: Notify designated Operator's representative
2. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT8 **192.465(a)** Perform cathodic protection surveys on a section of pipeline.

Evaluation Criteria:

1. Identify and describe the test equipment used to complete a cathodic protection survey:
   a. Digital or analog high impedance voltmeter
   b. Reference cell (copper-copper/sulfate, silver-silver/chloride, zinc)
   c. Ammeter (direct or indirect)
   d. Current Interrupter (if required)
   e. Datalogger or other data recording device
2. Demonstrate the proper use of the equipment:
   a. Employee must describe or simulate the calibration and setup of the test equipment.
   b. Employee must demonstrate the use of the equipment during an actual or simulated annual survey.
3. Identify, describe, and demonstrate the measurements that may be required at any test point:
   a. Structure-to-electrolyte potential
      i. Pipe-to-soil
      ii. Pipe-to-water
      iii. Casing-to-soil
      iv. Foreign line-to-soil
   b. Current flow measurement across a bond
   c. Current flow measurements on pipelines (where applicable)
   d. Galvanic anode output measurement (where applicable)
   e. Rectifier outputs . voltage and amperage
   f. AC potentials in areas subject to high AC currents
   g. Insulator integrity

Abnormal Operating Conditions:

1. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative
2. Pipeline segment is exposed to high voltage
   Reaction: Notify designated Operator's representative

CT9 **192.465(b)** Inspect cathodic protection rectifier or other impressed current power source to insure that it is operating correctly.

Evaluation Criteria:

1. Identify the steps to take prior to checking a rectifier for proper operation:
   a. Inspect for faulty ground
   b. Inspect cabinet for signs of damage
2. Identify and demonstrate the steps included in recording rectifier output:
   a. Demonstrate measurement of output voltage using a high impedance voltmeter

b. Demonstrate measurement of current output using an ammeter (direct or indirect) and also demonstrate measurement using a shunt
c. Demonstrate the ability to interpret the readings of the internally mounted voltage and amperage meters

Abnormal Operating Conditions:
1. Rectifier case is shorted
   Reaction: Notify designated Operator's representative
2. Rectifier is not working
   Reaction: Notify designated Operator's representative
3. Interruption of power
   Reaction: Notify designated Operator's representative

CT10 192.465(c) Inspect reverse current switches, diodes, and interference bonds.

Evaluation Criteria:
1. Identify the Equipment necessary for the proper inspection of a bond:
   a. High Impedance voltmeter (digital or analog) with test leads
   b. Calibrated resistor (shunt)
2. Demonstrate and describe the proper equipment setup and recording of data:
   a. Determine the direction of current flow to or from Operator structure
   b. Describe the test setup for a bond where both sides of structure are Operator owned. Connect negative (-) lead to the upstream side of the bond
   c. Describe the test setup for an Insulating Flange where both sides are

      Operator owned. Connect the negative (-) lead to the upstream side of the

      bond

   d. Describe the test setup for Galvanic Anodes. Connect the negative lead (-) to the structure side and the positive (+) lead to the anode side
   e. Employee must simulate this test and interpret the resultant data

Abnormal Operating Conditions:
Failure of a critical bond
Reaction: Notify designated Operator's representative

CT11 192.471(a), 192.471(b) Install test leads on the pipeline according to appropriate procedures and coat properly.

Evaluation Criteria:
1. Verify pipeline data:
   a. Measure the wall thickness
   b. Verify pipeline data using Operator resources (line no., station no., location, wall thickness etc.)

c. Alignment sheets
d. Operator resources
e. Other

2. Demonstrate surface preparation:
   a. Remove coating, file and clean down to bare metal
   b. Remove any film on pipeline with safety solvent
3. Select exothermic weld size:
   a. Verify appropriate charge size
4. Select appropriate furnace or mold:
   a. Size mold to pipe diameter and wire gauge
5. Select and prepare test lead wire/cable:
   a. Most common test leads are AWG #10 or #12 size
6. Complete weld and test integrity of weld/adhesion.
7. Apply Operator's designated coating.
8. Ensure test leads are not damaged during backfill.

