

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's Own
Motion to Adopt New Safety and Reliability
Regulations for Natural Gas Transmission and
Distribution Pipelines and Related Ratemaking
Mechanisms.

Rulemaking 11-02-019
(Filed February 24, 2011)

**NATURAL GAS SYSTEM OPERATOR SAFETY PLAN
OF WILD GOOSE STORAGE, LLC**

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Dated: June 28, 2013

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**NATURAL GAS SYSTEM OPERATOR SAFETY PLAN
OF WILD GOOSE STORAGE, LLC**

In accord with Ordering Paragraph 5 of Decision 12-04-020 of the California Public Utilities Commission (Commission), as supplemented by Ordering Paragraph 3 of Decision 12-12-009 issued on December 20, 2012, and Section 961(b) of the California Public Utilities Code, Wild Goose Storage, LLC (Wild Goose) submits its Natural Gas System Operator Safety Plan (Safety Plan).

I. INTRODUCTION

Wild Goose achieved the status of being the first independent storage provider in California in June 1997, upon receiving its certificate of public convenience and necessity from the Commission.¹ At that time, Wild Goose became authorized to provide firm and interruptible storage services from storage facilities to be constructed in Butte County, California. Since that time, Wild Goose has twice received Commission authorization to expand the size of its storage facility,² such that the Wild Goose facility currently has an inventory capacity 50 Bcf, with peak injection capacity of 650 MMcf/d and peak withdrawal capacity of 1,200 MMcf/d.

¹ See Commission Decision 97-06-091.

² See Commission Decision 02-07-036 and Decision 10-12-025.

As an independent storage provider operating in California, Wild Goose falls within the Public Utilities Code definition of natural gas corporation³ and thus is subject to the Code’s requirement to develop and submit for Commission approval “a plan for the safe and reliable operation of its commission regulated gas pipeline facility.”⁴

II. SAFETY PLAN

The attached Safety Plan Table (Table) (Attachment A) and supporting documentation (Appendices 1-21) set forth Wild Goose’s comprehensive Safety Plan, which, through its various elements demonstrates, consistent with Public Utilities Code Section 963(b) (3), that Wild Goose places the safety of the public and its employees as its top priority.⁵ In this regard, the Safety Plan achieves each of the specific criteria required in Public Utility Code §§961 (c) and (d) (1-10) as outlined on pages 16 and 17 of Decision 12-02-024. The Safety Plan is consistent with industry best practices and with federal pipeline safety statutes as set forth in Chapter 601 of Subtitle VIII of United States Code Title 49 and the implementing regulations adopted by the United States Department of Transportation. Moreover, Wild Goose maintains a rigorous schedule for the periodic review and updating of the Safety Plan as is further outlined at Section 1 of the Table.

As noted in the Decision (at pp. 19-20), Public Utilities Code Section 961(e) provides that the Commission require each gas corporation to “provide opportunities for meaningful,

³ California Public Utilities Code Section 222.

⁴ *Id.*, Section 961.

⁵ In accord with Decision 12-12-009, Wild Goose has worked with the Gas Engineering and Compliance Section of the Commission’s Safety and Enforcement Division to modify its Safety Plan to address all noted deficiencies. The corrections to these deficiencies are set forth in Attachment B (Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009). The letter confirming Wild Goose’ compliance is appended as Attachment C.

substantial, and ongoing participation by the gas corporation workforce in the development and implementation of the plan, with the objective of developing an industry-wide culture of safety that will minimize accidents, explosions, fires, and dangerous conditions for the protection of the public and the gas corporation workforce.” To implement this code section, the Decision requires that (1) “each gas corporation make its safety report available to its workforce, and provide for comments and suggestions from the workforce,” (2) “ gas system operators shall retain a log of the comments and suggestions, including the disposition of the comment or suggestion, with a summary of the rationale for the disposition,” (3) the gas system operators inform their employees that any employee who perceives a breach of safety requirements may inform the Commission of the breach, and that the Commission will keep the identity of the employee confidential. With respect to this last requirement, each gas operator must inform its workforce as to the manner by which to submit such information to the Commission.

In conformance with these requirements, Wild Goose provides meaningful, substantial and ongoing employee participation in the development and implementation of its Safety Plan (as outlined in Section 3 of the Table). Moreover, Wild Goose’s Public Awareness Program (PAP), which has been approved by the Commission’s Gas Safety and Reliability Branch, details Wild Goose’s commitment to its policy that the safety of the public and its employees are its top priority. Finally, for the purpose of reporting perceived safety violations to the Commission, Wild Goose confirms that it has provided its employees with the contact coordinates of the Director of the Commission’s Consumer Safety and Protection Division and the designation “Safety Breach Notification from Gas System Operator Employee-Confidentiality Requested.” In addition, this information has been posted in a public area at the Wild Goose facility.

As set forth in this submission, Wild Goose's Safety Plan is currently fully implemented.

III. CONCLUSION

Wild Goose looks forward to continuing its work with the Commission to monitor and update its Safety Plan as necessary.

Respectfully submitted June 28, 2013 at San Francisco, California.

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By /s/ Jeanne B. Armstrong
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Attorneys for Wild Goose Storage, LLC

ATTACHMENT A

Wild Goose Storage, LLC – Safety Plan Table – June 30, 2013

PU Code Section	Requirement	Specific area of Wild Goose Storage's (WGS) Safety Plan that addresses this PU Code Section	Summary of Wild Goose Storage's Safety Plan that addresses the deficiencies identified by the PUC
<u>Sec. 961 Subdivision (b)</u>			
-3	Each gas corporation shall implement its approved plan	- WGS Safety Plan Policy Statement	Please refer to the Wild Goose Storage, LLC – Safety Plan Policy signed by the President and Chief Executive Officer of Wild Goose Storage, LLC at Appendix 1.

<p>-4</p>	<p>The commission shall require each gas corporation to periodically review and update the plan</p>	<p>- Safety Plan Table</p>	<p>The Safety Plan as a whole is reviewed annually by the EH&S Coordinator, Engineering & Operations and the Production Coordinator of WGS.</p> <p>In addition, various components of the Safety Plan are reviewed as follows:</p> <ol style="list-style-type: none"> (1) The Emergency Response Plan (ERP), at Appendix 2, is reviewed annually by the EH&S Coordinator. (2) The Integrity Management Plan (IMP), at Appendix 3, is reviewed annually by Engineering and Operations. (3) The Operator Qualification for Pipeline Personnel (OQPP), at Appendix 4, is reviewed annually by Engineering and Operations. (4) The Operator Qualifications Training Matrix, at Appendix 5, is reviewed every three years by Engineering and Operations in accordance with Department of Transportation regulations. (5) The Operations & Maintenance Manual (O&MM), at Appendix 6, is reviewed annually by Engineering and Operations. (6) The Control Room Management Plan (CRM), at Appendix 7, is reviewed annually by Engineering and Operations. (7) The Whistleblower Protection Program is updated in accordance with PUC requirements. The Whistleblower Notice is at Appendix 8. (8) The Health, Safety and Environmental Policy, at Appendix 9, is reviewed annually by the EH&S Coordinator. (9) The Public Awareness Program (PAP), at Appendix 10, is reviewed annually by the EH&S Coordinator.
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<p><u>Sec. 961 Subdivision (c)</u></p>	<p>The plan developed, approved, and implemented pursuant to subdivision (b) shall be consistent with best practices in the gas industry and with federal pipeline safety statutes as set forth in Chapter 601 (commencing with Section 60101) of Subtitle VIII of Title 49 of the United States Code and the regulations adopted by the United States Department of Transportation pursuant to those statutes.</p>	<ul style="list-style-type: none"> - Safety Plan Table - EHS Handbook 	<p>WGS's Environmental Health and Safety Handbook (EHS Handbook), at Appendix 11, specifies that WGS is committed to best practices.</p> <p>Regulatory counsel Goodin, MacBride, Squeri, Day & Lamprey, LLP is retained to provide WGS with any and all relevant state regulatory updates.</p> <p>WGS works with consultants, regulators and contractors every day to continually engage in best practices. WGS notes that the gas storage industry is challenged in this regard as every plant has very specific attributes and can ultimately run very differently depending on a wide variety of factors.</p>
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<p><u>Sec. 961 Subdivision (d)</u></p> <p>-1 and -2</p>	<p>Identify and minimize hazards and systemic risks in order to minimize accidents, explosions, fires, and dangerous conditions, and protect the public and the gas corporation workforce.</p> <p>Identify the safety-related systems that will be deployed to minimize hazards, including adequate documentation of the commission-regulated gas pipeline facility history and capability.</p>	<ul style="list-style-type: none"> - Safety Plan Table - IMP Section 5.0, 6.0, 7.0, 8.0, 17.0 - Control Room Management Plan - ERP Section 7.0 and 12.0 	<p>WGS maintains numerous safety systems designed to identify and minimize hazards and systematic risks, including:</p> <ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> ☐ Pipeline System Description – Section 2.0: the pipeline system is maintained in compliance with 49 CFR Part 192 and was placed under cathodic protection shortly after commissioning ☐ Condition Discovery and Remediation Schedule – Section 5.4: integrity assessments in accordance with this Section help prioritize and evaluate remediation of anomalous conditions; reductions in operating pressure are determined using ASME/ANSI B31G or AGA Pipeline Research Committee Project PR-3-805 and notifications are made to the Pipeline and Hazardous Materials Safety Administration and the Commission Utilities Safety and Reliability Branch as required ☐ Preventive and Mitigative Measures – Section 6.0: provides detailed measures to protect High Consequence Areas and to enhance public safety, including measures for outside force damage threats, corrosion threats and the need for automatic shut-off or remotely operated valves ☐ Program Management – Section 7.0: performance measures are reported and submitted to Pipeline and Hazardous Materials Safety Administration (PHMSA) by March 15 of each year; Program Management also includes Record Keeping, Management of Change and Internal and External Communications ☐ Quality Assurance – Section 8.0: includes the appropriate documentation, training, assigned responsibilities, program reviews and audits to ensure success and continued improvement of the IMP - ERP: <ul style="list-style-type: none"> ☐ Hazardous Materials Information – Section 12.0: WGS has an online database, accessible by all employees, detailing all hazardous materials used in its operations deals extensively with Hazardous Materials Information - Operator Qualifications Table <ul style="list-style-type: none"> ☐ WGS has employees that are qualified for tasks that are directly related to the identification of hazards, including the following Covered Tasks: Valve Inspection, Pressure Vessel Inspection & Repair, Control Room Operations of a Pipeline, Gas Leak Survey, Prevention of Accidental Ignition, and Gas Detection and Alarms
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			<ul style="list-style-type: none"> - Training Matrix includes the following topics which also address hazard identification: - CRM Plan deals extensively with the identification of hazards as well as safety -related systems to minimize hazards, specifically: <ul style="list-style-type: none"> <input type="checkbox"/> Section III: ensure control room staff know roles and responsibilities <input type="checkbox"/> Section IV and VI: adequately spaced shift change ensures alertness when monitoring SCADA system by avoiding fatigue <input type="checkbox"/> Section VII: Management of incoming alarms <input type="checkbox"/> Section VIII: ensure changes to system settings are well documented <input type="checkbox"/> Sections IX and X: ensure personnel working in control room have proper experience and training <input type="checkbox"/> Fire Protection and Prevention, Hazard Communication, Injury and Illness Prevention Plan, Machine Guarding, Personal Protective Equipment and Respiratory Protection. - ERP: <ul style="list-style-type: none"> <input type="checkbox"/> Section 7.0 identifies specific emergency response procedures for: Facility process fires, Loss of well control, Pipeline rupture, Escaping gas including gas detected inside a building, Natural disasters, Major fires & explosions, Civil disturbance. In addition, annual site inspections are conducted by the EH&S Coordinator where deficiencies, if any, are identified, risk ranked for severity and probability, mitigative actions, persons responsible for addressing the issue and dates that each finding is to be addressed by.
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<p>-3</p>	<p>Provide adequate storage and transportation capacity to reliably and safely deliver gas to all customers consistent with rules authorized by the commission governing core and noncore replacement, preventive maintenance, and reactive maintenance and repair of its commission-regulated gas pipeline facility.</p>	<ul style="list-style-type: none"> - Safety Plan Table - Introduction 	<ul style="list-style-type: none"> - WGS’s PAP has been submitted and approved by the California Public Utilities Commission and complies with the American Petroleum Industry Public Awareness Programs for Pipeline Operators Recommended Practice and is designed to enhance public environmental and safety property protection through increased public awareness. - The PAP focuses on safety communication to four main groups: residents; emergency response officials; public officials and excavators and will provide the public, appropriate government organizations, persons engaged in excavation, public/private utility companies, and related activities with information on how to identify the location of underground pipelines owned and operated by WGS and how to recognize and report a natural gas pipeline emergency. - ERP Communication – Section 8.0: <ul style="list-style-type: none"> □ outlines the communication plan to the affected public in the event of an emergency □ Employees attend extensive training and orientation on WGS operations and environmental and safety matters this orientation given by the Environment Health & Safety Coordinator in accordance with Section 1.0 of the EHS Handbook □ Employees are required to comply with numerous policies, procedures and guidelines in place to ensure that safety is the top priority, including the Anti-Drug and Alcohol Misuse Prevention Plan developed in accordance with the DOT and acknowledged by each employee at Section VIII. - EHS Handbook: <ul style="list-style-type: none"> □ Incident Reporting and Legislative Requirements – Section 5.2 □ Near Miss Reporting – Section 5.3 □ Energy Isolation and Lock-out Tag Out – Section 9.9 □ Hazard Assessment and Control – Section 6.0
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			<ul style="list-style-type: none">□ Excavation and Trenching – Section 9.10□ Confined Space Entry – Section 9.3□ Work Site Safe Work Practices – Section 9.0 <p>- The Engineering and Operations group monitors reservoir capacity, well behavior, and pipeline/ plant operating conditions on a regular basis. They also are in communication with the transmission company daily to check on their system pressures, hydraulics, etc. Any bottlenecks or deficiencies are quickly identified and rectified. The group also implements a preventative maintenance program to reduce risk of equipment failure, ensuring reliability is high. Flow performance curves are generated that reflect overall facility capability at various levels of reservoir inventory.</p> <p>- IMP:</p> <ul style="list-style-type: none">□ Threats, Data Integration, and Risk Assessment – Section 4.0 details the process for threats and detection of leaks including time dependent threats; static or resident threats; time-independent threats or any additional threats.
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<p>-4</p>	<p>Provide for effective patrol and inspection of the commission-regulated gas pipeline facility to detect leaks and other compromised facility conditions and to effect timely repairs</p>	<ul style="list-style-type: none"> - Safety Plan Table - IMP Section 4.0 	<ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> <input type="checkbox"/> Threats, Data Integration, and Risk Assessment – Section 4.0 - details of the process for threats identification and detection of leaks. In addition, WGS completes the following: <ul style="list-style-type: none"> <input type="checkbox"/> An aerial survey of the complete WGS system every two weeks <input type="checkbox"/> Weekly drive by inspection of remote locations <input type="checkbox"/> Ionized gas detection on the High Consequence Area which includes a walk around with a flame ionization unit, conducted at least every 6 months depending on weather and land conditions <input type="checkbox"/> Various forms referenced at Appendix 1 of the O&MM to detail any reported leak including: <ul style="list-style-type: none"> ● WGS Form 100: Incident and Service Interruption Report ● WGS Form 101: Notice and Disposition of Reported Incident ● WGS Form 108: Safety Related Conditions Report ● WGS Form 109: Pipeline Leak Repair Report ● WGS Form 115: Leak Investigation Report <input type="checkbox"/> A Leak Compliant Form in the form of the template provided in the O&MM manual to detail any reported leak <input type="checkbox"/> A Smart pig run InLine Inspection survey every seven years on the High Consequence Area line
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<p>-5</p>	<p>Provide for appropriate and effective system controls, with respect to both equipment and personnel procedures, to limit the damage from accidents, explosions, fires, and dangerous conditions.</p>	<ul style="list-style-type: none"> - Safety Plan Table - ERP Section 6.0 - HSE Handbook 	<p>WGS has extensive systems and procedures in place to limit damage from accidents, explosions, fires, and dangerous conditions. For example:</p> <ul style="list-style-type: none"> - ERP: <ul style="list-style-type: none"> □ Niska Facility Sample Response Strategies – Section 7.0, including strategies for: <ul style="list-style-type: none"> ● Loss of Well Control - Section 7.2 ● Pipeline Rupture - Section 7.3 ● Escaping Gas - Section 7.4 ● Natural Disasters - Section 7.5 ● Major Fires and Explosions - Section 7.6 □ Site Specific Information – Section 6.0, provides extensive evacuation procedures to ensure the timely and effective evacuation of residents within the Emergency Planning Zone and to limit damage from accidents to equipment and personnel, including <ul style="list-style-type: none"> ● Emergency Control Systems – Section 6.1.2 ● Emergency Communications – Section 6.1. ● Safety Equipment -Section 6.1.4 ● Hazardous Materials Storage - Section 6.1.5 ● High Consequence Area – Section 6.1.10 ● Emergency Planning Zones – Section 6.1.11 <p>In addition, WGS has the following preventative, monitoring, and mitigative measures in place:</p>
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			<p>1) Preventative - WGS has the following in place to prevent accidents, explosions, fires and dangerous conditions:</p> <ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> <input type="checkbox"/> High Consequence Areas – Section 3.0 <input type="checkbox"/> Threats, data integration, and risk assessment – Section 4.0 <input type="checkbox"/> Preventive and mitigative measures (measures for 3rd party; outside force and corrosion threats) – Section 6.0 - CRM: <ul style="list-style-type: none"> <input type="checkbox"/> Understanding roles and responsibilities – Section III - O&MM: <ul style="list-style-type: none"> <input type="checkbox"/> Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Damage prevention – Section 2.8 ● Operating within maximum allowable operating pressure – Section 2.10 ● Pipeline isolation with lock and tagout – Section 2.12 ● Pipeline purging – Section 2.16 <input type="checkbox"/> Pipeline Maintenance – Section 3.0 <ul style="list-style-type: none"> ● Corrosion control – Section 3.5 ● Valve inspection – Section 3.16 - OQPP – Section 3 <ul style="list-style-type: none"> ● Task identification and analysis - training programs in the Training Matrix (previously submitted) are geared towards prevention and monitoring, such as rectifier inspection, external pipe surface inspection, maintain valves, gas leak survey) - EHS Handbook: <ul style="list-style-type: none"> <input type="checkbox"/> Emergency Planning and Reporting – Section 5.0 <input type="checkbox"/> Hazard Identification, Assessment and Control – Section 6.0 <input type="checkbox"/> Fire prevention – Section 10.10 - 10.14 <input type="checkbox"/> Fall protection - Section 9.11 <input type="checkbox"/> Each WGS employee must successfully complete a comprehension test on the EHS Handbook
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			<p>2) Monitoring - WGS has the following in place to monitor potential accidents, explosions, fires and dangerous conditions:</p> <p>- IMP:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Integrity assessment: baseline; continual evaluation; condition discovery; classification of anomalies – Section 5.0 <input type="checkbox"/> Program management: performance measures; record keeping; MOC; communications – Section 7.0 <input type="checkbox"/> Quality Assurance: program documentation; ensuring properly trained personnel and 3rd party contractors / inspectors; clear/concise roles and responsibilities – Section 8.0 <p>- CRM:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Alarm management – Section VI <ul style="list-style-type: none"> ● Control Room systems allow for constant monitoring of all systems and alerts WGS personnel immediately when there is a failure of any kind <input type="checkbox"/> Change management – Section VIII <ul style="list-style-type: none"> ● the Control Room Management Plan governs the procedures to be taken in the event any failure is detected, giving guidance to personnel on next steps <p>- O&MM:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Ongoing surveillance – Section 2.7 <input type="checkbox"/> Pipeline Maintenance – Section 3.0 <ul style="list-style-type: none"> ● Leak surveys – Section 3.6 ● Pipeline patrol – Section 3.9 <p>OQPP:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Task identification and analysis – Section 3.0
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			<p>3) Mitigation - WGS has the following in place to mitigate any possible accidents, explosions, fires and dangerous conditions:</p> <ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> <input type="checkbox"/> Integrity assessment - remediation schedule – Section 5.0 <input type="checkbox"/> Preventive and mitigative measures - dealing with incidents associated with 3rd party, outside force and corrosion; safely and efficiently shutting down PL system – Section 6.0 - CRM: <ul style="list-style-type: none"> <input type="checkbox"/> Fatigue Mitigation – Section VI - O&MM <ul style="list-style-type: none"> <input type="checkbox"/> Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Investigation of failures / incidents – Section 2.3 ● Incident reporting – Section 2.2 <input type="checkbox"/> Pipeline Maintenance – Section 3.0 <ul style="list-style-type: none"> ● Inactivation of facilities – Section 3.1 ● Blowdown of pipelines – Section 3.2 ● Clearing pipeline freezes – Section 3.3 <input type="checkbox"/> Abnormal operations – Section 4.0 <ul style="list-style-type: none"> ● Pressure increase / decrease – Sections 4.4 & 4.5 ● Flowrate increase / decrease – Sections 4.2 & 4.3 ● Pipeline shutdown, valve closure – Sections 4.6 & 4.7 - ERP: <ul style="list-style-type: none"> <input type="checkbox"/> ERP provides specific information on emergency control systems, emergency communications, safety equipment and hazardous materials storage – Section 6.0 <input type="checkbox"/> WGS Incident Investigation and Reporting Guideline, at Appendix II, specifically identifies what type of incidents are to be reported, including Reporting Near Miss Incidents <input type="checkbox"/> Niska Facility Sample Response Strategies <ul style="list-style-type: none"> ● Loss of Well Control - Section 7.2 ● Pipeline Rupture - Section 7.3 ● Escaping Gas - Section 7.4 ● Natural Disasters - Section 7.5 ● Major Fires and Explosions - Section 7.6
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			<ul style="list-style-type: none"><input type="checkbox"/> Site Specific Information – Section 6.0:<ul style="list-style-type: none">● Emergency Control Systems – Section 6.1.2● Emergency Communications – Section 6.1.● Safety Equipment -Section 6.1.4● Hazardous Materials Storage - Section 6.1.5● High Consequence Area – Section 6.1.10● Emergency Planning Zones – Section 6.1.11- EHS Handbook:<ul style="list-style-type: none"><input type="checkbox"/> Emergency Response Planning and Reporting, which includes Incident Reporting – Section 5.2 and Near Miss Reporting - Section 5.3
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<p>-6</p>	<p>Provide timely response to customer and employee reports of leaks and other hazardous conditions and emergency events, including disconnection, reconnection, and pilot-lighting procedures.</p>	<p>- Safety Plan Table</p>	<p>WGS provides extensive training to its employees to ensure that the response to any emergency or abnormal situation is answered in a timely and effective manner:</p> <ul style="list-style-type: none"> - ERP: <ul style="list-style-type: none"> □ Facility Sample Response Strategies – Section 7:0 provides emergency response procedures including strategies for: <ul style="list-style-type: none"> ● Loss of Well Control - Section 7.2 ● Pipeline Rupture - Section 7.3 ● Escaping Gas - Section 7.4 ● Natural Disasters - Section 7.5 ● Major Fires and Explosions - Section 7.6 □ Site Specific Information – Section 6.0 details extensive evacuation procedures to ensure the timely and effective evacuation of residents within the Emergency Planning Zone and to limit damage from accidents to equipment and personnel: <ul style="list-style-type: none"> ● Emergency Control Systems - Section 6.1.2 ● Emergency Communications - Section 6.1.3 ● Safety Equipment - Section 6.1.4 ● Hazardous Materials Storage - Section 6.1.5 ● High Consequence Area - Section 6.1.10 ● Emergency Planning Zones - Section 6.1.11 □ EPZ Evacuation Procedures – Section 9.0 includes extensive evacuation procedures and details on how to limit damage from accidents □ Hazardous Materials Information – Section 12.0 □ Post Emergency Procedures – Section 13.0 outlines procedures to follow post incident including: <ul style="list-style-type: none"> ● Post Incident Appraisal – Section 13.2 ● Report Documentation – Section 13.5 ● Critical Incident Stress Management – Section 13.6 - IMP: <ul style="list-style-type: none"> □ High Consequence Areas – Section 3.0 □ Threats, Data Integration, and Risk Assessment – Section 4.0 - EHS Handbook provides for: <ul style="list-style-type: none"> □ Emergency Response Planning and Reporting – Section 5.0
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			<ul style="list-style-type: none"><input type="checkbox"/> Hazard Identification, Assessment and Control – Section 6.0<input type="checkbox"/> Fire Prevention – Section 10.10 <p>In the event of a report of a leak or incident of any kind, WGS dispatches the appropriate person(s) to investigate immediately. Depending on the result of this initial investigation, further action is taken as required.</p> <p>Various forms are referenced at Appendix 1 of the O&MM to detail any reported leak including:</p> <ul style="list-style-type: none"><input type="checkbox"/> WGS Form 100: Incident and Service Interruption Report<input type="checkbox"/> WGS Form 101: Notice and Disposition of Reported Incident<input type="checkbox"/> WGS Form 108: Safety Related Conditions Report<input type="checkbox"/> WGS Form 109: Pipeline Leak Repair Report<input type="checkbox"/> WGS Form 115: Leak Investigation Report
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<p>-7</p>	<p>Include appropriate protocols for determining maximum allowable operating pressures on relevant pipeline segments, including all necessary documentation affecting the calculation of maximum allowable operating pressures.</p>	<p>- Safety Plan Table</p>	<p>During design stage of the project, WGS determines what pressure is best suited for the operation. This is based on:</p> <ul style="list-style-type: none"> - Maximum operating pressure of reservoir, staying within Division of Oil, Gas and Geothermal Resources pressure gradient requirement - Maximum operating pressure of the transmission system that the new facility will be tied into, which for California has been Pacific Gas and Electric Company - Hydraulic study of various piping size systems is performed by third party professional engineering firm to determine pressure loss in system, and operating pressure/ temperature requirements for piping/ equipment to satisfy needs - The optimum sized equipment, and piping size is selected. The pressure at which this equipment / pipe will operate at is confirmed <p>A professional engineering firm utilizes this information to determine pipe specification requirements to safely satisfy the maximum allowable operating pressure (MAOP). They look closely at pipe classification, crossings, pipe stresses, hydrotest requirements, terrain/ environment, and other criteria for which the pipe will be utilized, to ensure proper design detail is applied to the MAOP calculation (49CFR192). This in turn, ensures that the required pipe specifications/ wall thickness is selected for all Sections of the pipe.</p> <p>The process of determination and substantiation of the MAOP for the Wild Goose Gas Storage pipelines is as follows:</p> <p>The design operating pressure of the pipeline is determined using volume throughput, upstream pressure, desired downstream pressure, velocity restrictions, and compression requirements to optimize the pipeline diameter. With the optimal pipeline diameter determined, the pipeline wall thickness and steel yield strength are calculated to provide for the required design operating pressure by using the following design formula for steel pipe. (The actual wall thickness / yield strength combination is influenced by construction variables, material availability, and cost.)</p> <p>$P = (2 St/D) \times F \times E \times T$</p> <p><i>P</i> = Design pressure in pounds per square inch gauge. <i>S</i> = Yield strength of the steel in pounds per square inch. <i>D</i> = Nominal outside diameter of the pipe in inches. <i>t</i> = Nominal wall thickness of the pipe in inches.</p>
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			<p>E =Longitudinal joint factor (1.00 for DSAW and ERW pipe)</p> <p>T =Temperature derating factor (1.00 for 250° F or less)</p> <p>F =Design factor determined in accordance with the following:</p> <table border="1"> <thead> <tr> <th>Class location</th> <th>Design factor (F)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.72</td> </tr> <tr> <td>2</td> <td>0.60</td> </tr> <tr> <td>3</td> <td>0.50</td> </tr> <tr> <td>4</td> <td>0.40</td> </tr> </tbody> </table>	Class location	Design factor (F)	1	0.72	2	0.60	3	0.50	4	0.40
Class location	Design factor (F)												
1	0.72												
2	0.60												
3	0.50												
4	0.40												