Abnormal Operating Conditions:

1. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative
2. Fire/explosion (burn through during exothermic welding, ignition of vapors)
   Reaction: Notify designated Operator's personnel
3. Employee discovers a leak while performing this covered task
   Reaction: Eliminate ignition sources and notify designated Operator's personnel

CT12 192.475(b)(1) Inspect for internal corrosion on ends adjacent to removed section of pipe.

Evaluation Criteria:

1. Describe how and what to look for when performing internal corrosion inspection.

   a. Clean internal pipe surface
   b. Visual inspect for evidence of corrosion
   c. Pitting
   d. Erosion from liquids
   e. Scale
   f. Thinning

Abnormal Operating Conditions:

1. Failure to isolate (leaking valve, stopple failure)
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative
2. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative

CT13 192.477 Inspect coupons or other devices used for monitoring internal corrosion in areas where corrosive gas is being transported.

Evaluation Criteria:

1. Describe how corrosion coupons are used to monitor internal corrosion.
   a. Corrosion coupon - milled steel, reasonably close to the pipeline quality, which is inspected to determine metal loss
   b. Describe procedure for removing and inserting coupon (according to manufacturer's procedures):
      i. Roll out coupon
      ii. Close tap valve
      iii. Blow down holder
      iv. Remove coupon and install new coupon
      v. Open tap valve
      vi. Roll in coupon
2. Describe how probes or electronic rate monitors are used to monitor internal corrosion.
   a. Systems of probes or electronic readout equipment typically relate resistance change with time to indicate corrosion rate.
   b. The resistance method is used in process monitoring to activate alarms where less rapid changes require monitoring.

Abnormal Operating Conditions:

Pipeline leak

Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT14 192.481 Monitor atmospheric corrosion on above ground piping.

Evaluation Criteria:

1. At a field location where above ground piping exists demonstrate an atmospheric corrosion inspection and grade in accordance with the Operator's guidelines for grading coating conditions.

2. How would the extent of atmospheric corrosion be described?
   a. By the depth and length of pits

Abnormal Operating Conditions:

1. Employee discovers a leak while performing this covered task
   Reaction: Eliminate ignition sources and notify designated Operator's personnel
2. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative

CT 15 192.505(a) Conduct strength test to substantiate Maximum Allowable Operating Pressure for steel pipe operating above 30% of Specified Minimum Yield Strength.

Evaluation Criteria:

1. What are various test mediums and typical appropriate applications?
   a. Water, including any pre-test sampling, filtering, prevention of freezing
   b. Air or Inert gas, Natural Gas
2. Identify the set up requirements for conducting a strength test:
   a. Confirm all required calibration reports for test equipment is available and current
   b. Confirm material installed matches material specifications on testing plan
   c. Confirm all valves are in manufacturer's recommended position or per Operator's specifications and have been blown down or drained as required
   d. Confirm that all fittings, flanges, unions and threaded joints have been checked to insure they are tight and properly sealed
   e. Place all testing equipment as far as practical from pipeline to be tested, locate opposite side of any seams, keep in mind elevation constraints
   f. Setup and check all equipment for proper operation, confirm understanding of proper operation of all appropriate equipment including, Deadweights, electronic pressure monitor/recorders, mechanical pressure, temperature recorders, hoses, fittings, high and low-pressure pumps, stroke counters, etc.
   g. Confirm appropriate surveillance activities are conducted to minimize persons near the tests
   h. Obtain plan that provides details of pressure test parameters, target test pressures, pressure ranges +/-, location of manifolds, test medium, duration, MAOP of pipeline and confirmation of material design specifications
3. Identify the steps involved in pressurizing:
   a. Pressurize at Operator's prescribed rate (test plan)
   b. At test pressure, perform final leak check prior to starting test
   c. Allow test to stabilize at pressure within desired range
4. Identify activities required to conduct test:
   a. When pressure stabilizes begin test and insure pressures remain within desired range for prescribed duration of test, describe potential effects of sun and temperature on pressures and appropriate adjustments
   b. Perform any pressure "holds" that Operator's procedures may specify
   c. Record at prescribed intervals all required pressure, temperature and pump stroke readings as per Operator's requirements
5. What steps are involved in depressurizing?
   a. Confirm acceptance of test by authorized Operator's representative
   b. Relieve pressure in a safe, Operator approved manner, including any notifications if necessary
   c. Remove test medium by Operator's approved method to insure minimal impact to the environment and according to any required permits, including pigging, use of filters, dispersion methods, post testing sampling

and analysis, disposal of any contaminates according to appropriate Operator's environmental procedures

Abnormal Operating Conditions:
Pipe failure during test
Reaction: Eliminate ignition sources (if using natural gas), protect public, property, and environment, and notify designated Operator's personnel.

CT16 192.507 Use Operator's procedures to substantiate MAOP for steel pipe below 30% of SMYS.

Evaluation Criteria:

1. What are various test mediums and typical appropriate applications?
   a. Water, including any pre-test sampling, filtering, prevention of freezing
   b. Air or Inert gas, Natural Gas
2. Identify the set up requirements for conducting a strength test:
   a. Confirm all required calibration reports for test equipment are available and current.
   b. Confirm material installed matches material specifications on testing plan
   c. Confirm all valves are in manufacturer's recommended position or per Operator's specifications and have been blown down or drained as required
   d. Confirm that all fittings, flanges, unions and threaded joints have been checked to insure they are tight and properly sealed
   e. Place all testing equipment as far as practical from pipeline to be tested, locate opposite side of any seams, and keep in mind elevation constraints
   f. Setup and check all equipment for proper operation, confirm understanding of proper operation of all appropriate equipment including Deadweights, electronic pressure monitor/recorders, mechanical pressure, temperature recorders, hoses, fittings, high and low-pressure pumps, stroke counters, etc.
   g. Confirm appropriate surveillance activities are conducted to minimize persons near the tests
   h. Obtain plan that provides details of pressure test parameters, target test pressures, pressure ranges +/-, location of manifolds, test medium, duration, MAOP of pipeline and confirmation of material design specifications
3. What steps are involved in pressurizing?
   a. Pressurize at Operator's prescribed rate
   b. Conduct a leak test at a pressure between 100 psig and the pressure to produce a hoop stress of 20% of SMYS or
   c. With the test pressure held at least at approximately 20% of SMYS, walk the line to check for leaks
   d. Allow test to stabilize at pressure within desired range
4. Identify activities required to conduct test:

a. When pressure stabilizes begin test and insure pressures remain within desired range for prescribed duration of test; describe potential effects of sun and temperature on pressures and appropriate adjustments
b. Perform any pressure "holds" that Operator's procedures may specify
c. Record at prescribed intervals all required pressure, temperature and pump stroke readings as per Operator's requirements

5. What steps are involved in depressurizing?
   a. Confirm acceptance of test by authorized Operator's representative
   b. Relieve pressure in a safe, Company approved manner, including any notifications if necessary
   c. Remove test medium by Operator's approved method to insure minimal impact to the environment and according to any required permits, including pigging, use of filters, dispersion methods, post testing sampling and analysis, disposal of any contaminates according to appropriate Operator's environmental procedures

Abnormal Operating Conditions:
Pipe failure during test
Reaction: Eliminate ignition sources (if using natural gas), protect public, property, and environment, and notify designated Operator's personnel.

CT17 192.605(b)(5) Follow applicable procedure for starting up or shutting down any part of the pipeline to assure operation within the MAOP limits.