			<p>A design factor of 0.60 or less must be used in the design formula in steel pipe in Class 1 locations that:</p> <ul style="list-style-type: none"> - Crosses the right-of-way of an unimproved public road, without a casing; - Crosses without a casing, or makes a parallel encroachment on, the right-of-way of either a hard surfaced road, a highway, a public street, or a railroad; - Is supported by a vehicular, pedestrian, railroad, or pipeline bridge; or - Is used in a fabricated assembly, (including separators, mainline valve assemblies, cross-connections, and river crossing headers) or is used within five pipe diameters in any direction from the last fitting of a fabricated assembly, other than a transition piece or an elbow used in place of a pipe bend which is not associated with a fabricated assembly. <p>For Class 2 locations, a design factor of 0.50, or less, must be used in the design formula for uncased steel pipe that crosses the right-of-way of a hard surfaced road, a highway, a public street, or a railroad.</p> <p>For Class 1 and Class 2 locations, a design factor of 0.50, or less, must be used in the design formula in for steel pipe in a compressor station, regulating station, or measuring station.</p> <p>The MAOP is obtained by dividing the pressure to which the segment was tested after construction by a factor determined in accordance with the following table:</p> <table border="1"> <thead> <tr> <th>Class location</th> <th>Factors</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.1</td> </tr> <tr> <td>2</td> <td>1.25</td> </tr> <tr> <td>3</td> <td>1.5</td> </tr> <tr> <td>4</td> <td>1.5</td> </tr> </tbody> </table>	Class location	Factors	1	1.1	2	1.25	3	1.5	4	1.5
Class location	Factors												
1	1.1												
2	1.25												
3	1.5												
4	1.5												

			<p>The test medium is water and the test is conducted in accordance with CFR 49 PART 192—TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS. The test pressure can nowhere along the pipeline exceed 100% of SMYS of the steel. The maximum allowable operating pressure cannot exceed the design pressure determined by the above design formula for steel pipe.</p> <p>The IMP was developed to address the High Consequence Area that exists along one of the pipelines WGS operates. The IMP includes the requirement to perform in line inspection on the pipeline with a smart pig tool, with intent of identifying size/ type/ location of any defects. WGS recognizes the importance of maintaining pipeline integrity, and performs periodic in line inspection on their other gas pipelines too.</p> <p>WGS carefully selects their In Line Inspection (ILI) contractors by first identifying which ones can perform the desired services and level of inspection that’s required. The contractor that’s awarded the contract is determined after going through a request for quote/ bid analysis process. Each bid is evaluated in detail, which involves discussion with each ILI company clarifying various components of their tender. Preparation of the ILI program, selection of contractor, and analysis of inspection data, is performed by WGS in conjunction with a pipeline engineering company that possesses technical experts and software that aids in the assessment.</p> <p>WGS complies with all state and federal regulations including:</p> <ul style="list-style-type: none"> - California Public Utilities Code - Department of Transportation (DOT) Regulations - Pipeline and Hazardous Materials Safety Administration - Department of Transportation, Commission and any permitting agency that could require some pipeline/ safety related actions as part of the condition for permit - We utilize GTS Engineering and Consulting services to update the IMP, and perform annual IMP review; <p>WGS’s commitment to best practices is also stated at page 5 of the EHS Handbook.</p>
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<p>-8</p>	<p>Prepare for, or minimize damage from, and respond to, earthquakes and other major events.</p>	<ul style="list-style-type: none"> - Safety Plan Table - ERP Section 6.0 and 7.0 	<p>WGS has a comprehensive ERP and provides extensive training to its employees to ensure that the response to any emergency or abnormal situation is answered in a timely and effective manner:</p> <ul style="list-style-type: none"> - ERP: <ul style="list-style-type: none"> □ Facility Sample Response Strategies – Section 6:0: provides emergency response procedures including strategies for: <ul style="list-style-type: none"> ● Loss of Well Control - Section 7.2 ● Pipeline Rupture - Section 7.3 ● Escaping Gas - Section 7.4 ● Natural Disasters - Section 7.5 ● Major Fires and Explosions - Section 7.6 □ Site Specific Information – Section 6.0: extensive evacuation procedures to ensure the timely and effective evacuation of residents within the Emergency Planning Zone and to limit damage from accidents to equipment and personnel: <ul style="list-style-type: none"> ● Emergency Control Systems - Section 6.1.2 ● Emergency Communications - Section 6.1.3 ● Safety Equipment - Section 6.1.4 ● Hazardous Materials Storage - Section 6.1.5 ● High Consequence Area - Section 6.1.10 ● Emergency Planning Zones - Section 6.1.11 - IMP: <ul style="list-style-type: none"> □ High Consequence Areas – Section 3.0 □ Threats, Data Integration, and Risk Assessment – Section 4.0 - EHS Handbook: <ul style="list-style-type: none"> □ Emergency Response Planning and Reporting –Section 5.0 □ Hazard Identification, Assessment and Control - Section 6.0 □ Fire Prevention -Section 10.10
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Wild Goose Storage, LLC – Safety Plan Table – June 30, 2013

			<p>Employee training includes emergency response table top exercises for WGS employees, including the EH&S Coordinator and Manager of WGS, and are often facilitated by professional ERP exercises facilitators and included a table top exercise.</p> <p>A tabletop exercise was held at the Biggs Gridley Memorial Hospital on June 12, 2013 and representatives from the following attended: CAL/FIRE, Butte County Sheriff's Department, the California Public Utilities Commission and the Butte County Emergency Response Coordinator.</p>
-9	<p>Meet or exceed the minimum standards for safe design, construction, installation, operation, and maintenance of gas transmission and distribution facilities prescribed by regulations issued by the United States Department of Transportation in Part 192 (commencing with Section 192.1) of Title 49 of the Code of Federal Regulations.</p>	- Safety Plan Table	<p>WGS will comply with all state and federal regulations including the California Public Utilities Code and United States Department of Transportation Regulations. WGS utilizes GTS Engineering and Consulting Services to help with their integrity management program.</p> <p>WGS IMP includes requirements for performing in-line inspections with a smart pig tool. Preparation of the InLine Inspection program, selection of contractor, and analysis of inspection data, is performed by WGS in conjunction with a pipeline engineering company.</p> <p>Please refer to the Wild Goose Storage, LLC – Safety Plan Policy signed by the President and Chief Executive Officer of the Wild Goose Storage, LLC.</p>

<p>-10 and Sec. 963 Subdivision (b)(3)</p>	<p>Ensure an adequately sized, qualified, and properly trained gas corporation workforce to carry out the plan.</p>	<ul style="list-style-type: none"> - Safety Plan Table - Operators Qualifications Table 	<p>WGS provides training and orientation to the workforce on operations, environmental, and safety matters. WGS require their workforce to comply with various policies such as the Anti-Drug and Alcohol Misuse Prevention Program and other programs detailed in the EHS handbook. The Training Matrix provides details regarding the different training given and the frequency at which they are administered.</p> <p>The WGS Engineering and Operations Manager works with Human Resources and the WGS Production Coordinator annually to assess the operational needs of the facility with a view to the safety of employees and the public.</p>
<p>-11</p>	<p>Any additional matter that the commission determines should be included in the plan.</p>	<ul style="list-style-type: none"> - Whistleblower Protection Program 	<ul style="list-style-type: none"> - Whistleblower Protection Program consists of the following: <ul style="list-style-type: none"> <input type="checkbox"/> A Whistleblower Notice posted on the main page of the Environmental, Health and Safety page of the employee intranet. <input type="checkbox"/> A Whistleblower Notice prominently placed in a location noticeable to employees at the facility. <input type="checkbox"/> An Employee Confidence Line is third party service provider that allows employees to anonymously report sensitive work related issues, including safety concerns. The service is available to all employees 24 hours a day, 365 days a year via a toll-free phone line within North America. Interpreters are available for over 150 languages. The information related to this service is provided to all employees in their new hire package and is postage in several predominant locations throughout the facility.

<p>Sec. 961 Subdivision (e)</p>	<p>The commission and gas corporation shall provide opportunities for meaningful, substantial, and ongoing participation by the gas corporation workforce in the development and implementation of the plan, with the objective of developing an industry wide culture of safety that will minimize accidents, explosions, fires, and dangerous conditions for the protection of the public and the gas corporation workforce.</p>	<p>- Safety Plan Table</p>	<p>WGS is committed to ensuring an engaged and responsive workforce to maintain the highest safety environmental standards, examples include, but are not limited to:</p> <ul style="list-style-type: none"> - Confidence Line - a well publicized third party communications program that allows employees to anonymously report sensitive work related issues - EHS Handbook - offers an extensive resource for employees on environmental and safety issues including: <ul style="list-style-type: none"> ▢ Health and Safety Meetings ▢ Health and Safety Responsibilities ▢ General Safety Practices ▢ Work Site Safety Practices ▢ Other Safety Practices <p>Employees actively participate in the update and maintenance of TIPS (Training Information Practice System) providing over 100 safe work procedures, including equipment operation safety and standards, on an accessible share drive</p>
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			<p>WGS provides to the workforce a confidence line, a third party communication program that allows employees to anonymously report sensitive work related issues. Employees are also allowed active participation in the update of the Training Information Practice System (TIPS), which provides work procedures and standards on a shared drive.</p> <p>An electronic version of the Safety Plan is available to all employees through the employee accessible intranet and hard copies are available in the control room. When the Safety Plan is reviewed annually the Engineering and Operations Manager will require employees to acknowledge via email their commitment to the Safety Plan and provide all employees with a form for feedback to the Safety Plan. The Engineering and Operations Manager is responsible for the distribution of the Safety Plan Feedback Form and will retain a log for comments and suggestions including the disposition of the comment or suggestion, with a summary of the rationale for the disposition.</p>
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ATTACHMENT B

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

PU Code Section	Requirement	GSRB's initial review of the Safety Plan if it complies with this Section of the PU Code (Y of N)	GSRB Reviewer's Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
<u>Sec. 961</u> <u>Subdivision (b)</u>					
-3	Each gas corporation shall implement its approved plan	N	The plan did not provide details on how WGS plans to implement the safety plan nor is there a policy statement regarding the implementation of the safety plan.	Wild Goose Storage, LLC – Safety Plan Policy	Please refer to the Wild Goose Storage, LLC – Safety Plan Policy signed by the President and Chief Executive Officer of Wild Goose Storage, LLC.

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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-4	The commission shall require each gas corporation to periodically review and update the plan	N	Although the review frequency for which the different incorporated plans are mentioned, the safety plan did not provide details on how often the overall plan would be reviewed.	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan.	<p>The Safety Plan as a whole is reviewed annually by the EH&S Coordinator, Engineering & Operations and the Production Coordinator of Wild Goose Storage, LLC.</p> <p>In addition the various components of the Safety Plan are reviewed as follows:</p> <ul style="list-style-type: none"> (1) The Emergency Response Plan (ERP) is reviewed annually by the EH&S Coordinator. (2) The Integrity Management Plan (IMP) is reviewed annually by Engineering and Operations department. (3) The Operator Qualification for Pipeline Personnel (OQPP) is reviewed annually by Engineering and Operations. (4) The Operator Qualifications are reviewed every three years by Engineering and Operations department in accordance with Department of Transportation regulations. (5) The Operations & Maintenance Manual (O&MM) is reviewed annually by Engineering and Operations department. (6) The Control Room Management Plan (CRM) is reviewed annually by Engineering and Operations department. (7) The Whistleblower Protection Program is updated in accordance with PUC requirements. (8) The Health, Safety and Environmental Policy reviewed annually by the EH&S Coordinator. (9) The Public Awareness Program is reviewed annually by the EH&S Coordinator.

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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<p><u>Sec. 961 Subdivision (c)</u></p>	<p>The plan developed, approved, and implemented pursuant to subdivision (b) shall be consistent with best practices in the gas industry and with federal pipeline safety statutes as set forth in Chapter 601 (commencing with Section 60101) of Subtitle VIII of Title 49 of the United States Code and the regulations adopted by the United States Department of Transportation pursuant to those statutes.</p>	<p>N</p>	<p>The safety plan did not provide details on how operator stays informed on industry best practices or how its confirms that its operations, maintenance, and emergency response processes, procedures, and standards conform with or differ from national and statewide industry trends for similar operations.</p>	<p>As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan,</p>	<p>WGS's Environmental Health and Safety Handbook (EHS Handbook) specifies that WGS is committed to best practices.</p> <p>Regulatory counsel Goodin, MacBridge, Squeri, Day & Lamprey, LLP is permanently retained to provide WGS with any and all relevant state regulatory updates.</p> <p>WGS works with consultants, regulators and contractors every day to continually engage in best practices. WGS notes that the gas storage industry is challenged in this regard as every plant has very specific attributes and can ultimately run very differently depending on a wide variety of factors.</p>

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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<p><u>Sec. 961 Subdivision (d)</u> -1 and -2</p>	<p>Identify and minimize hazards and systemic risks in order to minimize accidents, explosions, fires, and dangerous conditions, and protect the public and the gas corporation workforce.</p> <p>Identify the safety-related systems that will be deployed to minimize hazards, including adequate documentation of the commission-regulated gas pipeline facility history and capability.</p>	<p>Y</p>	<p>WGS reference their IMP as the main driver for identifying the hazards associated with their system. The Program Management and Quality Assurance section of the IMP provides details for submitting annual reports, record keeping, and IM program review. Some mitigative measures include installing cathodic protection, reporting safety related conditions and reduction of pressures.</p> <p>The Safety Plan references the IMP Preventative and Mitigative Measures Section which details the different measures taken by WGS to minimize systemic risks such as third party damage, outside force, and corrosion threats. WGS also provide their workforce with an online database and Section 12 of the ERP which deals extensively with hazardous materials used in their operations.</p>	<p>As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan, as well as the Table of Concordance – IMP Section 5,7, 8, 17 – Control Room Management Plan.</p> <p>Table of Concordance – IMP Section 6 – ERP Section 7 and 12</p>	<p>The IMP is an important system for WGS to identify the hazards associated with their system. The Program Management and Quality Assurance section of the IMP provides details for submitting annual reports, record keeping, and IM program review. Some mitigation measures include installing cathodic protection, reporting safety related conditions and reduction of pressures.</p> <p>WGS's Operator Qualifications Table (as previously submitted) illustrate that WGS has employees that are qualified for tasks that are directly related to the identification of hazards, including the following Covered Tasks: Valve Inspection, Pressure Vessel Inspection & Repair, Control Room Operations of a Pipeline, Gas Leak Survey, Prevention of Accidental Ignition, and Gas Detection and Alarms.</p> <p>In addition, the WGS Training Matrix (as previously submitted) includes the following topics which also address hazard identification: Fire Protection and Prevention, Hazard Communication, Injury and Illness Prevention Plan, Machine Guarding, Personal Protective Equipment and Respiratory Protection.</p> <p>The WGS CRM Plan also deals extensively with the identification of hazards as well as safety -related systems to minimize hazards. Specifically:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Section III: ensure control room staff know roles and responsibilities <input type="checkbox"/> Section IV and VI: adequately spaced shift change ensures alertness when monitoring SCADA system by avoiding fatigue <input type="checkbox"/> Section VII: Management of incoming alarms <input type="checkbox"/> Section VIII: ensure changes to system settings are well documented <input type="checkbox"/> Sections IX and X: ensure personnel working in control room have proper experience and training <p>Section 7.0 of the WGS ERP identifies specific emergency response procedures for: Facility process fires, Loss of well control, Pipeline rupture, Escaping gas including gas detected inside a building, Natural disasters, Major</p>

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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					fires & explosions, Civil disturbance. In addition, annual site inspections are conducted by the EH&S Coordinator where deficiencies, if any, are identified, risk ranked for severity and probability, mitigative actions, persons responsible for addressing the issue and dates that each finding is to be addressed by.
-3	Provide adequate storage and transportation capacity to reliably and safely deliver gas to all customers consistent with rules authorized by the commission governing core and noncore replacement, preventive maintenance, and reactive maintenance and repair of its commission-regulated gas pipeline facility.	Y	WGS Engineering and Operations group are responsible for monitoring reservoir capacity, well behavior, and pipeline operating conditions. The group is also responsible for communicating with the transmission company. The Operations group also implements a preventative maintenance program to reduce risk of equipment failure.	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan and the CRM and IMP, as well as the previously submitted Table of Concordance and Introduction.	<p>WGS Engineering and Operations group are responsible for monitoring reservoir capacity, well behavior, and pipeline operating conditions. The group is also responsible for communicating with the transmission company to attain details and understanding pertaining to daily operations as well as information pertaining to upcoming transmission line outages and maintenance. The Operations group also implements a preventative maintenance program to reduce risk of equipment failure.</p> <p>CRM Plan:</p> <ul style="list-style-type: none"> □ Section III: Roles and Responsibilities <p>IMP:</p> <ul style="list-style-type: none"> □ Section 7.3: Management of Change □ Section 7.4: Internal and External Communications

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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-4	Provide for effective patrol and inspection of the commission-regulated gas pipeline facility to detect leaks and other compromised facility conditions and to effect timely repairs	N	The safety plan did not provide details regarding other activities such as patrolling, leak surveys, corrosion monitoring, etc.; how the activities are performed, frequency, and response efforts. The IMP Section 4 covers the identification of threats but does not cover mitigation activities.	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan, the IMP and O&MM.	<p>Section 4 of the IMP provides details of the process for threats identification and detection of leaks.</p> <p>In addition, WGS completes the following:</p> <ul style="list-style-type: none"> ☐ An aerial survey of the complete WGS system every two weeks ☐ Weekly drive by inspection of remote locations ☐ Ionized gas detection on the High Consequence Area which includes a walk around with a flame ionization unit, conducted at least every 6 months depending on weather and land conditions ☐ Various forms referenced at Appendix 1 of the O&MM to detail any reported leak including: <ul style="list-style-type: none"> ○ WGS Form 100: Incident and Service Interruption Report ○ WGS Form 101: Notice and Disposition of Reported Incident ○ WGS Form 108: Safety Related Condition Report ○ WGS Form 109: Pipeline Leak Repair Report ○ WGS Form 115: Leak Investigation Report ☐ A Smart pig run InLine Inspection survey every seven years on the High Consequence Area line

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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-5	Provide for appropriate and effective system controls, with respect to both equipment and personnel procedures, to limit the damage from accidents, explosions, fires, and dangerous conditions.	N	The safety plan did not provide details regarding the system the operator has in place for monitoring and maintaining pipeline pressure including use of remote monitoring.	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan.	<p>1) Preventative - WGS has the following in place to prevent accidents, explosions, fires and dangerous conditions:</p> <ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> <input type="checkbox"/> Threats, data integration, and risk assessment – Section 4 <input type="checkbox"/> Preventive and mitigative measures (measures for 3rd party, outside force and corrosion threats) – Section 6 - CRM: <ul style="list-style-type: none"> <input type="checkbox"/> Understanding roles and responsibilities – Section III - O&MM: <ul style="list-style-type: none"> <input type="checkbox"/> Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Damage prevention – Section 2.8 ● Operating within maximum allowable operating pressure - Section 2.10 ● Pipeline isolation with lock and tagout – Section 2.12 <input type="checkbox"/> Pipeline purging – Section 2.16 <ul style="list-style-type: none"> ● Pipeline Maintenance – Section 3.0 ● Corrosion control – Section 3.5 ● Valve inspection – Section 3.16 - OQPP – Section 3 <ul style="list-style-type: none"> <input type="checkbox"/> Task identification and analysis - training programs in the Training Matrix (previously submitted) are geared towards prevention and monitoring, such as rectifier inspection, external pipe surface inspection, maintain valves, gas leak survey) - EHS Handbook: <ul style="list-style-type: none"> <input type="checkbox"/> Guidance for hazard identification – Section 6 <input type="checkbox"/> Fire prevention – Section 10.10 - 10.14 <input type="checkbox"/> Fall protection - Section 9.11 <input type="checkbox"/> Each WGS employee must successfully complete a comprehension test on the EHS Handbook

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					<p>2) Monitoring - WGS has the following in place to monitor potential accidents, explosions, fires and dangerous conditions:</p> <p>- IMP:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Integrity assessment: baseline; continual evaluation; condition discovery; classification of anomalies – Section 5 <input type="checkbox"/> Program management: performance measures; record keeping; MOC; communications – Section 7 <input type="checkbox"/> Quality Assurance: program documentation; ensuring properly trained personnel and 3rd party contractors / inspectors; clear/concise roles and responsibilities – Section 8 <p>- CRM:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Alarm management – Section VII <ul style="list-style-type: none"> ● Control Room systems allow for constant monitoring of all systems and alerts WGS personnel immediately when there is a failure of any kind <input type="checkbox"/> Change management – Section VIII <ul style="list-style-type: none"> ● the Control Room Management Plan governs the procedures to be taken in the event any failure is detected, giving guidance to personnel on next steps <p>- O&MM:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Ongoing surveillance – Section 2.7 <input type="checkbox"/> Pipeline Maintenance – Section 3.0 <ul style="list-style-type: none"> ● Leak surveys – Section 3.6 ● Pipeline patrol – Section 3.9 <p>OQPP:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Task identification and analysis – Section 3

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					<p>3) Mitigation - WGS has the following in place to mitigate any possible accidents, explosions, fires and dangerous conditions:</p> <ul style="list-style-type: none"> - IMP: <ul style="list-style-type: none"> ☐ Integrity assessment - remediation schedule – Section 5 ☐ Preventive and mitigative measures - dealing with incidents associated with 3rd party, outside force and corrosion; safely and efficiently shutting down pipeline system – Section 6 - CRM: <ul style="list-style-type: none"> ☐ Fatigue Mitigation – Section VI - O&MM <ul style="list-style-type: none"> ☐ Normal Operations – Section 2.0 <ul style="list-style-type: none"> ● Investigation of failures / incidents – Section 2.3 ● Incident reporting – Section 2.2 ☐ Pipeline Maintenance – Section 3.0 <ul style="list-style-type: none"> ● Inactivation of facilities – Section 3.1 ● Blowdown of pipelines – Section 3.2 ● Clearing pipeline freezes – Section 3.3 ☐ Abnormal operations – Section 4.0 <ul style="list-style-type: none"> ● Pressure increase / decrease – Sections 4.4 & 4.5 ● Flowrate increase / decrease – Sections 4.2 & 4.3 ● Pipeline shutdown, valve closure – Sections 4.6 & 4.7 - Emergency response <ul style="list-style-type: none"> ● ERP provides specific information on emergency control systems, emergency communications, safety equipment and hazardous materials storage – Section 6.0 ● WGS Incident Investigation and Reporting Guideline specifically identifies what type of incidents are to be reported, including Reporting Near Miss Incidents - EHS Handbook: <ul style="list-style-type: none"> ● Emergency Response Planning and Reporting which includes Incident Reporting – Section 5.2 and Near Miss Reporting - Section 5.3

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

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-6	Provide timely response to customer and employee reports of leaks and other hazardous conditions and emergency events, including disconnection, reconnection, and pilot-lighting procedures.	N	The safety plan did not provide details of the processes for receiving and responding to reports of gas leaks, including resources available to the operator's workforce for reporting a hazard or abnormal conditions.	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan the ERP and the O&MM.	<p>The WGS ERP includes extensive evacuation procedures and details on how to limit damage from accidents specifically at section 9.0 which outlines Evacuation Centers, Evacuation Criteria, Evacuation Procedures and Facility Evacuation. In addition the ERP at section 12.0 outlines Hazardous Materials Information and at section 13.0 includes information on Post Emergency Response Procedures, Post Incident Appraisal, and Critical Incident Stress Management.</p> <p>In the event of a report of a leak or incident of any kind, WGS dispatches the appropriate person(s) to investigate immediately. Depending on the result of this initial investigation, further action is taken as required.</p> <p>Various forms referenced at Appendix 1 of the O&MM to detail any reported leak including:</p> <ul style="list-style-type: none"> ☐ WGS Form 100: Incident and Service Interruption Report ☐ WGS Form 101: Notice and Disposition of Reported Incident ☐ WGS Form 108: Safety Related Condition Report ☐ WGS Form 109: Pipeline Leak Repair Report ☐ WGS Form 115: Leak Investigation Report
-7	Include appropriate protocols for determining maximum allowable operating pressures on relevant pipeline segments, including all necessary documentation affecting the calculation of maximum	Y	WGS used various data such as pressure of the reservoir, the transmission company’s operating pressure, and hydraulic study of the pipe system during the design stage to determine operating pressures. Utilizing a professional engineering firm, WGS looked at different factors such as pipe classification, crossings, pipe stress, hydrotest requirements, environment	As per this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan, the IMP and O&MM, and as per the previously submitted Table of Concordance	<p>WGS used various data such as pressure of the reservoir, the transmission company's operating pressure, and hydraulic study of the pipe system during the design stage to determine operating pressures. Utilizing a professional engineering firm, WGS looked at different factors such as pipe classification, crossings, pipe stresses, hydrotest requirements, environment and other criteria to determine the maximum allowable operating pressure (MAOP) as required by 49 CFR 192.</p> <p>The design operating pressure is determined using volume throughput, upstream pressure, desired downstream pressure, velocity restrictions, and compression requirements. The MAOP is determined using the calculations as prescribed in CFR 49 Part 192.</p>

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

PU Code Section	Requirement	GSRB’s initial review of the Safety Plan if it complies with this Section of the PU Code (Y of N)	GSRB Reviewer’s Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
	allowable operating pressures.		and other criteria to determine the maximum allowable operating pressure (MAOP) as required by 49 CFR 192. Update 08/24/2012: The design operating pressure is determined using volume throughput, upstream pressure, desired downstream pressure, velocity restrictions, and compression requirements. The MAOP is determined using the calculations as prescribed in CFR 49 Part 192.		<p>Specific references include:</p> <p>O&MM:</p> <ul style="list-style-type: none"> ☐ Class Locations – Section 2.4 ☐ Maximum Allowable Operating Pressures – Section 2.10 ☐ Pressure Piping Materials - Section 2.14 ☐ Operating Pressure Limits During Maintenance and Repair – Section 3.8 ☐ Record Keeping – Section 3.12 ☐ Repair Procedures and Documentation for Gas Transmission Pipelines – Section 3.13 ☐ Testing Requirements – Section 3.15 <p>IMP:</p> <ul style="list-style-type: none"> ☐ Covered Pipeline System - Section 2.1 ☐ Maintenance and Operating Data Sources - Section 3.2.1 ☐ Prescriptive Program Data Elements – Section 4.2.4 ☐ Baseline Assessment – Section 5.1.2 ☐ Threats and Integrity Assessment Methods – Section 5.2.2 ☐ Immediate Repair Conditions - 5.5.1 ☐ Management of Change – Section 7.3.1

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-8	Prepare for, or minimize damage from, and respond to, earthquakes and other major events.	Y	As part of their ERP, WGS provides training to its employees in responding to an emergency. Section 7 of the ERP provides various response strategies including loss of well control, pipeline rupture, escaping gas, natural disasters, and major fires and explosions. Section 6 of the ERP provides site specific information including specific emergency response information.	The previously submitted Table of Concordance, this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan and sections 6 and 7 of the ERP.	<p>As part of their ERP, WGS provides training to its employees in responding to events. Section 7 of the ERP provides various response strategies including loss of well control, pipeline rupture, escaping gas, natural disasters, and major fires and explosions. Section 6 of the ERP provides site specific information including specific emergency response information.</p> <p>Part of this training includes emergency response table top exercises for WGS employees, including the EH&S Coordinator and Manager of WGS, and are facilitated by professional ERP exercises facilitators and will include a full scale table top exercise at the Gridley Hospital. The next tabletop exercise is scheduled for June 12, 2013 and representatives from the following have been invited: CAL/FIRE, Butte County Sheriff's Department, Colusa County Sheriff's Department, the Butte County Emergency Response Coordinator and the California Public Utilities Commission.</p>

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

PU Code Section	Requirement	GSRB’s initial review of the Safety Plan if it complies with this Section of the PU Code (Y of N)	GSRB Reviewer’s Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
-9	Meet or exceed the minimum standards for safe design, construction, installation, operation, and maintenance of gas transmission and distribution facilities prescribed by regulations issued by the United States Department of Transportation in Part 192 (commencing with Section 192.1) of Title 49 of the Code of Federal Regulations.	N	The plan needs to include a high level policy statement that WGS endeavors to design, construct, install, operate, and maintain its gas pipeline facilities must meet or exceed the regulations. The statement must be reviewed, approved, and signed by an Officer of WGS.	Previously submitted Table of Concordance and the Wild Goose Storage, LLC – Safety Plan Policy.	<p>WGS is in compliance with all state and federal regulations including the California Public Utilities Code and United States Department of Transportation Regulations. WGS utilizes GTS Engineering and Consulting Services to help with their integrity management program.</p> <p>WGS IMP includes requirements for performing in-line inspections with a smart pig tool. Preparation of the InLine Inspection program, selection of contractor, and analysis of inspection data, is performed by WGS in conjunction with a pipeline engineering company.</p> <p>Please refer to the Wild Goose Storage, LLC – Safety Plan Policy signed by the President and Chief Executive Officer of Wild Goose Storage, LLC.</p>
-10 and Sec. 963 Subdivision (b)(3)	Ensure an adequately sized, qualified, and properly trained gas corporation workforce to carry out the plan.	N	The safety plan did not incorporate the Operator Qualification Plan as the means for ensuring qualified and properly trained workforce.	Previously submitted Table of Concordance; Operator Qualification Plan now incorporated in the Safety Plan.	<p>WGS provides training and orientation to the workforce on operations, environmental, and safety matters. WGS require their workforce to comply with various policies such as the Anti-Drug and Alcohol Misuse Prevention Program and other programs detailed in the EHS handbook. The Training Matrix (as previously submitted), provides details regarding the different training given and the frequency at which they are administered.</p> <p>The WGS Engineering and Operations Manager works with Human Resources and the WGS Production Coordinator annually to assess the operational needs of the facility with a focus on the safety of employees and the public.</p>

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

PU Code Section	Requirement	GSRB's initial review of the Safety Plan if it complies with this Section of the PU Code (Y of N)	GSRB Reviewer's Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
-11	Any additional matter that the commission determines should be included in the plan.	N	Did not meet criterion	Wild Goose Storage, LLC Whistleblower Protection Program	<p>The Wild Goose Whistleblower Protection Program consists of the following:</p> <ul style="list-style-type: none"> □ A Whistleblower Notice posted on the main page of the Environmental, Health and Safety page of the employee intranet. □ A Whistleblower Notice prominently placed in a location noticeable to employees at the facility. □ An Employee Confidence Line is third party service provider that allows employees to anonymously report sensitive work related issues, including safety concerns. The service is available to all employees 24 hours a day, 365 days a year via a toll-free phone line within North America. Interpreters are available for over 150 languages. The information related to this service is provided to all employees in their new hire package and is postage in several predominant locations throughout the facility.

Wild Goose Storage, LLC – Safety Plan – Compliance with Decision 12-12-009

PU Code Section	Requirement	GSRB's initial review of the Safety Plan if it complies with this Section of the PU Code (Y of N)	GSRB Reviewer's Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
Sec. 961 Subdivision (e)	The commission and gas corporation shall provide opportunities for meaningful, substantial, and ongoing participation by the gas corporation workforce in the development and implementation of the plan, with the objective of developing an industry wide culture of safety that will minimize accidents, explosions, fires, and dangerous conditions for the protection of the public and the gas corporation workforce.	N	The safety plan did not provide details on how operator engages its workforce by providing them with access to the Safety Plan and to allow for feedback. The safety plan also did not provide details on how comments/feedback are received, tracked, reviewed, and considered.	Previously submitted Table of Concordance and this table addressing deficiencies which forms part of the Wild Goose Storage, LLC Safety Plan.	<p>WGS provides to the workforce a confidence line, a third party communication program that allows employees to anonymously report sensitive work related issues. Employees are also allowed active participation in the update of the Training Information Practice System (TIPS), which provides work procedures and standards on a shared drive.</p> <p>An electronic version of the Safety Plan is available to all employees through the employee accessible intranet and hard copies are available in the control room. When the Safety Plan is reviewed annually the Engineering and Operations Manager will require employees to acknowledge via email their commitment to the Safety Plan and provide all employees with a form for feedback to the Safety Plan. The Engineering and Operations Manager is responsible for the distribution of the Safety Plan Feedback Form and will retain a log for comments and suggestions including the disposition of the comment or suggestion, with a summary of the rationale for the disposition.</p>

ATTACHMENT C

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



June 27, 2013

Subject: Filing of Gas Safety Plans

Dear Mr. Dupere,

The Safety and Enforcement Division, Gas Safety and Reliability Branch (GSRB) has reviewed the revisions made to Wild Goose Gas Storage's (Wild Goose) Safety Plan to resolve all deficiencies per the requirements of Ordering Paragraph 3 (OP.3) of Commission Decision 12-12-009.

Based on its review, GSRB believes the revisions adequately address the deficiencies and that Wild Goose may now file its revised Safety Plan with all the required company official's and management signatures. As a reminder, a separate table summarizing the changes made with the following information must be included in the final filing:

PU Code section	Requirement	GSRB's initial review of Safety Plan if it complies with this Section of the PU Code (Y or N)	GSRB Reviewer's Comments during the initial review	Specific section in the REVISED Safety Plan that addresses revisions made to meet the PU Code Section	Summary of the REVISED Safety Plan that addresses this PU Code Section
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Should you have any questions related to this matter, please contact at Aimee Cauguiran at (415) 703-2055 or by e-mail at (aimee.cauguiran@cpuc.ca.gov).

Sincerely,

Michael Robertson, Program Manager
Gas Safety and Reliability Branch

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20. Appendix 20 - Safety Plan Feedback Form
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Wild Goose Storage LLC

Safety Plan Policy

Wild Goose Storage, LLC (WGS) is committed to the safe and reliable operation of its facilities and confirms that the safety of the public and our employees is the company's top priority.

The Wild Goose Safety Plan includes the following:

- Integrity Management Plan - WGS's Pipeline Integrity Management Program and the processes used to maintain compliance with Department of Transportation 49 CFR 192, Subpart O Pipeline Integrity Management.
- Operations and Maintenance Manual - basic operating, maintenance and inspection procedures for natural gas pipelines and associated facilities and includes instructions necessary for compliance with Department of Transportation regulations.
- WGS Emergency Response Plan – emergency response procedures to ensure response to emergencies is timely, effective and minimizes loss and to enhance the safety of the public, public property, WGS personnel, the environment and WGS operations.
- Control Room Management Plan - roles and responsibilities of WGS controllers working in the control room and how they will monitor and control the pipeline.
- Health, Safety and Environmental Handbook - minimum standards for safety and supplements federal Occupational Safety and Health Administration Regulations and Codes.
- As well as additional documents, policies and procedures that WGS uses to continually maintain extremely high safety standards.

WGS, and specifically its management team, emphatically approves the WGS Safety Plan and all of its components and commits to ensuring the WGS Safety Plan will be reviewed annually. The components of the WGS Safety Plan have all been implemented and are currently being adhered to by WGS.

WGS endeavors to meet or exceed the minimum standards for safe design, construction, installation, operation and maintenance of our facilities.

WGS will comply with all applicable state and federal health, safety and environmental laws and regulations related to our business, including the California Public Utilities Code and United States Department of Transportation Regulations.

WGS will provide continual training and orientation to the workforce on operations, environmental and safety matters. In addition, WGS reviews its manpower plan annually and compares it with operational requirements to ensure an adequately sized, qualified and properly trained gas corporation workforce to carry out the WGS Safety Plan.

WGS will make the WGS Safety Plan available to employees in both electronic and hard copy formats and as part of the annual review of the WGS Safety Plan invites employees to provide comments and suggestions and WGS retains a log of those comments and suggestions, including the disposition of the comment or suggestion.

Whistleblower notices are posted at prominent locations throughout the facility as well as on the main page of the Environmental, Health and Safety page of the employee intranet.

WGS shall strive to protect the health and safety of employees, the public and the environment through the WGS Safety Plan.