Evaluation Criteria:
1. Identify and describe the key components of a pipeline shutdown procedure:
   a. Section to be shutdown
   b. Valves to be operated (opened or closed) and valve positions to be verified (in the proper sequence)
   c. Location of filter/separators, pulldown compressors, or other associated equipment
   d. Ability to use pipeline and station drawings as necessary
   e. Conduct a leakage survey over the segment to be shutdown, if applicable
   f. Review the receipt/delivery points into the pipeline and verify with Gas Control that the section to be shutdown has been isolated
   g. Shutdown procedure must be verified with Gas Control Staff prior to beginning shutdown
   h. Complete valve maintenance on affected valves prior to beginning shutdown
   i. Isolate the pipeline section as detailed in the shutdown procedure
   j. Monitor pressures in adjacent sections to ensure MAOP is not exceeded
2. Identify the steps required for blowdown of isolated section:
   a. Blowdown and isolate all operator piping to gas operated isolation valves
   b. Notify the appropriate agencies in the event of a blowdown
   c. Verify that any necessary state or local permits have been obtained

d. If applicable, depressurize the pipeline section in accordance with the shutdown procedure:
    i. Pulldown using station compressors
    ii. Pulldown using field compressors
    iii. Pulldown using Meter Station
    iv. Venting to atmosphere
    v. Flaring
    vi. Leave blowoffs in appropriate position

3. Identify and describe the key components of a pipeline startup procedure:
    a. Section to startup
    b. Valves to be operated (opened or closed) and valve positions to be verified (in the proper sequence)
    c. Ability to use pipeline drawings as necessary
    d. Review the receipt/delivery points into the pipeline and verify with Gas Control
    e. Startup procedure must be verified with designated Operator's representative prior to beginning startup
    f. Monitor pressures in section to be startup and adjacent sections to ensure MAOP is not exceeded
    g. Open valves and pack pipeline at prescribed rate
4. Purge as per evaluation criteria 192.629.

Abnormal Operating Conditions:

1. Failure to isolate (leaking valve)
   Reaction: Notify designated Operator's representative
2. MAOP is exceeded
   Reaction: Notify designated Operator's representative

CT18 192.605(b)(6) Isolating sections of pipe for purging before returning to service.

Evaluation Criteria:

1. Identify steps involved with isolating a section of pipeline for maintenance:
    a. Develop a shutdown procedure utilizing the pipeline drawings for proper isolation and obtain operator approval
    b. Receive approval from Operator to begin required work
    c. Operate valves in accordance with the shutdown procedures
2. Describe the procedure for starting and monitoring the purge:
    a. Develop a purge procedure utilizing the drawings

Abnormal Operating Conditions:

1. Failure to isolate (leaking valve)
   Reaction: Notify designated Operator's representative
2. Failure of any pipeline component (valve, regulator, relief valve, alarm, sensor).
   Reaction: Notify designated Operator personnel

CT19 192.614(c)(5) Temporary marking of buried pipelines.

Evaluation Criteria:

1. Demonstrate how to locate pipelines using a line locator, and placing appropriate temporary line markings before any excavation activities begin.
2. Describe the proper selection and use of the appropriate line-locating device.
3. Identify types of temporary markings:
   a. Stakes
   b. Flags
   c. Paint
   d. Buoys
   e. Signs
   f. Marker post
4. Identify where temporary markings must be installed:
   a. Along or across the pipeline in the vicinity of the excavation or activity
   b. Consistent with federal, state or local law

Abnormal Operating Conditions:

Pipeline leak

Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT20 192.614(c)(6) Inspect excavation activities that may result in damage to the pipeline including blasting activities.

Evaluation Criteria:

1. Describe or demonstrate the proper inspection of pipelines during and after excavation activities.
2. Identify the considerations for excavation of pipelines:
   a. Provide for standby personnel as needed
   b. Provide excavator with guidelines for construction near Pipelines
   c. Ensure bucket teeth are barred and sidecutters are removed
   d. Maintain clearance between bucket and pipeline according to Operator's guidelines
   e. Hand excavate as required by Operator's guidelines
3. Identify the requirements for blasting operations near pipelines:
   a. Obtain the blasting plan
   b. Review and evaluate plan to ensure all information is included for Operator's review
   c. Inspect blasting operations
   d. If there is reason to believe damage could occur, perform a leakage survey

Abnormal Operating Conditions:

1. Pipeline system damage (mechanical damage, coating damage)

Reaction: Notify designated Operator's representative

2. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT21 192.615 Emergency Response

Evaluation Criteria:

1. Describe how to identify and classify events that require immediate response.
   a. The reported event is an emergency if it is near or directly involves an Operator pipeline and involves:
      i. Significant amounts of escaping gas (reported or actual) in any location
      ii. Fire or explosion near or directly involving a pipeline
      iii. Natural disaster (flood, tornado, earthquake, etc.)
   b. Other events must be investigated and resolved as soon as possible.
2. Describe the emergency procedures to be followed in emergency situations:
   a. Contact the Emergency Coordinator (see Operator Emergency Contact List) and follow Emergency Coordinator's instructions for investigation of a reported leak
   b. On arrival at the site, assess the situation:
      i. How much gas is escaping?
      ii. What is the wind speed and direction?
      iii. Is fire involved?
      iv. What is the danger of explosion?
      v. Where are the nearest occupied buildings or places of public assembly relative to the emergency?
      vi. Is evacuation warranted?
      vii. Is the situation likely to get worse?
   c. If an emergency situation does exist, report it immediately to the Emergency Coordinator. Report shall include any additional personnel, materials or equipment needed.
   d. Follow Emergency Coordinator's instructions regarding on-site measures to be taken. Protect life and property from danger (in that order) and eliminate the hazardous situation:
      i. For a gas leak in or near a building:
         - Evacuate the building and surrounding area as needed.
         - Control or eliminate ignition sources (matches, motors, electric switches, telephones, static electricity, pilot flames, etc.).
         - Isolate the leaking pipeline segment using appropriate block valves.
         - Vent confined areas to disperse accumulated gas.
      ii. For large amounts of escaping gas in any location:
         - Evacuate and limit access to the hazardous area.

- Control or eliminate ignition sources.
- Isolate the leaking pipeline segment using appropriate block valves.
- Enter areas to make investigations or repairs only after gas is dispersed to non-hazardous concentrations (less than 20% lower explosive limit).

iii. For a fire or explosion near or directly involving Operator pipelines:

- Evacuate and limit access to hazardous areas.
- If gas is burning, spray structures, vessels, and piping near fire with water to prevent spreading or explosion.
- If gas is burning, isolate the leaking pipeline segment using appropriate block valves and wait for line to depressurize.
- If fire is burning near Operator's pipelines, shut down and isolate the pipelines to reduce potential hazards.

iv. For a natural disaster or civil disturbance in close proximity to Operator's pipelines:

- Patrol area of pipelines for developing or potential hazards.
- If Operator pipelines are threatened shut down and isolate the endangered pipelines.

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT22 192.627 Tapping pipelines under pressure (hot taps).

Evaluation Criteria:

1. Describe the steps to prepare for a hot tap:
   a. Review the applicable Operator's procedures
   b. Determine the acceptable location for the tap in relation to seams and girth weld
   c. Perform ultrasonic inspection to determine wall thickness, pipe integrity
   d. Monitor pressure and flow conditions for installation of branch connection; qualified welder(s) installs branch connection and or split sleeve
   e. Qualified welder(s) connects valve to branch connection
2. Describe and simulate the use of a hot tap machine according to manufacturer's procedures:
   a. Attach and support the hot tap machine to the valve
   b. Leak test branch connection
   c. Dry run hot tap machine to verify the tap valve will close and to measure travel

d. Operate the tap machine according to the manufacturer's guidelines and make cut, measure the distance traveled
e. Retract tap machine and close the valve
f. Blowdown tap machine and remove

Abnormal Operating Conditions:

1. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative
2. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT23 192.629 Purge pipelines with gas.

Evaluation Criteria:

1. Simulate the steps necessary to purge a pipeline with gas:
   a. Obtain the purge pressure and purge duration for the length and diameter of pipeline
2. Identify the steps necessary to complete a purge of air or inert gas with gas:
   a. Install pressure gauge immediately downstream of the purge pressure control valve
   b. Determine if the installation of a Combustible Gas Indicator (CGI) at the blowoff stack at the downstream end of the section to be purged is required
   c. Open the purge control valve the appropriate amount to achieve the inlet purge pressure as quickly as possible
   d. Maintain inlet purge pressure for the specified purge duration
   e. Upon completion of purge, close the downstream blowoff; pack the pipeline at the predetermined rate per minute and return the pipeline to service

Abnormal Operating Conditions:

1. Explosion occurs inside the pipeline
   Reaction: Notify designated Operator's personnel
2. A source of ignition is identified at the blowoff while purging (lightening, power lines)
   Reaction: Notify designated Operator's personnel
3. Liquids are encountered during the purge
   Reaction: Notify designated Operator's personnel
4. High wind carries gas into a populated or unsafe area
   Reaction: Notify designated Operator's personnel

CT24 192.629 Purge pipelines with air or inert gas.