Simon Dupéré
President and Chief Executive Officer
Wild Goose Storage, LLC
June 2013



Corporate Emergency Response Plan

*including **

Site Specific Emergency Response *
Information *

*For **

*USA * Operations*

Wild Goose Storage *

*

Copy # * *

*

*

Developed 2008 *
Rev. June 2012 *

Remember! *

In any emergency: *

Safety *

- * * *Ensure no further danger to yourself or others; * *
do not rush in. **
- * * *Stay calm ≠ think clearly ≠ act with caution. **
- * * *Warn others at or near the scene who may be at risk. **
- * * *Determine injuries. **

Isolation *

- * * *Isolate energy sources, if possible. **
- * * *Determine what happened. **

Notification *

- * * *Sound warning alarm(s), if applicable. **
- * * *Report the incident to the Niska Facility Control Room ≠ *
request First Aid assistance if required. **
- * * *Move to a safe location ≠ upwind and/or away from *
the scene. **

*

Niska Gas Storage Corporate Emergency Response Plan (Wild Goose Operations) *

Quick Phone List *

Niska Gas Storage Calgary Head Office *
 400, 607 8th Avenue, S.W., Calgary, AB * * T2P7**
 Phone # 403 513 8600 *www.niskapartners.com * *

Corporate Emergency Operations Center (CEOC) * 403 513 8691; Fax: 1 866 871 6417 *

24 Hr. Phone: 1 * *866*710*3726

Fax: 403 * *263*77 *

Corporate Position *	Contact *	Business *	Residence *	Cellular *
President, CEO & COO *	Simon Dupere *	403 * *513*8709	403 * *663*2177	403 * *803*8904
Executive VP *	Rick Staples *	403 * *513*8616	403 * *284*1575	403 * *560*9272
VP, General Counsel & * Corporate Secretary *	Jason Dubchak *	403 * *513*8647	403 * *209*2878	403 * *681*1587
Chief Financial Officer *	Vance Powers *	403 * *513*8724	4610 * *285*2434	4610 * *207*2926
EHS & S Coordinator *	Kelly Baltimore *	403 * *513*8663	403 * *912*5106	403 * *988*7041
Manager Engineering & * Ops * *	Gary Theberge *	403 * *513*8631	403 * *460*0068	403 * *863*8586
Drilling & Completion * Specialist *	John Craig *	403 * *513*8708	403 * *242*7977	403 * *540*0922
Facility Engineering *	John Shelford * Swift Engineering *	403 * *705*4800	Not Available *	403 * *804*4949
Legal Counsel *	Lawna Hurl *	403 * *513*8680	403 * *282*4674	4587 * *228*6856
Vessel Inspection *	Izak Roux P. Eng. * RAE Engineering and * Inspection Ltd. *	780 * *469*2401	*	780 * *405*2512
QA/QC Inspector *	Stephen Comstock *	403 * *544*5129	403 * *527*2479	403 * *581*8527
Wild Goose Gas Storage Facility 24 Hour Emergency Number: 1 * *866*940*7351				
Production Coordinator *	Pat Baynard *	530 * *846*7385	530 * *363*0032	2530 * *363*0032

Niska Gas Storage Corporate Emergency Response Plan (Wild Goose Operations) *
Distribution List *

*

Corporate Position *	Recipient *	Location *	Copy # *
Niska Field Personnel *			
Operations and Maintenance * Coordinator *	Pat Baynard *	Wild Goose *	2 *
Wild Goose Office *	Spare *	Wild Goose *	3 *
Niska Calgary Personnel *			
President, CEO & COO *	Simon Dupere *	Calgary *	5 & 6 *
Executive VP *	Rick Staples *	Calgary *	27 *
Chief Financial Officer *	Vance Powers *	Calgary *	29 *
EHS & S Coordinator *	Kelly Baltimore *	Calgary *	7 & 8 *
Legal Counsel *	Lawna Hurl *	Calgary *	9 *
Manager Engineering & Ops *	Gary Theberge *	Calgary *	10 * & * 12 *
VP, General Counsel & Corporate * Secretary *	Jason Dubchak *	Calgary *	11 *
Calgary Office *	Emergency Operations * Centre *	Bow Island Work * Room *	28 *
Calgary Office *	Spares *	EHS & S Calgary *	1, 4, * 26 *
External Agencies *			
CAL * * Fire Butte County Fire Dept. * 176 Nelson Ave. * Oroville CA 95965 *	Michael G. Brown *	Battalion Chief * Oroville CA *	13 *
	Sean Norman *	Fire Captain * Gridley *	14 *
	Todd Findill *	Fire Captain * Biggs *	15 *
	Russ Fowler *	Battalion Chief * Chico & Kelly * Ridge *	16 *

	Darren Read *	Battalion Chief * Durham *	17 *
	Skip Sannar *	Fire Captain * Gridley *	18 *
	Steve Emerick *	Assistant Chief * Oroville *	19 * & * 23 *
California Public Utilities Commission * (CPUC) * Consumer Protection and Safety Div * Utility Safety and Reliability Branch * 505 Van Ness Avenue, Room 2 * *D San Francisco, CA 94102 * *3298 Ph: (415) 703 * *1555 Fax: (415) 703 * *1891 Cell: (415) 203 * *5836 E * *mg@cpuc.ca.gov *	George Carter *Utilities * Engineer *	San Francisco, CA *	20 *
Butte County *Environmental Health * Division * 202 Mira Loma Drive * Oroville, CA 95965 * Ph: (530) 538 * *7281 e * *m@buttecounty.net *	Danelle Ellis *	Oroville, CA *	21 *
Butte County *Office of Emergency * Services * 25 County Center Drive * Suite 200 * Oroville, CA 95965 * Ph: (530) 538 * *7373 Fax: 530 * *53820 * Cell: 530 * *624*6356 e * *m@buttecounty.net *	John Gulserian *Emergency * Services Officer *	Oroville, CA *	22 *
Colusa County Sheriff *Coroner * 929 Bridge St * Colusa, CA 95932 * Dispatch: (530) 458 * *0200 Office: (530) 458 * *0230 e * *m@colusasheriff.com *	Lt. Russ Jones *Support * Services *	Colusa, CA *	24 *

Shepherd Risk and Safety Advocates * LLC * 47765 Pansy St * Indio, California * * 92201 Ph: (760) 702 * * 2310 Fax: (760) 347 * * 0715 pipestr@hotmail.com *	Gary Shepherd ± Safety * Consultant *	Indio, CA *	25 *
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Niska Gas Storage Corporate Emergency Response Plan (Wild Goose Operations) *
Revision Record *

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Date *	Revision (Page #) *	Approved By *	Inserted * (*) *
August 2010 *	*	*	*
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*

Acronym Key *

ACGIH *	American Conference of Governmental Industrial Hygienists. * * This group is best known for developing TLV's for occupational chemical exposures. *
AGA *	American Gas Association *
AHM *	Acutely Hazardous Material (CH & SC Sec. 25532 et seq.) *
ANSI *	American National Standards Institute *
API *	American Petroleum Institute *
APWA *	American Public Works Association *
ASME *	American Society of Mechanical Engineers *
ASTM *	American Society for Testing and Materials *
BLEVE *	Boiling * * liquid expanding * * vapor explosion. The possible result of a * Complex sequence of event involving the impingement of flame on the * exterior of a container of liquefied gas. *
Cal EPA *	California Environmental Protection Agency. * * Formerly * Environmental Affairs Agency; was expanded in 1991 to include the * Department of Toxic Substances Control (formerly DHS * * TSCA), the Air * Resources Board, the State Water Resources Control Board, the * Regional Water Quality Control Boards, the Integrated Waste * Management Board, the Department of Pesticide Regulation, and the * Office of Health Risk Assessment. *
Cal OSHA *	California Division of Occupational Safety and Health Administration. * in the Department of Labor. *
CAS *	Chemical Abstract Service *
CCR *	California Code of Regulations (formerly California Administrative * Code) *
CEOC *	Corporate Emergency Operations Center *
CEPRC *	Chemical Emergency Planning and Response Commission (California). *
CERCLA *	Comprehensive Environmental Response, Compensation, and Liability * * Act of 1980 *
CFR *	Code of Federal Regulations *
CHEMTREC *	Chemical Transportation Emergency Center *
CHRIS *	Chemical Hazards Response Information System *
CMA *	Chemical Manufacturers Association *
CMT *	Crisis Management Team *
CPUC *	California Public Utilities Commission *
CUPA *	Certified Unified Program Agency *

CWA *	Clean Water Act *
DOHS *	Department of Health Services (California; a.k.a. CDHS;DHS;SDOHS). *
DOT *	Department of Transportation (Federal agency) *
EOC *	Emergency Operations Center *
EOC *	Off * *Site Emergency Operations Center (government) *
EPZ *	Emergency Planning Zone *
ERP *	Emergency Response Plan *
ERT *	Emergency Response Team *
ESD *	Emergency Shutdown *
FEMA *	Federal Emergency Management Agency *
GECC *	Government Emergency Command Center *
HAZMAT *	Hazardous Materials *
HAZWOPER *	Hazardous Waste Operations and Emergency Response 29 CFR * 1910.120. *
HCS *	Hazard Communication Standard (HAZCOM) *
HVP *	High Vapor Pressure liquid *
IC *	Incident Commander *
IC2 *	Deputy Incident Commander *
ICS *	Incident Command System. The organizational arrangement by which * one person, normally the Fire Chief of the impacted district, is in charge * of both an integrated, comprehensive emergency response * organization and the emergency incident site and is backed by an * Emergency Operations Center staff with resources, informational, and * advice. *
ICS/NIMS *	Incident Command System / National Incident Management System *
ICT *	Incident Command Team *
IDLH *	Immediately Dangerous to Life or Health *
LEL *	Lower explosive limit or lower flammable limit (LFL). By percentage, * the lowest concentration of a substance in air, which will ignite. *
LEPC *	Local Emergency Planning Committee *
LFL *	See LEL *
LPG *	Liquefied Petroleum Gas *
MSDS *	Material Safety Data Sheet *
NACE *	National Association of Corrosion Engineers *
NCRIC *	National Chemical Response and Information Center *

NFPA *	National Fire Protection Association *
NGL *	Natural Gas Liquids *
NGPSA *	Natural Gas Pipeline Safety Act of 1968 *
NIOSH *	National Institute of Occupational Safety and Health *
NRC *	National Response Center *
NRT *	National Response Team *
OES *	Governor's Office of Emergency Services *
OPS *	Office of Pipeline Safety *
OSCP *	On * *Site Command Post *
OSHA *	Occupational Safety & Health Administration (Federal). *
PPB *	Parts per Billion *
PPM *	Parts per million *
SARA *	Superfund Amendments and Reauthorization Act of 1986 *
SERC *	State Emergency Response Commission *
SMYS *	Specified Minimum Yield Strength *
SPCC *	Spill prevention, control, and countermeasures plan (from CWA). *
STEL *	Short Term Exposure Limit *
TLV *	Threshold Limit Value *
TPQ *	Threshold planning quantity (from EPCRA). * Quantity designated for * each chemical on the list of extremely hazardous substances that * triggers notification by facilities to the State Emergency Response * Commission that such facilities are subject to emergency planning * requirements under SARA Title III. *
TSI *	Transportation Safety Institute *
TWA *	Time * *Weighted Average *
U.S. EPA *	United States Environmental Protection Agency *
UEL *	Upper explosive limit or upper flammable limit (UFL). The maximum * percentage of substance in air which will ignite. (See also LEL). *
UFC *	Uniform Fire Code *
UFL *	Upper Flammable Limit *
ULCC *	Utility Location and Coordination Council *
USCG *	U.S. Coast Guard *
WCB *	Workers Compensation Board *

*

1.0 * Introduction *

An **emergency** is a present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety, and welfare of people and to limit damages to property and the environment. *

Niska Gas Storage operates the Wild Goose Gas Storage (WGS) Facility in Gridley California with the utmost safety in mind. * * As a result, the possibility of a harmful release of substances occurring is extremely remote. * Nevertheless, Niska has prepared this Emergency Response Plan (the Niska ERP) to assist its operations with an emergency response within the Niska facilities. *

1.1 * Plan Purpose *

The purpose of this Emergency Response Plan (ERP) is to ensure response to emergencies is timely, effective, and minimizes loss at Niska's Wild Goose Storage Facility. * * Specifically, WGS ERP is intended to: *

- * * Enhance the safety of the public, public property, WGS personnel, the environment and corporate facilities. *
- * * Provide WGS personnel with established procedures to:
 - o * Notify WGS Emergency Response Team Personnel, government agencies, spill co * operative other companies and petroleum industry operators, and Emergency Planning Zone (EPZ) occupants, of any hazardous situation that requires immediate action to protect the public and the environment. *
 - o * Monitor the Emergency Planning Zone to determine the presence of flammable situations. *
 - o * Isolate and evacuate the Emergency Planning Zone as required to protect the public. *
 - o * Ignite a natural gas release vapor cloud if public safety cannot be assured. *
- * * Eliminate or minimize the effects emergency incidents have on Niska operations. *

The WGS ERP complements other emergency response plans administered by: *

- * * Government agencies, *
- * * Other industrial operators in the area, and *
- * * County, State or Federal Emergency Services. *

The WGS ERP describes the emergency actions and procedures which Niska Gas Storage will implement if an incident occurs that causes, or has the potential to cause, a hazardous situation. *

1.2 * Emergency Preparedness & Manual Maintenance *

1.2.1 * Response Training *

All *levels *of *management *will *become *familiar *with *Niska's *Wild *Goose *ERP *and *its * requirements. * * Supervisory staff must be knowledgeable of the sections that affect their * responsibilities and area of operations. *

Training *on *the *use *of *emergency *response *plans *will *be *provided *through *exercises. * * Assistance in designing and coordinating these exercises will be provided by the Niska * Operational Management and EHS&S Coordinator. * A record of emergency response exercises * will be maintained at the Wild Goose facility office. A report of the exercises will be prepared * to identify any shortcomings or issues which need improvement. * * Exercise records and * reports can be reviewed during the audit/inspection process. *

Emergency response exercises will be conducted at the discretion of Niska management. * * These exercises * * meant to be a realistic simulation of an emergency response and should * involve all Niska operations personnel at the Wild Goose facility. * * Should * * deployment exercise be conducted, government and support service personnel identified in the plan may * be invited, as required, to participate. *

1.2.2 * Revisions and Updates *

Revisions to Niska's Wild Goose Storage ERP *

The emergency response plan will be reviewed and revised at least annually by Niska and * changes forwarded to all Niska ERP holders listed on the Distribution List. For any major * modifications of Wild Goose Storage operations, Niska will review its emergency response * plans before commencement of modifications to ensure that its ERP remains applicable to the * operations. *

Niska will ensure that effective regular communications are in place with local levels of * government regarding the WGS ERP with the responsibility of the local authorities during a * gas release or any other emergency. *

A record of all changes to the WGS ERP will be maintained on the Emergency Response Plan * revision record contained in the front of each Niska ERP. *

The Niska EHS&S Coordinator will update the WGS ERP document annually with respect to: *

- * * Telephone numbers, *
- * * Road systems and evacuation routes, *
- * * Niska facility operations *

At the discretion of Niska Management a company representative may tour the Emergency * Planning Zones (EPZ's) to visit with the occupants (i.e. landowners and residents) in the * emergency planning zone to advise them of the hazards and characteristics of natural gas, the * emergency response procedures, and safety measures employed by Niska. * * This time * resident contact information and health considerations will be updated. * * *

Suggested tour frequencies are: *

- * * Following the initial ERP publication, *
- * * By telephone one year after the ERP publication, *
- * * In person every two years or more frequently if occupants change. *

1.3 * Regulatory Applicability *

Niska's Wild Goose Storage ERP applies to Niska's California operation and to Calgary management where an emergency requires a Corporate * level response. *

The WGS ERP contains information that is specific to the Wild Goose Storage facility and to the governing agency in that area. *

1.3.1 * U.S.A. Applicability *

The purpose of this ERP manual is to provide procedures to be followed by Wild Goose Storage personnel in any emergency involving the Department of Transportation (DOT) jurisdictional pipelines. * * These procedures are written to assure the welfare and safety of the public and all emergency response personnel. * * Property, both company and public, is to be protected, but only after it is ascertained that the public is adequately protected from any consequences of the failure or accident. * * This plan is designed to meet the requirements of the DOT for natural gas pipeline operations as outlined in 49 CFR 192.615 and 49 CFR 191. *

1.4 * Command Posts *

The following locations will be used to coordinate emergency response activities at all Niska locations:

1.4.1 * Niska Command Posts *

* * The **On Site Command Post (OSCP)** will be established by the Incident Commander at the nearest safe location to the emergency. * * The OSCP could be a motor vehicle, trailer or other portable building. * * The purpose of the On Site Command Post (OSCP) is to manage emergency response actions and safety of on site personnel. Communication will be maintained between the OSCP and government agencies, the Emergency Operations Center (EOC), and the Niska Corporate Emergency Operations Center (CEOC). * * The OSCP will be manned by the Operations Chief, Public Safety Coordinator and any individuals necessary for support activities. *

* * The **Emergency Operations Center (EOC)** will be established by the Incident Commander or Deputy Incident Commander at the WGS Facility Administration Building, provided that the building is not located in the Emergency Planning Zone. If the building is located in the Emergency Planning Zone (EPZ) the nearest possible location outside of the EPZ will be utilized. * * This will be the primary location for the coordination of response to most incidents. * * The EOC provides the primary link between the Emergency Response Team (ERT) and all others involved in the response. * * The EOC will also be the staging area for emergency response personnel requested from mutual aid groups, spill cooperatives, response contractors, and other petroleum industry operators. * *

The EOC will be manned by the Incident Commander (IC), Deputy Incident Commander (IC2), General Staff Chiefs and the Command Staff. *

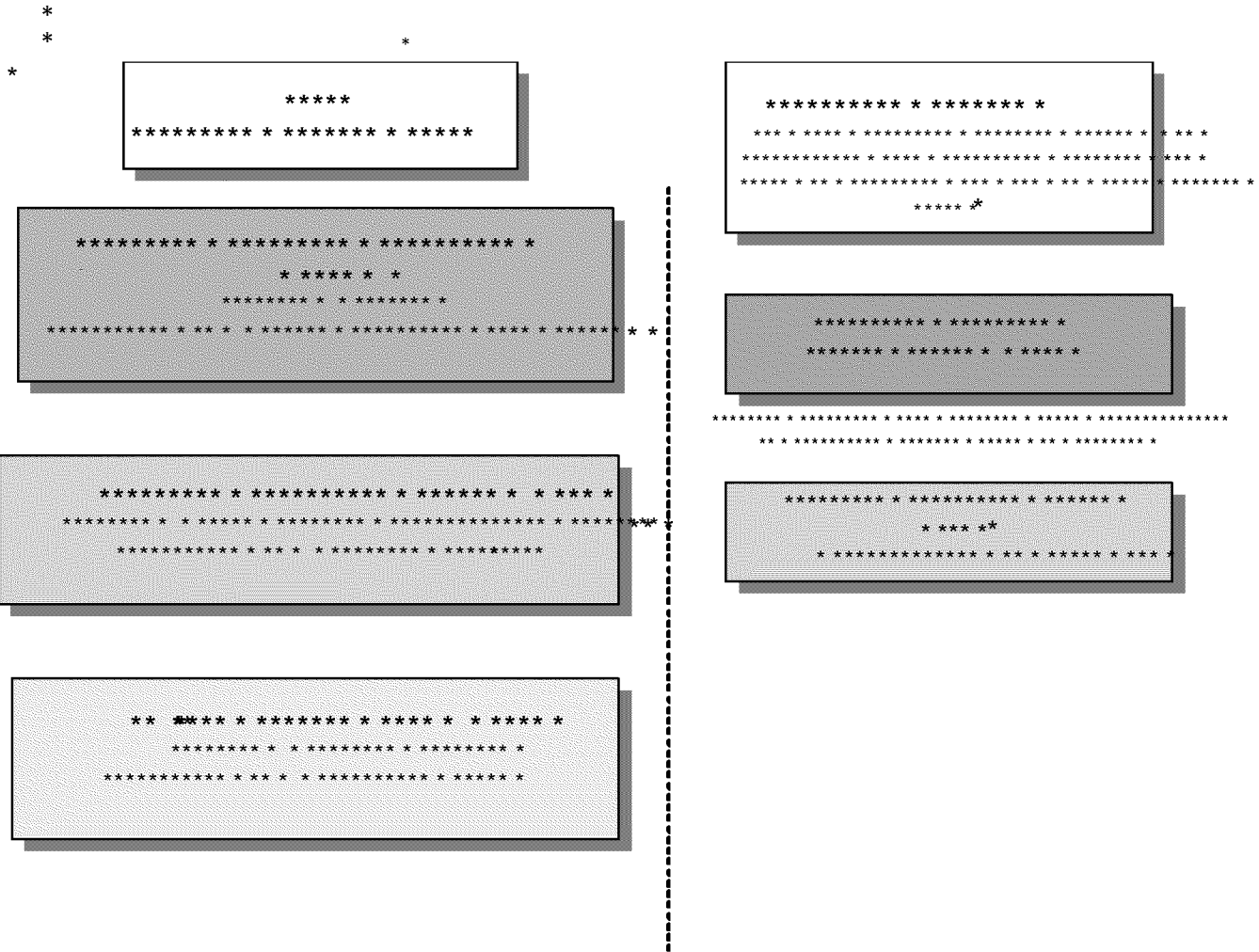
* * The **Corporate Emergency Operations Center (CEOC)** will be established by the Crisis Management Team (CMT) leader. * * Members of the Crisis Management Team will locate to the CEOC during Level 2 & 3 Emergencies to support the incident response. *

* * The CEOC is located at the Niska Calgary office: *

- * Room: * 433 *
- * Phone: * 403 * 513*8691
- * Fax: * * 1 * 866*871*6417

1.4.2 * Government Command Posts *

* * The *lead *government *agency *responsible *for *emergency *response, *in * consultation with other government agencies and local authorities, may elect * to establish a local **Government Emergency Command Center (GECC)**. *The * location of the GECC will be determined at the time of the emergency by the * responsible government or local authority. * * The Incident Commander *will * dispatch *authorized *Niska *representatives *to *the *GECC, *if *established. * * Government *agency *representatives *will *also *participate *in *the ***Emergency * Operations Center (EOC)** *established *by *Niska *off * * * * *from *the *emergency * incident. * *



1.5 * Emergency Planning Zones *

1.5.1 * Emergency Planning Zone *

The **Emergency Planning Zone (EPZ)** is the zone surrounding a WGS well, pipeline or facility which could become hazardous if a natural gas release were to occur. * * ~~Part~~ * - Transportation of Natural and Other Gas Pipeline, Section § 192.903 has been used to determine the EPZ radius for storage wells, pipelines and the facility. These values were determined using the flammability of an uncontrolled sweet or sour gas release from a well, pipeline or facility. The EPZ distance represents the radial zone around the point of release. *

Wild Goose Storage is considered to be a sweet gas facility, meaning that it contains 0% Hydrogen Sulfide (H₂S). See Sections 6.1.11 for further information on the Wild Goose EPZs. *

The EPZ was determined based on the maximum distance to 50% of the lower flammable limit (LFL/2). * * ~~The~~ * is the lowest concentration at which the released fuel will support combustion in the presence of an ignition source. *

Based on the Wild Goose Gas Storage facility, it is anticipated that the worst case catastrophic hazard scenario, and hence the largest EPZ radial distance of * * ~~740~~ * (225 meters) will result from a failure involving a pipeline release. * * *