Evaluation Criteria:

1. Identify the steps necessary to complete a purge of gas with air:

a. Establish the direction of the purge and mount air movers on the appropriate blowoff
b. Ensure that air mover is grounded in accordance with Operator's procedures
c. Turn on the required supply to the evacuator
d. Sample the atmosphere in the pipeline at work location; once there has been a clear atmosphere for at least 15 minutes begin work
e. Maintain the flow of air away from the workspace at the volume specified
f. Man the evacuator at all times while it is running.

2. Identify the steps necessary to complete a purge with inert gas:
   a. Disconnect and physically isolate the pipeline sections to be purged with nitrogen
   b. Purge using a polypig where possible
   c. Sample the gas until readings indicate the presence of nitrogen
   d. Purge by running a polypig, two-way pig, or other acceptable pig through the section using nitrogen.
   e. Continue the injection of Nitrogen once the final pig has been received until the specific gravity of nitrogen (0.967) is detected and maintained for 5 minutes
   f. If pigs are not being used, inject the nitrogen into a blowoff on one end of the section and purge the gas/nitrogen mixture through a blowoff on the down stream end
   g. Ensure an adequate supply of air or nitrogen is available for the purge

Abnormal Operating Conditions:

1. Explosion occurs inside the pipeline
   Reaction: Notify designated Operator's personnel
2. A source of ignition is identified at the blowoff while purging. (lightening, power lines.)
   Reaction: Notify designated Operator's personnel
3. Liquids are encountered during the purge
   Reaction: Notify designated Operator's personnel
4. High wind carries gas into a populated or unsafe area
   Reaction: Notify designated Operator's personnel

CT25 192.705 Patrol transmission (and gathering) lines.

Evaluation Criteria:

1. Identify methods of pipeline patrol:
   a. Aerial
   b. Vehicular
   c. Walking rights of way
2. Identify the items to observe while patrolling:
   a. General condition of rights of way
   b. Encroachments
   c. Signs of gas leakage

d. Soil slips, subsidence, and erosion over pipeline
e. Condition of pipeline markers, and information contained thereon
f. Construction within an area that may impact class location (building, parks, recreational areas, etc. within 660 feet of pipeline)

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT26 192.706 Conducting leakage surveys.

Evaluation Criteria:
1. Describe means of identifying leaks:
   a. Smell
   b. Dead vegetation
   c. Ice accumulation
   d. Dust cloud
   e. Bubbles in water
2. Demonstrate use of the leak detection device according to manufacturer's guidelines.
3. Describe and simulate the proper survey technique:
   a. Consider environmental conditions
   b. Identify the location of the pipeline using Operator's maps and resources
   c. Maintain normal walking stride
   d. Hold device appropriate distance above vegetation
   e. Move device back and forth in a consistent arc extending 3' on each side of the centerline of the pipeline

Abnormal Operating Conditions:
Pipeline system damage (mechanical damage, coating damage)
Reaction: Notify designated Operator's representative

CT27 192.707 Placing and maintaining pipeline markers.

Evaluation Criteria:
1. Simulate the ability to place pipeline markers at appropriate locations and maintain them according to Operator's procedures.
2. Describe and simulate the proper use of a line-locating device.
3. Identify appropriate locations for line markers:
   a. Stream crossings
   b. Both sides of public road crossings
   c. Other utilities rights of way
   d. Both sides of railroad crossings
   e. Above ground pipelines accessible to the public

f. Compressor and Meter station fence lines
g. Where appropriate to reduce the possibility of damage or encroachment
h. Casing vents
i. Line of sight where appropriate

4. Identify the information that must be correct and legible on the markers:
   a. Emergency 24-hour Phone Number
   b. Operator Identification
   c. "Warning" or "Danger"
   d. Name of gas transported

Abnormal Operating Conditions:

1. Installing line markers with power operated equipment and hit pipeline
   Reaction: Notify designated Operator's personnel
2. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative
3. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative
4. No identification sticker or illegible sticker on pipeline markers
   Reaction: Notify designated Operator's personnel

CT28 192.713 Transmission lines: Permanent field repair of imperfections and damage.

Evaluation Criteria:

Demonstrate or describe how to make permanent repairs of imperfections or damage using the following repair methods:

1. Replace Pipe Segment
   a. Must complete the Operator's welding test
2. Repair Clamps
   a. Follow manufacturer's installation instructions
   b. If repair clamp requires welding, must complete the Operator's welding test
3. Clockspring:

   a. Obtain annual training and certification from certified Clockspring trainer

Abnormal Operating Conditions:

1. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's Representative
2. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative

CT29 192.715 Permanent field repair of welds.

Evaluation Criteria:

1. The individual must complete the Operator's welding test

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

CT30 192.717 Perform permanent field repair of leaks.

Evaluation Criteria:
1. Perform and describe, activities related to permanent repairs of leaks in accordance with the Operator's requirements.

Abnormal Operating Conditions:
Pipeline system damage (mechanical damage, coating damage)
Reaction: Notify designated Operator's representative

CT31 192.727 Abandon or deactivate pipelines.

Evaluation Criteria:
1. Describe, simulate or perform the activities associated with abandoning or deactivating pipelines.
2. Identify and describe the types of pipelines:
   a. Inactive - under gas pressure, but are isolated from all sources of gas and are not being used to transport gas.
   b. Idle - isolated from all sources of gas, but have a positive gas or inert gas pressure of 25 to 50 psig.
   c. Decommissioned - physically disconnected from the pipeline system, purged with an inert material and sealed at the ends. Cathodic Protection and Leakage Surveys are discontinued.
   d. Abandoned - physically disconnected from the pipeline system, purged with water or an inert material and sealed at the ends. All work on the line is discontinued.
   e. Removed - physically removed from the right of way.
3. Identify methods of isolating the pipeline:
   a. Cutting and welding end caps
   b. Disconnect and install blind flanges
   c. Closing and locking valves

Abnormal Operating Conditions:
Pipeline leak
Reaction: Eliminate potential ignition sources and notify designated Operator's representative

1. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative
2. Pipeline system damage (mechanical damage, coating damage)
   Reaction: Notify designated Operator's representative

CT33 192.745 Inspect, maintain and partially operate valves.

Evaluation Criteria:

The evaluation will be based on the Operator's specifications.

1. Describe and perform appropriate valve inspections and maintenance on valves.
2. Identify the steps to inspect a valve:
   a. Inspect for leaks
   b. Clean stem threads
   c. Inspect stem packing and lubrication
   d. Lubricate the valve; monitor grease pressure to ensure valve pressure rating is not exceeded
   e. Bleed valve body
   f. Check adjustments, if applicable
   g. Winterize valves subject to freezing
   h. Operate valve completely when gas flow is not impacted
   i. Partially operate the valve when full operation is not practical

CT34 192.625 Odorization of gas.

Evaluation Criteria:

1. Review the process of odorant addition to odorization equipment.
2. Describe the gas odorization process.
3. Review odorant properties.

Abnormal Operating Conditions:

1. No odorant in gas
   Reaction: Notify designated Operator's personnel
2. Odorization equipment leak
   Reaction: Eliminate odorant leak and/or potential ignition sources and notify designated Operator's representative

CT35 192.751 Prevention of Accidental Ignition.

Evaluation Criteria:

1. Review properties of natural gas.
2. Simulate and review preventiative measures to eliminate ignition.

Abnormal Operating Conditions:

1. Pipeline leak
   Reaction: Eliminate potential ignition sources and notify designated Operator's representative