EPZ Calculations *

*

* * 30" Pipeline *

$1200 \pm (\text{MAOP}) \times 34.64 \times .69 (\text{BTU Factor}) \pm 23.90 \times 30 (\text{OD of pipeline}) \pm 717.06.$ * * *

Total radius ± 717 ft. *

*

* * 24" & 16" Pipelines * *

Run parallel and therefore are calculated as a worse case scenario. *

$2000 \pm (\text{MAOP}) \times 44.72 \times .69 (\text{BTU Factor}) \pm 30.85 \times 24 (\text{OD of Pipeline}) \pm 740.40$ *

Total radius ± 740 ft. *

*

* * 16" Pipeline *

$2000 \pm (\text{MAOP}) \times 44.72 \times .69 (\text{BTU Factor}) \pm 30.85 \times 16 (\text{OD of pipeline}) \pm 493.60$ * * *

Total radius ± 494 ft. *

*

* * Well Pad *

The calculations for a wellhead absolute open flow will utilize the information contained for the 24" pipeline which ± 740ft. * *

*

2.0 * Emergency Notification *

2.1 * Notification and Alerting *

Notification of an emergency may likely be: *

- ** A report from a resident or member of the general public. *
- ** A report from on * * site personnel. *
- ** An activation of an instrumentation alarm; or *
- ** A report from gas storage facility personnel. *

All odor complaints, public concerns or abnormal operating situations reported to or observed * by Wild Goose personnel are to be investigated and acted upon without delay. *

** **Do not approach a hazardous condition** alone or without the proper personal protective equipment (breathing apparatus [SCBA] and personal electronic gas detector capable of detecting O₂ (oxygen), H₂S (hydrogen sulphide), CO (carbon monoxide), and explosive gases (LEL). *

** **Always employ the buddy system**, and if necessary, await the arrival of additional personnel and equipment. *

*

Notice of Certain Incidents CFR 191.3 is required for: *

1. * An event that involves a release of gas from a pipeline and that results in one or more of the following consequences: *
 - i. * A death or personal injury necessitating in * * patient hospitalization; or *
 - ii. * Estimated property damage of \$50,000 or more, including loss to the operator and others, or both, but excluding cost of gas lost; *
 - iii. * Unintentional estimated gas loss of three million cubic feet or more; *
2. * An event that results in an emergency shutdown of an LNG facility. Activation of an emergency shutdown system for reasons other than an actual emergency does not constitute an incident. *
3. * An event that is significant in the judgment of the operator, even though it did not meet the criteria of paragraphs (1) or (2) of this definition. *

*

CFR § 191.5 Immediate Notice of Certain Incidents. *

- a. * At the earliest practicable moment following discovery, each operator shall give notice in accordance with paragraph (b) of this section of each incident as defined in §191.3. *
- b. * Each notice required by paragraph (a) of this section must be made to the National Response Center either by telephone to 800-424-8802 (in Washington, DC, 202 267-2675) * or electronically at <http://www.nrc.uscg.mil> and must include the following information: *
 1. * Names of operator and person making report and their telephone numbers. *
 2. * The location of the incident. *
 3. * The time of the incident. *
 4. * The number of fatalities and personal injuries, if any. *
 5. * All other significant facts that are known by the operator that are relevant * to the cause of the incident or extent of the damage. *

Contact with the California Public Utilities Commission (CPUC) * *

If any incident as described above occurs the CPUC requires the operator to access them via * the internet as soon as possible but within 1 * hours of the incident occurring by accessing * <http://www.cpuc.ca.gov/PUC/emrep/> *

Gas utilities must report, within two hours * during working hours and four hours outside of * working hours, incidents which involve the release of gas: * *

- * Result *in *fatality *or *personal *injury *rising *to *the *level *of *in * * patient hospitalization; * *
- * Are the subject of significant public attention or media coverage; * *
- * Involve damage to property of the utility, including loss of gas, or others, or * both, estimated to exceed \$50,000. * *

*

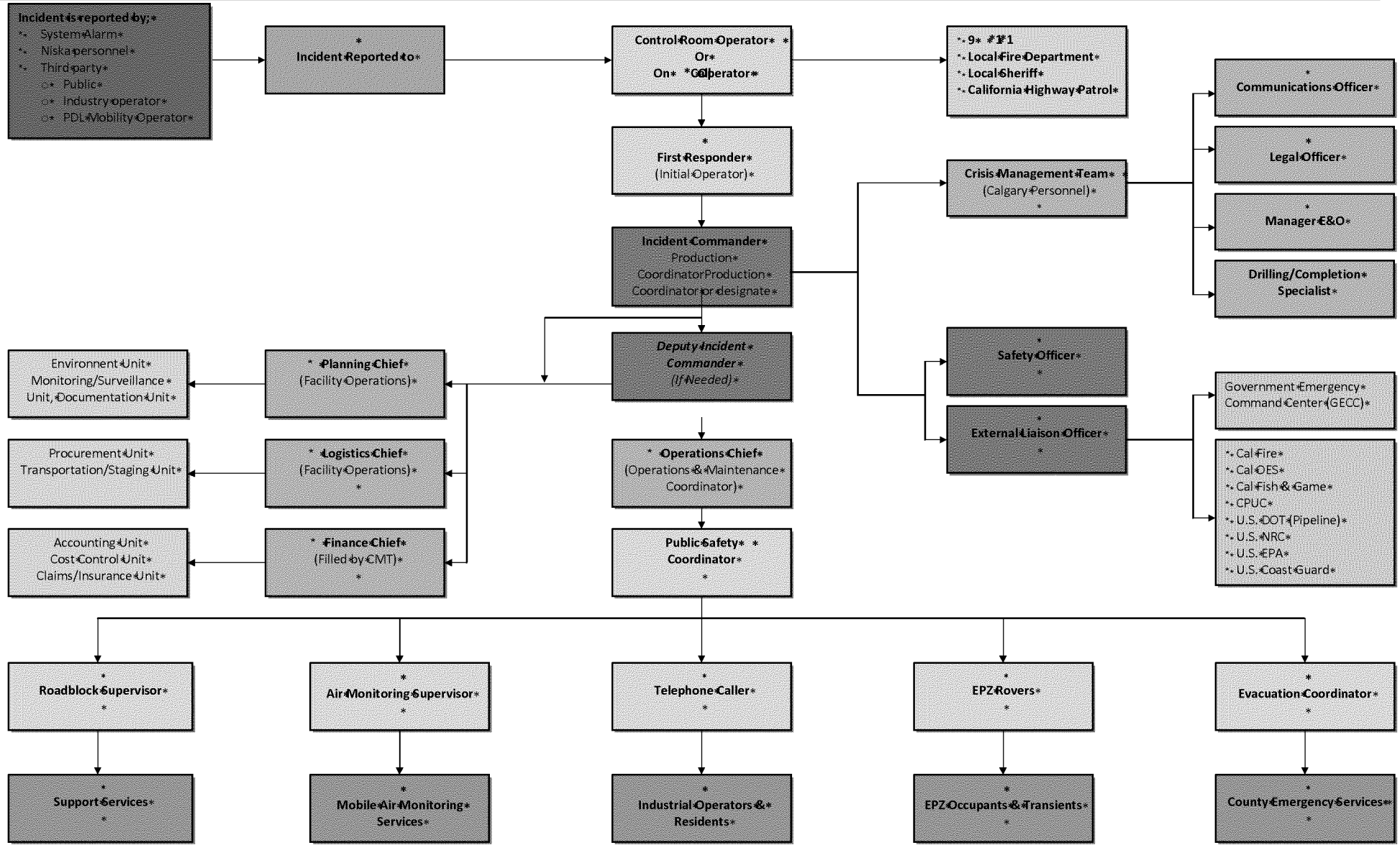
Contact with the Federal Department of Transportation (DOT) *

If property damage exceeds \$50,000, contact the Federal Department of Transportation at * * (800) 424 * * 8802 providing the following information: *

- * Name of the operator, * *
- * * Person reporting the incident and * *
- * * Appropriate contact information *

*

Figure 2.1 Emergency Notification Flow Chart - Wild Goose Operations



2.1.1 * Incident Observer and First Responder *

Immediately following the occurrence of an emergency incident, the Incident Observer/First Responder will assume the duties as described in Section 4.2.1 as well as the role of Incident * Commander until relieved of the position by more senior or knowledgeable personnel. * * *

In order of priority the Incident Observer/First Responder must: *

1. * Identify the incident and determine what happened. *
2. * Ensure no further danger to yourself or others; do not rush in. *
3. * Stay calm * think clearly * act with caution. *
4. * Sound warning alarm(s), if applicable. *
5. * Isolate energy sources, if possible. * * Emergency Shut Down (ESD) facility. *
6. * Warn others at or near the scene who may be at risk. *
7. * Determine injuries and how many injured, if safe to do so. *
8. * Move to a safe location * upwind and/or away from the scene. *
9. * Report the incident to the Wild Goose Control Room Operator and request * First Aid assistance if required. *
10. Make appropriate notifications to regulatory officials, as required. *

2.1.2 * Wild Goose Control Room *

Upon being notified of an incident, the Wild Goose Control Room Operator will immediately: *

1. * Notify as required: *
 - * * The Wild Goose Production Coordinator or their designate; *
 - * * Emergency response personnel, * *
 - * * Appropriate regulatory officials. *
 - * * Production Coordinator *
2. * Restrict access to the property to only emergency personnel and/or vehicles, * as appropriate; *
3. * Ensure access to the site is clear of obstruction; and *
4. * Look for and direct emergency vehicles to the scene of the incident, or to a * staging area pending further direction. *

2.1.3 * Incident Command *

The Incident Observer/First Responder must perform the responsibilities of the Incident Commander (section 4.3.1) until relieved of the position by more senior or knowledgeable personnel. *

Until the ICT has been established and is functioning, the Incident Commander must also assume the role of Operations Chief and is responsible for organizing the Emergency Response Team (ERT * see Section 4.2) based on the requirements of the situation, assigning available personnel, and initiating appropriate response actions. * * This includes activating and directing the ERT as dictated by the circumstances of the incident. Once the ICT is in place, the Incident Commander will relinquish the role of Operations Chief who will coordinate the ERT and work together to coordinate the operational response. * *

The Operations Chief will perform the duties as described in section 4.3.5 and in consultation with the Incident Commander, will immediately: *

- * * **Ensure** the safety of all personnel and complete a head count if appropriate; *
- * * From a safe location, **assess** the situation and risks based on information provided by the Incident Observer/First Responder, if they are fulfilling the roles of both Incident Observer/First Responder and Incident Commander positions and personal observation; *
- * * **Begin** to complete the Niska Gas Storage ± Emergency Response, Site Specific Health & Safety Plan form; *
- * * **Consider** the need to evacuate the immediate area and order evacuation if required ± as per Wild Goose Facility Evacuation procedures; *
- * * **Ensure** the incident has been identified, energy sources have been isolated, if possible, the facility has been Emergency Shutdown (ESD) and appropriate notifications have been made; *

*Appropriate notifications are e.g., 911, police, fire, ambulance, etc.; **

- * * **Secure** the area and isolate the scene; *
- * * **Collect/confirm** critical information about the incident ± Who? What? Where? When? How? * * Document records; *
- * * **Initiate** a partial or full plant or field evacuation, as required; *
- * * **Activate** the Emergency Response Team (ERT) if required. *
*
Note * if the ERT is activated, the Incident Command Team (ICT) Deputy Incident Commander (ICT IC2) MUST be notified. *
- * * **Activate** the Incident Command Team (ICT ± see Section 4.1.2) if required. *

- * * ONLY if safe to do so, direct on site employees to contain/control the situation; *
- * * In the case of small spills, utility failures, other localized incidents, work with the most senior facility operator to direct response activities; *
- * * **Coordinate** response operations with the Operations Section; and *
- * * **Keep** the ICT Incident Commander informed, either directly, or through the ICT Operations Section if a full ICT has been established. *

2.1.4 * Incident Command Team * Incident Commander (ICT IC) *

The Incident Command Team * Incident Commander (ICT IC), typically the Production Coordinator or their designate, are on call, 24 hours a day, 7 days a week. Upon being notified of an incident, the ICT Incident Commander will decide the level of ICT response needed and notify:

- * * The Niska Facility Production Coordinator; *
- * * The on call (24/7) Incident Command Team consisting of the Operations Chief, Planning Chief, Logistics Chief and Finance Chief, as required, and; *
- * * The Command Staff consisting of himself, Deputy Incident Commander (IC2) Safety Officer and External Liaison Officer, as required. *

* See Section 4.1.4 * Response Roles vs. Corporate Position. *

The ICT Incident Commander will make this determination based on a personal assessment of the risks involved and support requests coming from the ERT. *

The ICT Incident Commander will also, or delegate to a Deputy Incident Commander (IC2): *

- * * Alert the full ICT; *
- * * Alert the ICT and place in stand by mode; *
- * * Alert the ICT and conduct briefing; *
- * * Alert the ICT and dispatch selected team members; and *
- * * Alert the ICT and mobilize for full activation. *

2.2 * Emergency Levels & Criteria *

The level of the emergency is determined by combining Table 1 *Consequence of Incident and *
Table 2 * * * * Likelihood of Incident Escalating. * * This results in a ranking of its potential to cause *
harm to workers, property, public or the environment. * *

An **emergency** is a present or imminent event outside the scope of normal operations that *
requires prompt coordination of resources to protect the health, safety, and welfare of *
people and to limit damages to property and the environment. *

*
Niska classifies all incidents as either an Alert or Emergency Levels 1 (Low), 2 (Medium) or 3 *
(High). * * The emergency level is determined by its potential to adversely affect workers, *
property, public and the environment. * The emergency level will dictate the required *
notification and response actions. *

2.2.1 * Assessment Matrix for Classifying Incidents *

Rank *	Category *	Example of consequence in category *
1 *	Minor *	** No worker injuries. * ** Nil or low media interest. * ** Liquid release contained on lease. * ** Gas release impact on lease only. *
2 *	Moderate *	** First aid treatment required for on lease worker(s). * ** Local and possible regional media interest. * ** Liquid release not contained on lease. * ** Gas release impact has potential to extend beyond lease. *
3 *	Major *	** Worker(s) requires hospitalization. * ** Regional and national media interest. * ** Liquid release extends beyond lease and not contained. * ** Gas release impact extends beyond lease and public health/safety could be jeopardized. *
4 *	Catastrophic *	** Fatality. * ** National and international media interest. * ** Liquid release off lease not contained and potential for, or is, impacting water or sensitive terrain. * ** Gas release impact extends beyond lease and public health/safety jeopardized. *

Rank *	Descriptor *	Description *
1 *	Unlikely *	The incident is contained or controlled and it is unlikely that the incident will escalate. There is no chance of additional hazards. Ongoing monitoring required.
2 *	Moderate *	Control of the incident may have deteriorated but imminent control of the hazard by the licensee is probable. It is unlikely that the incident will further escalate.
3 *	Likely *	Imminent and/or intermittent control of the incident is possible. The licensee has the capability of using internal and/or external resources to manage and bring the hazard under control in the near term.
4 *	Almost certain or currently occurring *	The incident is uncontrolled and there is little chance that the licensee will be able to bring the hazard under control in the near term. Licensee will require assistance from outside parties to remedy the situation.

Sum the rank from both of these columns to obtain the risk level of the incident.

* What is the likelihood that the incident will escalate, resulting in an increased exposure to the public health, safety, or the environment? *

Risk Level *	Assessment Results *
Very Low: 2 * 3 *	Alert *
Low: 4 * 5 *	Level 1 * Emergency
Medium: 6 *	Level 2 * Emergency
High: 7 * 8 *	Level 3 * Emergency

2.2.2 * Possible Responses for Specified Incidents * *

Responses *	Alert *	Level 1 Emergency *	Level 2 Emergency *	Level 3 Emergency *
Communications * Internal * * External public * * * Media * * * Government *	Discretionary, * depending on * company policy. *	Discretionary, depending * on company policy. *	Immediate notification * of off site management. *	Immediate notification of * off site management. *
	Courtesy at company * discretion. *	Mandatory for * individuals within the * EPZ requiring * notification. *	Planned and instructive * as per the specific ERP. *	Planned and instructive as * per the specific ERP. *
	Reactive, as required. *	Reactive, as required. *	Proactive media * management to local or * regional interest. *	Proactive media * management to national * interest. *
	Notify appropriate * government agency if * public contacted. *	Notify appropriate * government agency and * local authority, if * required for initial * response. *	Notify appropriate * government agency and * local authority. *	Notify appropriate * government agency and * local authority. *
Actions * * Internal * * * * * External *	On site, as required by * company. *	On site, as required by * company. * * Initial response undertaken in * accordance with the * specific or corporate * level ERP. *	Predetermined public * safety actions are under * way. * * Corporate management team * alerted and may be * appropriately engaged to * support on scene * responders. *	Full implementation of * emergency management * system ICS / NIMS. *
	On site, as required by * company. *	On site, as required by * company. *	Potential * for multi * * agency (operator, * municipal, provincial, or * federal) * response.	Immediate multi agency * (operator, municipal, * provincial, or federal) * response. *
Resources * Internal * * * External *	Immediate and local. * No additional * personnel required. *	Establish what resources * would be required. *	Limited supplemental * resources or personnel * required. *	Significant incremental * resources required. *
	None. *	Begin to establish * resources that may be * required. *	Possible assistance from * government agencies * and external support * services, as required. *	Assistance from * government agencies and * external support services, * as required. *

*

3.0 * Contact Lists *

3.1 * Niska Contact Lists *

3.1.1 * Niska U.S.A. Facility Contacts *

Wild Goose Gas Storage Facility *
 24 * * Home Emergency Number 1 * * 866*940*51 *

*

Corporate Position *	Contact *	Business *	Facsimile *	Cellular *
Operations & * Maintenance * Coordinator *	Pat Baynard *	530 * *846*7385	530 * *846*7353	530 * *363*0032
Operator *	Grant Bozarth *	530 * *751*8170	530 * *846*7353	530 * *624*0112
Operator *	Stacy Brackin *	530 * *751.8170	530 * *846*7353	530 * *363*0017
Mechanic *	Richard Holland *	530 * *751*8171	530 * *846*7353	530 * *624*0288
Operator *	Justin Jarramillo *	530 * *751*8170	530 * *846*7353	530 * *363*0019
Mechanic *	Matthew Jones *	530 * *751*8163	530 * *846*7353	530 * *363*0015
Operator *	Lee Killough *	530 * *751.8170	530 * *846*7353	530 * *624*0294
Operator *	Dana Moffett *	530 * *751*8162	530 * *846*7353	530 * *624*0289
Instrument Technician *	Daniel Pleger *	530 * *751*8173	530 * *846*7353	530 * *363*0034
Conference Room *	*	530 * *751*8168	*	*

*

3.1.2 * Niska Calgary Contacts *

Corporate Position *	Contact *	Business * *	Residence *	Cellular *
President, CEO & * COO *	Simon Dupere *	403 * *513*8709	403 * *663*2177	403 * *803*8904
Executive VP *	Rick Staples *	403 * *513*8616	403 * *284*1575	403 * *560*9272
VP, General Counsel * & Corporate * Secretary *	Jason Dubchak *	403 * *513*8647	403 * *209*2878	403 * *681*1587
Chief Financial * Officer *	Vance Powers *	403 * *513*8724	610 * *285*2434	610 * *207*2926
EHS & S Coordinator *	Kelly Baltimore *	403 * *513*8663	403 * *912*5106	403 * *988*7041
Manager Engineering * & Ops *	Gary Theberge *	403 * *513*8631	403 * *460*0068	403 * *863*8586
Drilling & Completion * Specialist * * * * Consultant *	John Craig *	403 * *513*8708	403 * *242*7977	403 * *540*0922
Facility Engineering *	John Shelford * Swift Engineering *	403 * *705*4800	Not Available *	403 * *804*4949
Vessel Inspection *	Izak Roux P. Eng. * RAE Engineering * and Inspection * Ltd. *	780 * *469*2401	*	780 * *405*2512
QA/QC Inspector *	Stephen * Comstock *	403 * *544*5129	403 * *527*2479	403 * *581*8527

3.2 * Mutual Aid Contacts *

Mutual Aid Assistance *	24 * *hour	Office *	Cellular *
As of 2012 * *03 * *10, specific organizations or corporations have been contracted by Niska to fulfill a contracted mutual aid role. * * Information to be completed at a future date. *			
U.S.A. * * * * CA	*	*	*

3.3 * California Government Contacts *

Agency *	Location *	Business *	Other *
Butte County * Air Quality Management * District * www.bcaqmd.org * *	Chico *	855 * * 332 * 9400	24 Hr: * 530 * * 332 * 9400 ext.4 *
Butte County * Environmental Health * Division (County CUPA) * * www.buttecounty.net/publichealth/ * *	Oroville *	530 * * 538 * 7281 530 * * 538 * 5322 *	Fax: 530 * * 538 * 5339 *
Butte County * Office of Emergency * Services * http://www.buttecounty.net/Office%20of%20Emergency%20Mgmt.aspx *	Oroville *	530 * * 538 * 7373	*
Butte County Sheriff * www.buttecounty.net/SheriffCoroner.aspx * *	Oroville *	530 * * 538 * 7321 Ext. 2 *	*
Cal * * Fire Emergency Command Center * www.fire.ca.gov * *	Oroville *	24 Hr: * 530 * * 538 * 6460	Emergency * Command * Center (ECC) * 530 * * 533 * 6363
California Department of Fish and * Game * * www.dfg.ca.gov * * Office of Spill Protection and Response * (OSPR) * www.dfg.ca.gov/ospr * *	Sacramento *	916 * * 445 * 0411 * 916 * * 445 * 9338	*
California Highway Patrol (CHP) * * www.chp.ca.gov * *	State Wide *	911 * 24 Hr: * 530 * * 879 * 1900	Oroville * * 530 * * 538 * 2700 * Yuba City * * 530 * * 674 * 5141
California Office of Emergency Services * (OES) * www.oes.ca.gov * *	State Wide *	Spill Reporting: * 800 * * 852 * 7550	916 * * 845 * 8510
California Public Utilities Commission * (CPUC) * * www.cpuc.ca.gov/puc/ * *	State Wide *	415 * * 703 * 2782 24 Hr: * 800 * * 235 * 1076	800 * * 235 * 7128
Cal * * OSHA * www.dir.ca.gov/dosh/CalOSHA.htm * *	Chico *	530 * * 895 * 4761	530 * * 224 * 4743

Agency *	Location *	Business *	Other *
Central Valley Regional Water Board *	Redding *	530 * *224*4845	Dale for * Groundwater * 530—224 * *4785
Colusa County Environmental Health * (County CUPA) **	Colusa *	530 * *458*0395	*
Colusa County Sheriff's Department * www.colusasheriff.com * Lt. Russ Jones, Support Services * rjones@colusasheriff.com * * Scott Marshall, Sheriff * *Coroner smarshall@colusasheriff.com * *	Colusa *	911 *	24 Hr ECC: * 530 * *458*0200
Division of Oil, Gas and Geothermal * Resources (DOGGR) * www.conservation.ca.gov/dog/Pages/index.aspx * *	Sacramento *	916 * *322*1110 Ask for Engineer * on call *	*
Gridley Fire Department * http://www.gridley.ca.us/city/departments/fire * *department	Gridley *	911 * Cal Fire ECC: * 530 * *933*6363	530 * *846*5711
U.S. Department of Transportation ** www.dot.gov * *	Washington * D.C. *	202 * *366*4000	*
U.S. National Response Center ** www.nrc.uscg.mil/nrchp.html * *	Washington *	800 * *424*8802	202 * *267*2180 Fax: 202 * *267* 1322 *

*

* Must be contacted immediately at onset of incident. *

In California the following agencies should be notified at the onset of an "Incident": *

- ** Local 911(Cal * *Fire)
- ** County Sheriff, *
- ** County Certified Unified Program Agency (County CUPA), *
- ** California Highway Patrol (CHP)(911), *
- ** Cal OES, *
- ** Cal Fish and Game, *
- ** Cal Public Utilities Commission, *
- ** U.S. Dept. of Transportation, and *
- ** U.S. National Response Center. *

Other agencies may be called or added if needed based upon the needs of the "Incident" (i.e. * Fed EPA, Coast Guard etc.). * * Accident is defined in Section 2.1 "Notification and Alerting". *

3.4 * California Support Services Contacts *

* Verify Niska MSA with all Contractors **

Industry Support Services / Contractors *			
Contractor *	Location *	Business *	Other *
Cal * * Fire Emergency Command * Center *	Oroville *	24 Hour: * 530 * * 538 * 6460	Emergency * Command Center * (ECC): * 530 * * 533 * 6363
Electricity Provider ± PG&E *	Shafter *	800 * * 743 * 5002	*
Emergency Response Advisor * Shepherd Risk and Safety * Advocates * Gary Shepherd *	* * * Indio, CA *	760 * * 702 * 2310	760 * * 347 * 0715
Industrial Fire Fighters ± * Gridley Fire Dept. *	Gridley *	911 *	*
Pipeline Transporters ± PG&E *	n/a *	800 * * 228 * 1353	*
Road Maintenance ± Butte * County *	Gridley *	530 * * 846 * 2515	530 * * 624 * 5574
Spill Clean * * * Parks * Environmental *	West * Sacramento *	800 * * 456 * 7745	916 * * 371 * 5747
Vacuum Truck/Steamer * * * * Mervin Clark *	Sutter *	530 * * 755 * 0596	530 * * 701 * 8077
Well Control * United Well * Control *	Bakersfield *	661 * * 397 * 4875	*

4.0 * Emergency Response Role and Duty Checklists *

4.1 * Niska Personnel Responsibilities *

Niska has divided incident response into three teams which will be activated depending on the severity, and degree of response required to mitigate the situation regardless of the emergency level. *

4.1.1 * Emergency Response Team (ERT) *

4.1.2 * Incident Command Team (ICT) *

4.1.3 * Crisis Management Team (CMT) *

Other factors such as the degree of interest or concern by the media, the public, and/or various levels of government, the cost and potential duration of the response, and potential liabilities arising from an incident must also be considered. * *

If an emergency situation occurs: *

- * * Ensure no further danger to yourself. *
- * * Avoid the temptation to rush * and address the incident. *
- * * Stop, think and remain calm. *
- * * Ensure the safety of all persons. *
- * * Identify the Emergency Level. *
- * * Flip to the page of your response role in Section 4.0. *
- * * Complete your response duties. *
- * * Ensure that all activities and correspondence with residents, contractors, government agencies, industrial operators and any other third parties are well documented. Use the Time and Event Log in Section 15.0, "Report Forms". *

4.1.1 * Emergency Response Team (ERT) *

The Emergency Response Team, consisting of the Public Safety Coordinator and their direct reports; EPZ Rovers, Evacuation Coordinator, Telephone Callers, Roadblock Supervisor and Air Monitoring Personnel are located at the On Site Command Post. * The ERT's primary tasks are to: *

- * * Identify nature of incident. *
- * * Ensure no further danger to yourself. *
- * * Avoid the temptation to rush * and address the incident. *
- * * Ensure the safety of all workers. *
- * * Isolate hazards and energy sources. *

- * * Assess the situation (i.e., spill size, severity, likely impacts, etc). *
 - * * Take appropriate action to secure, assess and control the incident if safe to do so. *
 - * * Activate the Incident Command Team. *
 - * * Initiate evacuation procedures, if required, and *
 - * * Notify appropriate agencies. * * *
- Refer to Section 3.3 *"California Government Contacts"*. *

4.1.2 * Incident Command Team (ICT) *

The Incident Command Team (ICT), consisting of: the Command Staff (Incident Commander, Deputy Incident Commander, Safety Officer and External Liaison Officer) and the General Staff (Operations Chief, Planning Chief, Logistics Chief and the Finance Chief) are responsible for planning, managing and directing the response to incidents at Niska facilities. * * The report to the Incident Commander and are located at the Emergency Operations Center (EOC). *

The ICT's primary duties are to: *

- * * Plan, coordinate and manage the overall response in conjunction with the ERT and appropriate emergency agencies and government authorities. *
- * * Ensure that response actions are planned and implemented in accordance with identified response priorities and all legal / regulatory requirements. *

4.1.3 * Crisis Management Team (CMT) *

The Crisis Management Team (CMT) is comprised of Calgary Senior Management, Legal Officer and the Communication Officer. * * The CMT's role is to support the ICT during the response to Level 2 or Level 3 incident, and to protect the company's major overall business and financial interests, and its reputation as a responsible corporate citizen. * * *

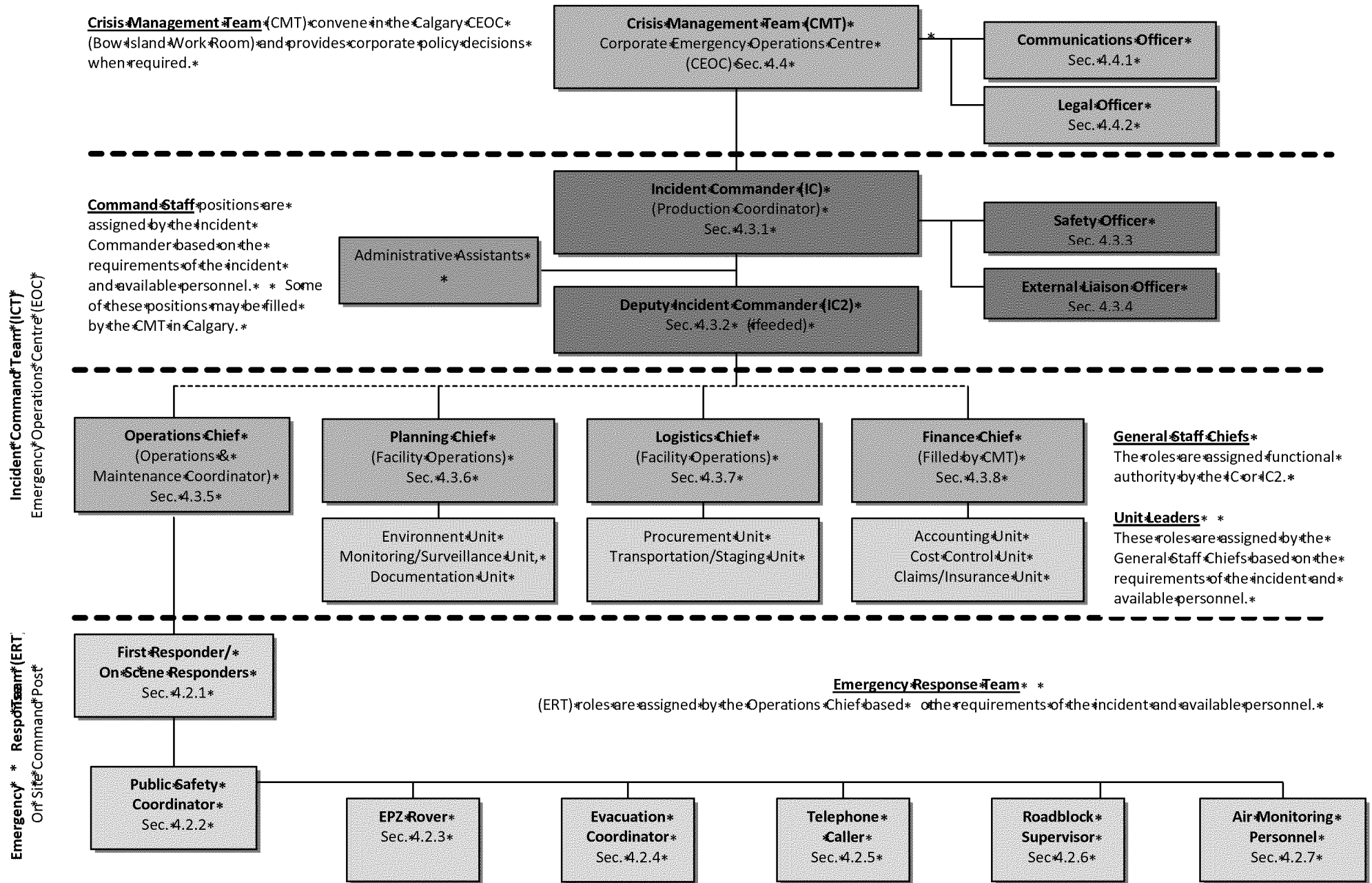
Refer to Section 2.2.1 *"Assessment Matrix For Classifying Incidents"*. *

The CMT Leader meets with all core advisors and explains the situation. * * Core advisors assess the impact of the crisis on their departments. * * Based on this analysis the CMT leader will prioritize the response to reduce the impacts. *

The CMT is responsible for providing clear, accurate and timely information about the response to the media, the community and other outside stakeholders and the crisis management team. *

The CMT will assemble at the Niska Gas Storage head office Corporate Emergency Operations Center (CEOC) located at 400, 607 8th Ave SW Calgary, Alberta, Canada, in Room 433, the Bow Island Work Room. *

Figure 4.1 - Niska Incident Command System (ICS) *



4.1.4 * Response Roles vs. Corporate Position *

The following outlines the Corporate Position to the Emergency Response Roles. *

	Niska Corporate Position *	*	Emergency Response Role *
Emergency Response Team*	First Available Niska Facility Operator *	*	First Responder / On Scene Responders * (Section 4.2.1) *
	Designated Niska Facility Operator *	* *	Public Safety Coordinator * (Section 4.2.2) *
	Designated Niska Facility Operator *	* *	EPZ Rover * (Section 4.2.3) *
	Designated Niska Facility Operator *	* *	Evacuation Coordinator * (Section 4.2.4) *
	Designated Niska Facility Operator *	* *	Telephone Caller * (Section 4.2.5) *
	Designated Niska Facility Operator *	* *	Roadblock Supervisor * (Section 4.2.6) *
	Designated Niska Facility Operator *	* *	Air Monitoring Supervisor * (Section 4.2.7) *
	Production Coordinator * * or their designate *	* *	Incident Commander (IC) * (Section 4.3.1) * Deputy Incident Commander (IC2) * (Section 4.3.2) *
Incident Command Team*	Facility or Calgary Corporate Positions *	* *	Command Staff * Safety Officer (Section 4.3.3) * * External Liaison Officer (Section 4.3.4) *
	Operations and Maintenance * Coordinator *	* *	Operations Chief * * (Section 4.3.5) *
	Designated Niska Facility Personnel *	* *	Planning Chief * * (Section 4.3.6) *
	Designated Niska Facility Personnel *	* *	Logistics Chief * * (Section 4.3.7) *
	Designated Niska Facility Personnel * (filled from CMT) *	* *	Finance Chief * * (Section 4.3.8) *
CMT *	Calgary Corporate Positions *	* *	Crisis Management Team (CMT) * * Communication Officer (4.4.1) * * Legal Officer (4.4.2) *

- * Emergency Response Team *EMT (Field Location). *
- * Incident Command Team *ICT (Field Location). *
- * General Staff Chiefs ± (Field Location) *
- * Crisis Management Team *CMT (Calgary). *

- ** **Check** for toxic gases or explosive vapors with an electronic gas detector ± *
(human sense of sight or smell cannot be trusted to determine hazards) *
- ** **Obtain** all relevant MSDS for the products that could be affected *
- ** **Establish** a 'cold, warm or hot' zone around the incident site. *
- ** **Beware** of physical hazards such as debris, structural failures, impaired access/egress, secondary fires, or explosions. *
- ** **Ensure** all sources of ignition are eliminated.

Post Emergency Procedures *

- ** **Initiate** clean up and recharging of equipment only after the Incident Commander has called down the emergency status. *
 - ** **Debrief** on site response personnel, as required. *
 - ** **Review** emergency response capabilities and document areas of improvement. *
 - ** **Attend** an emergency debriefing meeting and be prepared to discuss: *
 - o The cause of the incident, *
 - o Details of emergency response actions taken, *
 - o Whether response actions were sufficient and response equipment was adequate, and *
 - o Whether Wild Goose response personnel and support services were able to fulfill their emergency response responsibilities. *
- *

Post Emergency Procedures *

- ** When the Incident Commander has called down the emergency status, *
advise the Evacuation Coordinator, Air Monitoring Personnel, Roadblock *
Supervisor, Telephone Callers, and EPZ Rovers. *
- ** **Debrief** on * site response personnel, as required. *
- ** **Review** * emergency * response * capabilities * and * document * areas * of *
improvement. *
- ** **Attend** an emergency debriefing meeting and be prepared to discuss: *
 - o * The cause of the incident, *
 - o * Details of emergency response actions taken, *
 - o * Whether response actions were sufficient and response *
equipment was adequate, and *
 - o * Whether Niska response personnel and support services were *
able to fulfill their emergency response responsibilities. *

4.2.3 * EPZ Rover (ERT) *

The EPZ Rover is a Niska Representative who assists in EPZ occupant notification in the event of evacuation of the EPZ. The **first available Wild Goose Operator** designated by the Public Safety Coordinator will fill the role of EPZ Rover. *

The EPZ Rover will only be dispatched for Level 2 and 3 Emergencies. *

Level 1 * (All Hazards) *	Level 2 * (All Hazards) *	Level 3 * (All Hazards) *
*****	*****	*****
Level 1 * (Chemical Spills) *	Level 2 * (Chemical Spills) *	Level 3 * (Chemical Spills) *
*****	*****	*****
Level 1 * (Gas Release) *	Level 2 * (Gas Release) *	Level 3 * (Gas Release) *
*****	*****	*****
*****	*****	*****
*****	*****	*****
○ *****	*****	*****
○ *****	*****	*****
○ *****	*****	*****
○ *****	*****	*****
○ *****	*****	*****
○ *****	*****	*****
*****	*****	*****

Post Emergency Procedures *

- ** **Notify** transients in the EPZ of the end of the emergency only after the Incident Commander has called down the emergency status. *
- ** **Initiate** clean up and recharging of equipment. *
- ** **Attend** debriefing of emergency response personnel, as required. *
- ** **Participate** in review of emergency response capabilities and document areas of improvement. *

* * The Evacuation Coordinator shall notify all persons previously requested to *
evacuate that an emergency condition no longer exists, and all persons may *
return. Niska shall provide transportation and assistance where required *
and further instructions on how to claim for expenses incurred due to the *
emergency. *

Post Emergency *

* * **Attend** emergency response debriefing. *

4.2.5 * Telephone Callers (ERT) *

The first available Wild Goose personnel designated by the Public Safety Coordinator will act as the Telephone Callers. *

Upon the declaration of a Level 2 Emergency, Telephone Callers will contact occupants in the EPZ. *

Level 1 * (All Hazards) *	Level 2 * (All Hazards) *	Level 3 * (All Hazards) *
*****	*****	*****
Level 1 * (Chemical Spills) *	Level 2 * (Chemical Spills) *	Level 3 * (Chemical Spills) *
*****	*****	*****
Level 1 * (Gas Release) *	Level 2 * (Gas Release) *	Level 3 * (Gas Release) *
*****	*****	*****

Post Emergency Procedures *

- ** Advise occupants and inform each of the termination of the emergency only *
 after the Incident Commander has called down the emergency status. * *
- Attend emergency response debriefing. *

4.2.6 * Roadblock Supervisor (ERT) *

The first available Wild Goose plant operator designated by the Public Safety Coordinator. *

Level 1 * (All Hazards) *	Level 2 * (All Hazards) *	Level 3 * (All Hazards) *
* *	* *	* *
Level 1 * (Gas Release) *	Level 2 * (Gas Release) *	Level 3 * (Gas Release) *
* *	* *	* *

Post Emergency Procedures *

- * * **Remove** roadblocks upon instruction from the Public Safety Coordinator. *
- Return all roadblock equipment to its designated location. *
- Attend emergency response debriefing.

*

4.3 * Incident Command Team (ICT) *

During Level 2 and Level 3 emergencies on Niska worksites, the Incident Command Team (ICT) * is responsible for planning, managing and directing the response. * * The ICT is organized * according to the basic principles and organizational structure of the Incident Command * System (ICS). An Incident Command Team (ICT) organization chart is shown in Figure 4.1. *

The ICT is comprised of two teams, Command Staff and General Staff Chiefs. * * *

The Command Staff includes: *

- * * Incident Commander *
- * * Deputy Incident Commander *
- * * Safety Officer *
- * * External Liaison Officer *
- * * Administrative Assistant *

The General Staff Chiefs includes: *

- * * Operations Chief *
- * * Planning Chief *
- * * Logistics Chief *
- * * Finance Chief *

This structure provides an overall organizational template. The actual organization activated * will depend on the type, size and requirements of the incident and the availability of qualified * personnel to fill various positions at the time. * The Incident Commander (IC) and Deputy * Incident Commander (IC2) are responsible for determining which positions will be filled using * the model shown in Figure 4.1 as a guide, and ensuring that the most qualified persons * available are assigned to fill the "General Staff Chief" positions. * Details of the roles of the IC, * IC2 and other ICT members follow in this Sub Section. *

The ICT's primary duties are to: *

- * * **Plan, coordinate and manage** the overall response in conjunction with the * ERT and appropriate emergency agencies and government authorities. *
- * * **Ensure** that response actions are planned and implemented in accordance * with identified response priorities and all legal/regulatory requirements. *
- * * **Provide** clear, accurate and timely information about the response to the * media, the community and other outside stakeholders and the crisis * management team. *

*

*

Incident Command System (ICS) *

The Niska Incident Command System (ICS) is administered by the Incident Commander. It is designed to ensure that all incidents are effectively managed and receive appropriate accounting with detailed documentation being produced. The site's ICS provides the ICT with efficient tools for documenting and coordinating a response without limiting their ability to carry out their roles. *

By adopting and implementing Incident Command System (ICS) teams, as an integral component of the ICS, the site is able to link efficiently with various fire departments, emergency responders, government agencies, industry responders, etc. all of which use ICS based systems. *

The primary objectives of the ICT are: *

- * * **Maximize** the efficiency of the response. *
- * * **Be and be seen** as properly protecting and caring for the public interest. *
- * * **Document** the actions of the ICT and account for their expenditures. *
- * * **Develop** a "Plan" that allows for a shift change to take place and supports the transition from "reacting" to "managing" the incident. *
- * * **Protect** the company's reputation, business, and financial interests. *

Post Emergency Procedures *

- * * **Call * *down** an emergency following consultation with applicable regulatory agencies and on Niska representatives when it has been determined that no danger exists to the public, environment or workers. * * **Notify** the media of the call * *down on the emergency. *
- * * **Debrief** ICT and CMT, as required. *
- * * **Review** emergency response capabilities and document areas of improvement. *
- * * **Attend** an emergency debriefing meeting and be prepared to discuss:
 - o * The cause of the incident *
 - o * Details of emergency response actions taken *
 - o * Whether response actions were sufficient and response equipment was adequate *
 - o * Review if Niska response personnel and support services were able to fulfill their emergency response responsibilities. *
- * * **Submit** reports, in consultation with the CMT, to CAL/OSHA, DOT, OSHA and all other pertinent state or federal agencies, as required. *

Within 30 days of the end of a Level 2 or 3 emergency, and in consultation with the CMT, complete and submit an internal operator incident summary report to Niska management. *

The Safety Officer will use the Niska Gas Storage Health & Safety Plan to support the development of an effective emergency response. * * This template is not meant to be comprehensive. * *

Contents of the Health & Safety Plan Include: *

1. * Incident Information *
2. * Products/Chemicals Involved *
3. * Primary Hazards *
4. * Personal Protective Equipment *
5. * Hot Zone Authorized Entrants *
6. * Site Map *
7. * Secondary Hazards *
8. * Evacuation Plan *
9. * Nearest Hospital *
10. Proposition 65 Notices *
11. TCS Organization *
12. Enforcement / Regulatory Agencies (On Site) *
13. Contractors (On Site) *
14. Hot Zone Entry Objectives *
15. Decontamination Checklist *
16. Atmospheric Monitoring *
17. Authorization Signatures *

Post Emergency Procedures *

- ** **Review** emergency response capabilities and document areas of improvement. *
- ** **Debrief** on * *site response personnel, as required. *
- ** **Attend** emergency debriefing meeting and be prepared to discuss:
 - o * The cause of the incident, *
 - o * Details of emergency response actions taken, *
 - o * Whether response actions were sufficient and response * equipment was adequate, and *
 - o * Whether Niska response personnel and support services were * able to fulfill their emergency response responsibilities. *

4.4 * Crisis Management Team (CMT) *

Role *

The *role* of* the *Crisis *Management *Team *is *to *provide *corporate *contact *to *the *Incident *Commander and make corporate policy decisions where required. * * **Chief Operating Officer** * will lead the Crisis Management Team and be supported by other Niska corporate managers as required. * * Depending on the emergency incident, the Legal Officer and the Communications Officer may be assigned and/or filled by members of the CMT. *

The *CMT *has *a *final *decision * *making* authority *on *the *overall *response *prioritized *objectives, *strategies and countermeasures, and major expenditures. * * *

Niska corporate positions that may form the CMT include: *

- * * President & CEO *
- * * EHS & S Coordinator *
- * * Manager Engineering & Operations *
- * * Drilling and Completion Specialist *
- * * Legal Counsel & Legal Officer *

Duties *

Level 1 * (All Hazards) *	Level 2 * (All Hazards) *	Level 3 * (All Hazards) *
* * * * * * * * * * * * * * *	* *	* * * * * * * * * *

Post Emergency Procedures *

- * * **Ensure** that all documentation associated with the emergency response is maintained and stored appropriately for future reference. *
- * * **Attend** an emergency debriefing meeting. *

5.0 * Government Involvement *

5.1 * State of California *

The local Emergency Management System (EMS) and the utilization of appropriate contractors * can play a significant role in the support of the industrial operator in bringing an emergency * incident under control as safely and quickly as possible. * * ICS/NIMS was designed to be * compatible *with *industry *emergency *response *plans. * * *Notifying *the *appropriate * government agencies, this ERP will be activated and the support of state and federal agencies * secured. *

A number of other state and federal agencies provide special services during an emergency. * The following section outlines some of the responsibilities of key state agencies during an * emergency response. *

Butte County *

- * * Activates their Emergency Plan, as required. * * The County may be directly * involved in on * site emergency response actions and will most likely offer * assistance in an emergency situation. The County can provide assistance in * various ways i.e. opening evacuation centers, setting up roadblocks, issuing * emergency directives etc. * * *
- * * Establishes the Emergency Operations Center (EOC) when required. *
- * * Declares a "State of Local Emergency" if enforced evacuation is required and * activates a public Emergency Public Warning System. *
- * * The local authority is required to have a County Emergency Plan (CEP). The * CEP is an "all hazards" approach to emergency planning and response. The * local authority may also have arrangements and agreements in place with * local county and state resources, should they be required. * * The local authority * is the lead agency in matters concerning public safety within its jurisdiction. * * For the purposes of the CEP, local law enforcement is considered to be a * resource of the local authority. *

5.2 * Federal *

The federal government shall be called upon provided the nature or degree of the "Incident" * requires a federal response. Based upon ascending levels of incident needs and management, * on * scene management shall make a determination to request federal assistance. Additionally * requiring ICS/NIMS incident management to be in place and utilized in a manner which best * provides for federal oversight or management. This is provided the "Incident" has impacted * the local, county or state resources in a highly significant manner and is in need of the * resources, *and *abilities *of *the *Federal *government *to *either *direct *or *assist *in *the * management of the "Incident". *

*

*

- ** Utilization of a Federal On Scene Coordinator (FOSC) shall occur in the following manner:
 - o U.S. Coast Guard: Spills on Navigable Waters *
 - o EPA: Spills to the Environment *
 - o DOT: Pipeline Releases *
- ** A "Unified Command" should be in place to assure Niska, local county, state or federal agencies, work in a cohesive manner to provide for a timely and effective manner in which to mitigate and resolve the "Incident". *
- ** By utilizing ICS/NIMS "Unified Command" will allow Niska as well as those agencies with different legal, geographic and functional authorities and responsibilities to work together effectively **without** affecting individual agency authorities, responsibilities or accountability *
- ** For Accident reporting, DOT shall be notified. **
See Section 2.0 "Emergency Notification" for contact information". *
- ** The affected EPA Region shall be notified. **
See Section 2.0 "Emergency Notification" for contact information". *
- ** The National Response Center shall be notified. **
See Section 2.0 "Emergency Notification" for contact information". *
- ** The Federal Bureau of Investigation shall be notified in the event of either a suspected terrorist act or an incident requiring Federal investigation. *

*

6.0 * Site Specific Information *

This Section contains specific operation information for the Wild Goose facilities located in Gridley, California, U.S.A. *

The general process of Niska Gas Storage is to allow customers to benefit from both injection * and withdrawal flexibility of natural gas. *

Wild Goose Gas Storage Facility *

The Wild Goose Gas Storage facility consists of 4 reservoirs, 15 storage wells, 4 observation wells and 4 plants with 8 compressors. *

- ** Storage gas capacity * 50 BCF *
- ** Peak withdrawal rate * 900 MMCF per day *
- ** Peak injection rate * 450 MMCF per day *

*

Location *	Latitude/Longitude *	GPS Coordinates *
Wild Goose Plant *	Latitude 39° 20' 53.16", * Longitude 121° 49' 1.56" *	39.348100, 121.817100 *
Well Pad *	Latitude 39° 19' 28.56", * Longitude 121° 52' 57.72" *	39.324600, 121.882700 *
Mid **Point	Latitude 39° 21' 45.72", * Longitude 122° 1' 17.76" *	39.362.700, 122.021600 *
Delevan Station *	Latitude 39° 21' 46.44", * Longitude 122° 15' 38.16" *	39.362900, 122.260600 *
High Consequence Area * (HCA) *	Latitude 39° 21' 46.09", * Longitude 121° 55' 20.75" *	39.362800, **121.922400

6.1 * Wild Goose *

6.1.1 * Wild Goose Operations Description *

Wild Goose Storage ELC commenced natural gas storage operations in September 1998. It is located at 2780 West Liberty Road approximately 8 miles south west of Gridley California. Natural gas is transmitted to the Wild Goose facility via a Niska owned and operated 30" pipeline from the PG&E metering station located in Delevan California, approximately 25 miles west of the WGS facility at a MAOP of 1200 psi. Gas is then transmitted to the Wild Goose well pad located on the Gray Lodge Waterfowl Reserve via two parallel pipelines, a 18" and a 24" pipeline approximately 4.5 miles SW of the Wild Goose facility and operates at a maximum pressure of 2000 psi.

There is a total of 50 billion cubic feet (BCF) of gas storage injected and withdrawn via a total of 15 gas storage wells. There are 4 observation wells. The facility is considered sweet (0% hydrogen sulfide (H₂S) concentration).

6.1.2 * Wild Goose Emergency Control Systems *

A number of flow control, leak prevention and monitoring systems have been installed to minimize the occurrence of emergency incidents involving the Wild Goose facility. These include:

- ** Emergency Shut Down (ESD) buttons at each exit of the compressor building.
- ** Continuous combustible gas detection in each compressor building.
- ** Ultra violet detection system to detect leaks at the compressor building.
- ** Daily Facility inspections which are conducted by operations personnel to identify unauthorized activities or operational problems.
- ** Fire Fighting Equipment: Numerous wall mounted stored pressure or cartridge operated ABC & CO₂ hand held fire extinguishers are located throughout the facility. Equipment is regularly checked monthly and certified annually.

6.1.3 * Wild Goose Emergency Communications *

Evacuation Alarm *	Continuous Horn and flashing red light signaling * immediate evacuation of the facility. *
Alarm Activation Location *	Control Room plus ESD (emergency shut ** down) buttons in every building. *
Primary Muster Location *	Control Room. *
Secondary Muster Location *	Southwest gate. *
Emergency Operations Center (EOC) *	Administration Building Control Room. *
On ** Site Command Post (OSCP) *	Strategically located vehicle @ incident location. *
On ** Site Communication *	Landlines, radios, cell phones, e ** mail.
Off ** Site Communication *	Landlines, radios, cell phones, e ** mail.
Public Contact Information *	Confidential public contact information will be * stored in a sealed envelope in the WGS control * room. * * Additional sealed envelope will be kept * with the EHS&S Coordinator in Calgary, Alberta, * Canada. *
Contacting The Facility *	Wild Goose is attended 7 days/week from 7:00 * AM to 4:00 PM. * For normal communications call 530 * *846*7351.* For emergencies call: 1 * *866*940*7351
Incident Record *	The Incident Notification Report & Event Call Log * will be used for the duration of the incident * (Section 15.0). *

6.1.4 * Wild Goose Safety Equipment *

First Aid Equipment *	Automated External Defibrillator (AED) * First Aid Kits located in every vehicle and in the * administration building. *
Spill Response Equipment *	Absorbent pads. *
Road Block Equipment *	None. *
Flare Guns *	None. *

6.1.5 * Wild Goose Hazardous Materials Storage *

Substance *	Container * Descriptions *	Largest Vessel * Volume(s) (Gallons) *	Typical Volumes * (Gallons) *
Diesel Fuel *	Steel Drum *	55 *	55 *
Ethylene Glycol *	Tote Bin *	7006 *	3025 *
Lube Oil *	AST *	1000 *	3000 *
Lube Oil * * * * Pegasus * 805 *	AST *	650 *	990 *
Methanol (Plant) *	Stainless Steel AST *	500 *	350 *
Produced Water *	AST Steel Tanks *	(6) * 400 barrel *	0 *
Mineral Spirits *	Steel Drum *	55 *	100 *
Tri * * Ethylene Glycol * (TEG) *	AST Steel Tank (T * * 303) *	6,000 *	12,000 *
Urea *	AST *	8000 *	7500 *
Waste Ethylene * Glycol *	AST *	3000 *	None generated at * this time *
Waste Lube Oil *	Tank Inside Building *	4084 *	2042 *

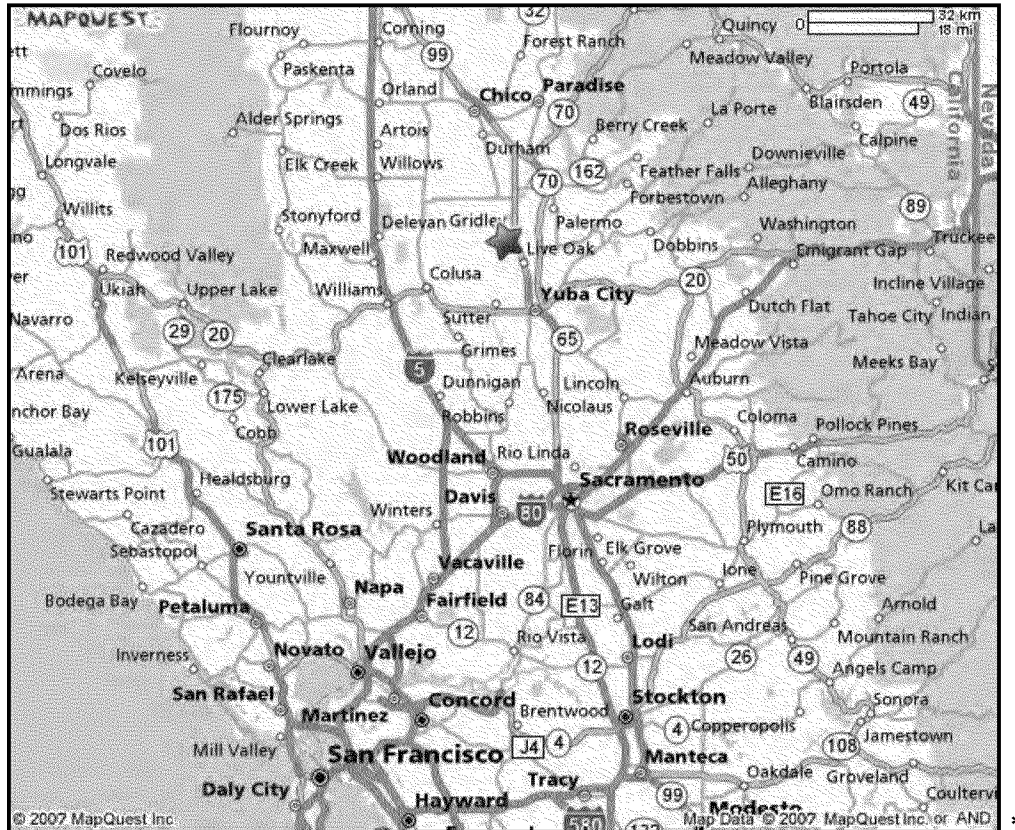
* Wild Goose has an on * * side produced water injection well. *

6.1.6 * Wild Goose Location Directions *

The primary access to the Wild Goose gas storage facility is via Gridley, CA. *

Latitude (N) 39° 20' 53.16" Longitude (W) 121° 49' 1.56" *
GPS Coordinates 39.348100, -121.817100 *

*



From Sacramento: *

- * From Sacramento, travel north on Highway 99 for approximately 65 miles through Yuba City and Live Oak to Gridley. *

From Gridley: *

1. * At Gridley, turn left (west) at the intersection of Highway 99 and Sycamore Street (Sycamore Street is 1 block north of the 4 way stop light) *
2. * After the city limits, Sycamore Street turns into Gridley/Colusa Highway. * Travel 6 miles to the Pennington Road intersection. *
3. * Turn left (south) onto Pennington Road and travel 1 mile. *
4. * Turn right (west) on to W. Liberty Road and travel 1 mile to the storage facility. *

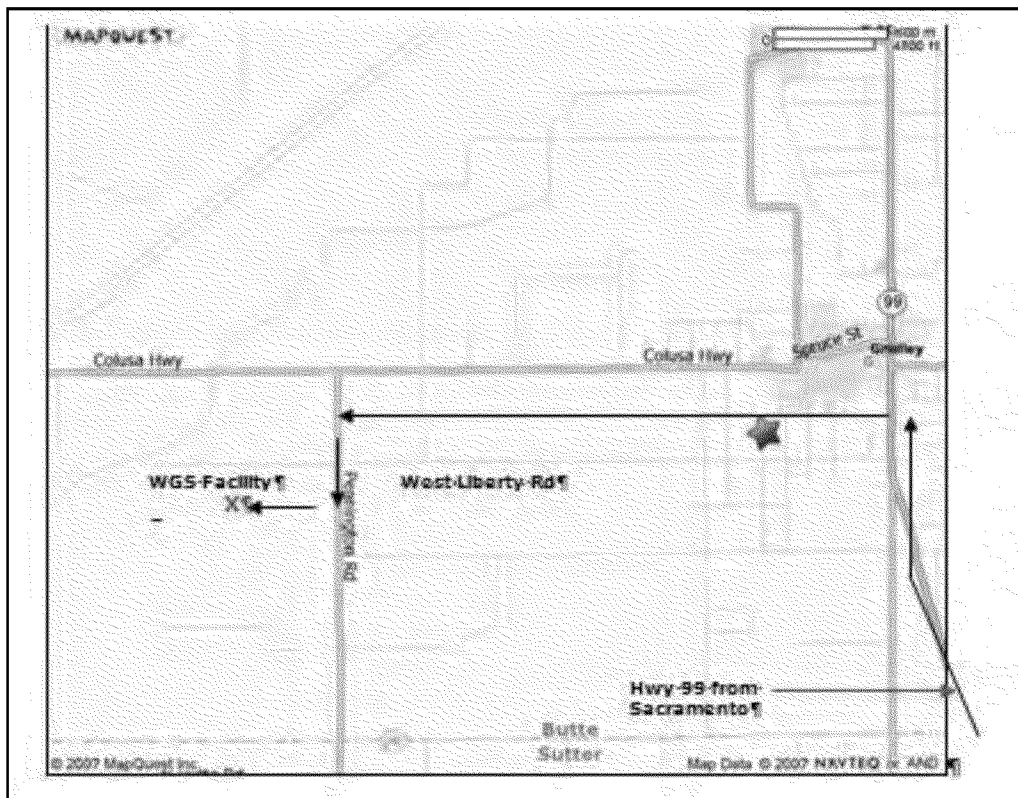
From Chico: *

1. * From Chico head south on Highway 99 for approximately 29 miles to Gridley. *
2. * At Gridley, turn right (west) at the intersection of Highway 99 and Sycamore Street *
(Sycamore Street is 1 block north of the 4 way stop light) *
3. * After the city limits, Sycamore Street turns into Gridley/Colusa Highway. * * Travel 6 miles *
to the Pennington Road intersection. *
4. * Turn left (south) onto Pennington Road and travel 1 mile. *
5. * Turn right (west) on to W. Liberty Road and travel 1 mile to the storage facility. *

From San Francisco International Airport: * *

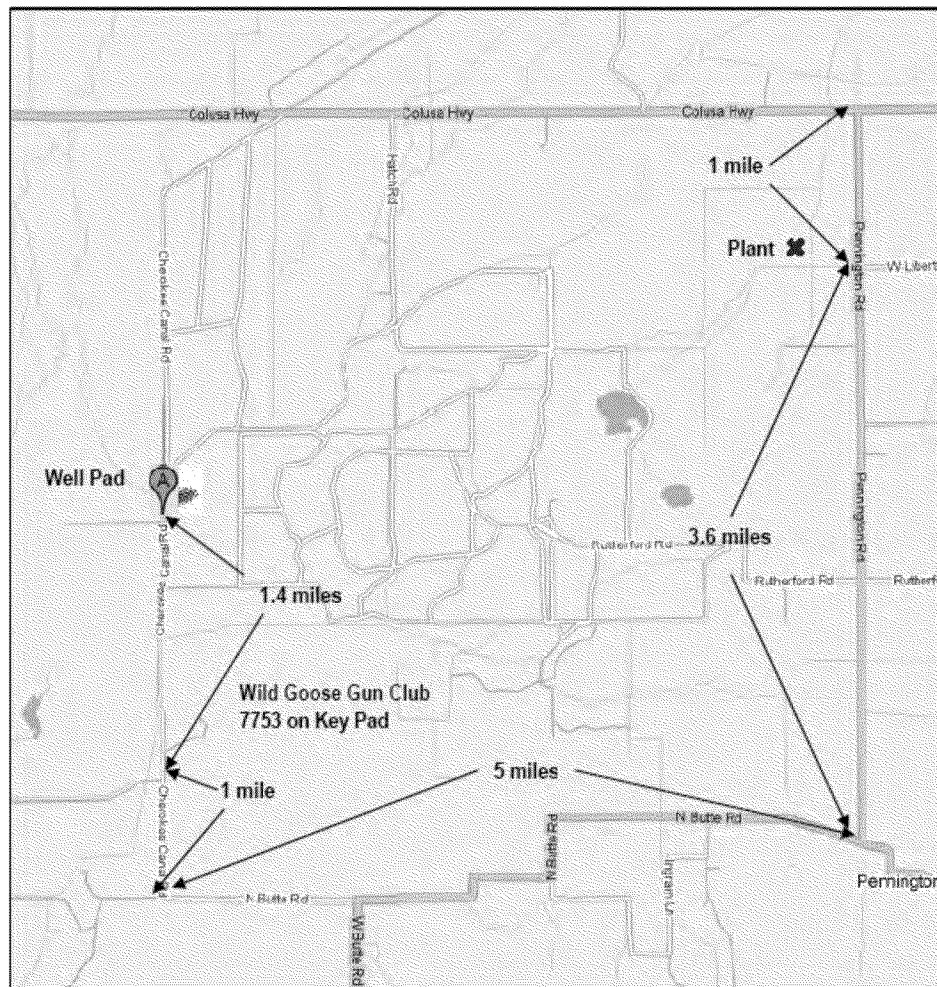
Travel time is 147 mi about 2 hours 47 minutes, up to 3 hours 30 minutes in traffic. *

1. * From the San Francisco International Airport merge onto U.S. * * 101 via the on * * ramp
toward San Francisco (11.4 miles). *
2. * Take a slight right at I * * 80 (signs for Bay Bridge/I * * 80 Oakland 69.2 miles). *Note: there is *
a \$4.00 toll bridge fee on this highway. *
3. * Take the exit onto CA * * 113 toward Woodland, (12.8 miles) *
4. * Take exit 538 for CA * * 113N/East toward Yuba City (1.5 miles) *
5. * Turn right at CA * * 113 East St (9.6 miles). *
6. * Turn left to stay on CA * * 113 (7.3 miles). *
7. * Turn left at CA * * 113 (5.6 miles). *
8. * At Gridley, turn left (west) at the intersection of Highway 99 and Sycamore Street *
(Sycamore Street is 1 block north of the 4 way stop light) *
9. * After the city limits, Sycamore Street turns into Gridley/Colusa Highway. * * Travel 6 miles *
to the Pennington Road intersection. *
10. Turn left (south) onto Pennington Road and travel 1 mile. *
11. Turn right (west) on to W. Liberty Road and travel 1 mile to the storage facility. *



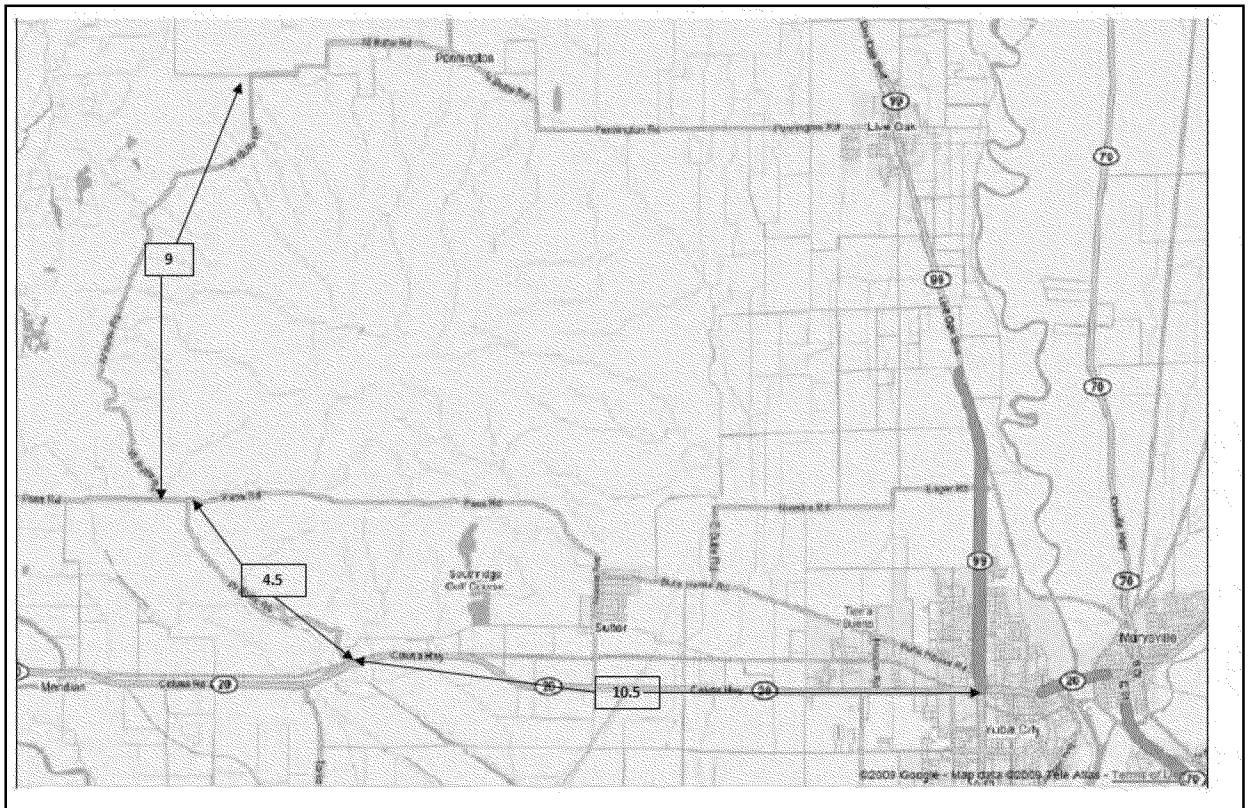
From Wild Goose Storage to Well Pad: * *

1. * Leave plant & drive one mile east on W. Liberty Rd to Pennington Rd and turn right * (south). *
2. * Head south on Pennington Rd 3.6 miles until you reach a T' junction North Butte Rd and * turn right. *
3. * Go 5 miles along Butte Rd until you hit a gravel road and continue approximately 1/2 mile * until you arrive at the Wild Goose Gun Club. *
4. * Turn right (north) and drive along Cherokee Canal until you arrive at a security gate and * enter 7753 on the keypad. *
5. * Follow the road, turning left * over bridge and then right going north for another 1.4 * miles until you reach the Well Pad. *



Yuba City to Wild Goose Storage Well Pad *

1. * From the junction of Highway 99 and Highway 20 (Colusa Hwy) turn west and drive * approximately 10.5 miles. *
2. * Turn north onto W. Butte Rd and drive 4.5 miles to Pass Rd. *
3. * Turn west onto Pass Rd and drive .7 miles and turn north onto W Butte Rd and drive * approximately 9 miles to N. Butte Rd. *
4. * Stop at the junction of W. Butte Rd and N. Butte Rd and turn west. Drive 1 ¼ miles west * to Cherokee Canal Rd. *
5. * Turn north onto Cherokee Canal Rd and drive 1 mile until you come to the access gate at * the Wild Goose Gun Club. Press 7753 on the touch pad and proceed through the gate. * * Drive approximately 1 ¼ miles north to the well pad. *



From Wild Goose Storage to Mid * *Point:*

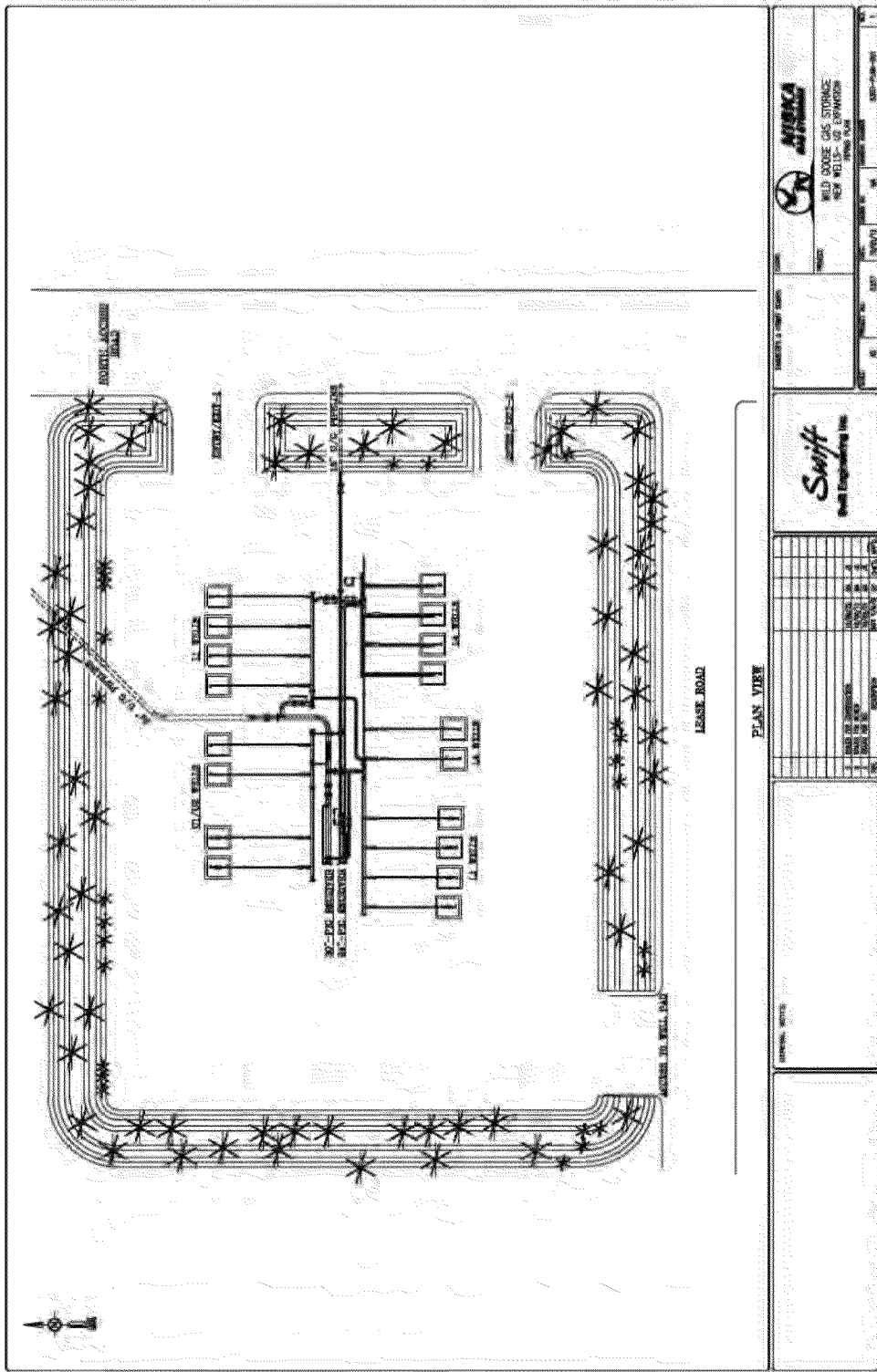
1. * Drive 1 mile east on West Liberty Rd to Pennington Rd. *
2. * Turn left on Pennington Rd and drive 1 mile to Colusa/Gridley Hwy. *
3. * Turn left onto Colusa/Gridley Hwy and drive for 7.4 miles to Butler Rd. *
4. * Turn right onto Butler Rd, (which changes names to County Rd 70, County Rd Z and *
County Rd 67) and drive north 7 miles to Hwy 162. *
5. * Turn left onto Hwy 162 and drive 3.2 miles to Butte City and another 1.3 miles past *
Butte City to Hwy 45. *
6. * Turn left onto Hwy 45 and drive 3.6 miles to Princeton and another 3.1 miles and turn *
left onto dirt road. Mid * *Point is approximately 100 yards east of Hwy 45. *

From Wild Goose Storage to Delevan: * *

1. * Drive 1 mile east on West Liberty Rd to Pennington Rd. *
2. * Turn left on Pennington Rd and drive 1 mile to Colusa/Gridley Hwy. *
3. * Turn left onto Colusa/Gridley Hwy and drive for 7.4 miles to Butler Rd. *
4. * Turn right onto Butler Rd, (which changes names to County Rd 70, County Rd Z and *
County Rd 67) and drive north 7 miles to Hwy 162. *
5. * Turn left onto Hwy 162 and drive 3.2 miles to Butte City and another 11 miles to Old *
Hwy 99W. *
6. * Turn left on Old Hwy 99W and drive 8.1 miles to Delevan Rd. *
7. * Turn right onto Delevan Rd and drive 2 miles overtop of Hwy 5 to McDermott Rd. *
8. * Turn right and drive 1 mile north to Dirks Rd. *
9. * Turn left onto Dirks Rd and drive 1.7 miles to the Delevan Station located on the left side *
of the road. *

*

6.1.8* Wild Goose Well Pad Site Plans*



6.1.10* Wild Goose High-Consequence Area*



6.1.11 * Wild Goose Emergency Planning Zones *

***** * ***** * ***** * * * * ***** * ***** * ***** *

As identified in Section 1.5.1 * Emergency Planning Zone, a Common Emergency Planning Zone (EPZ) for the Wild Goose Storage has been determined to have a radius of 740 feet (~225 meters) for the plant facility pipelines and the well pad. * * The EPZ would be associated with an initially uncontrolled gas release from a storage or observation well, pipeline or facility involving the Wild Goose Storage System. * *

Within the pipeline EPZ radius there are numerous residents (see the ERP map contained in the map pocket). * * the event of a well control incident associated with any of the wells within the EPZ, the EPZ must be evacuated and secured to prevent unauthorized entry (see Niska Response Strategies in Section 7.0 *Niska Facility Sample Response Strategies* for further information). *

***** *

The most probable emergency at this facility is a facility process fire (see Section 7.1). *

The worst case emergency occurrence is predicted to result from a failure involving a gas storage well, (see Section 7.2). *

***** * ***** * ***** *

A review of the worst case and most probable occurrences indicates that in the event of a loss of control of a storage well, adjacent residents may be impacted. * *

Immediately upon determining that local residents are, or may be, impacted they will be contacted by Wild Goose Storage personnel. * * They will be advised of the situation, updated as to Niska Gas Storage's control plan and will be advised accordingly: *

1. * Advisory Notification * no action required. *

Conditions: * Atmospheric monitoring indicates combustible vapor concentrations are not detectable; control of release is imminent. * *

2. * Shelter in Place * stay indoors, close windows *

Conditions: * Atmospheric monitoring indicates combustible vapor concentrations do not approach 20% LEL (3 * minute average); control of release is underway. *

3. * Evacuation * to outside the EPZ *

Conditions: * Atmospheric monitoring indicates combustible vapor concentrations exceed 20% LEL (3 * minute average); control of release is underway. *

Confidential resident contact information, along with a public evacuation plan, is stored in a sealed envelope in the Wild Goose Operations Control Room and with the EHS&S Coordinator in Calgary. *

6.1.12 * Wild Goose Resident Lists *

Confidential resident contact information, along with a public evacuation plan, is stored in a sealed envelope in the WGS operations office. *

School Divisions / Districts *

***** *	***** *	***** *	***** *
Gridley Unified * School District *	Pat Hydeman *	Gridley, CA *	530 846 * *4721

*

Schools *

There are no public or private schools located within the Wild Goose Storage Emergency Planning Zone. *

***** *	***** *	***** *	***** *
*	*	*	*
*	*	*	*

Transients * Campgrounds *

There are no identified campgrounds or RV parks located in the Wild Goose facility, pipeline * or well pad EPZ areas. *

6.1.13 * Wild Goose Site Specific Medical Emergencies *

For medical emergencies at the Niska Wild Goose plant site, pipeline or well pads, contact 911 * and advise them of the following: *

- ** State your name, your location (2780 West Liberty Road, Gridley), and reason * for your call, *
- ** Directions on how to get to where the emergency is, and the reason for your * call, *
- ** Indicate that Wild Goose is a natural gas storage facility (i.e. an industrial site), *
- ** Number of people injured, their condition and nature of injury, *
- ** Gender and age of injured person(s), *
- ** What happened, *
- ** Any further dangers. *

**

Wild Goose Emergency Services *	
Butte County Sheriff Department *	530 * *538*7321
Gridley *Biggs Police Department *	911 or 530 * *846*5670
Gridley Fire Dept *	911 or 530 * *846*1000 Direct Facility #: 530 * *846*5711
Biggs * *Gridley Hospital *	530 * *846*5671
Enloe Hospital (Chico) *	530 * *332*7300
Poison Control Center *	800 * *222*1222

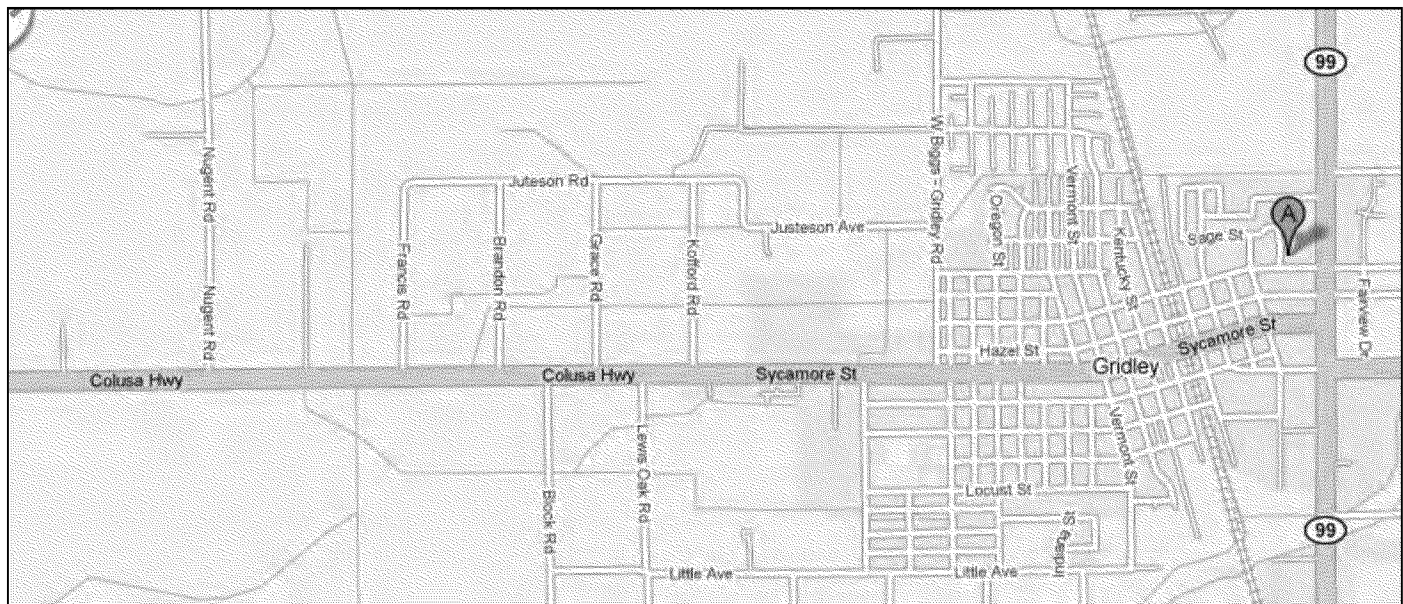
*

Directions to the Biggs * * Gridley Hospital in Gridley from Wild Goose *

Phone: * 530 * *846*5671

Address: * 240 Spruce Street *
* * Gridley, CA 95948 *
* * <http://www.bgmh.us.com/> *

1. * Turn left (east) out of the main gate and drive to Pennington Rd. *
2. * Turn left (north) onto Pennington Rd. and 1 mile to the Colusa Hwy. *
3. * Turn right (east) on to the Colusa Hwy, and drive to Gridley (Colusa Hwy turns into *
Sycamore Street). *
4. * Turn left (north) on to Haskell Street. *
5. * Turn right (east) on to Spruce Street. *



Directions to the Enloe Medical Centre in Chico from Wild Goose *

(travel distance is approximately 39 miles) *

Enloe Prompt Care *

Phone: * 530 * *332*7300

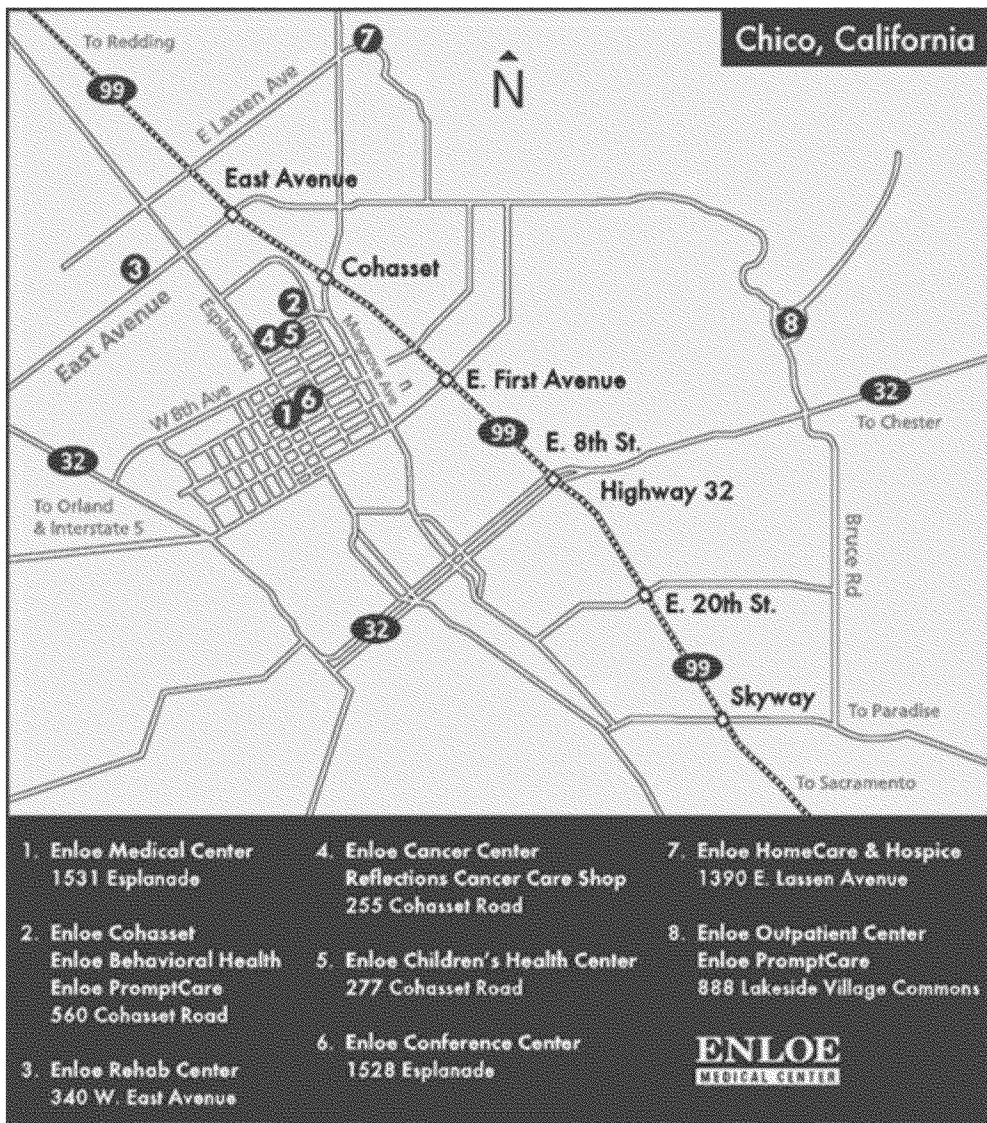
Address: * 1531 Esplanade *

* * Chico CA 95926 *

* * www.enloe.org *

1. * Turn left (east) out of the main gate and drive to Pennington Rd. *
2. * Turn left (north) onto Pennington Rd. and 1 mile to the Colusa Hwy. *
3. * Turn right (east) on to the Colusa Hwy, and drive to Gridley (Colusa Hwy turns into * Sycamore Street) to Hwy CA * *99.
4. * Turn left (north) on CA * *99 and drive 30 miles *
5. * Take exit 387A toward Mangrove Avenue (0.2 miles). *
6. * Turn left at Cohasset Road (0.2 miles). *
7. * Turn right to stay on Cohasset Road (0.2 miles). *

*
*



7.0 * Niska Facility Sample Response Strategies *

This section identifies seven types of natural gas emergencies and provides a guideline response for each type of emergency. The liaison between the Company and public officials is outlined and guidelines for educating public officials and the general public are provided. * * Four of the emergency responses are as per CFR 192.615(a)(3). *

An additional reference for pipeline emergency response is the booklet "Pipeline Emergency Response Guidelines" prepared by the Pipeline Association for Public Awareness www.pipelineawareness.org. * *

7.1 * Facility Process Fire *

Evacuate *

- ** **Evacuate** the area and direct others to the predetermined muster point. *
- ** **ESD** the site from a safe location. *

Sound the Alarm *

- ** **Alert** other personnel. *

Call for Help *

- ** **Notify** the Control Room and the On * *call supervisor. *
- ** **Initiate** the Incident Command System and complete sections 1 * of the * Niska Health and Safety Plan. *
- ** **Request** assistance from the local fire responders (911) to standby for * secondary fire control if required (i.e. perimeter fire, structural fire, grass * fire etc.). *
- ** **Ensure** the appropriate regulatory and government agencies have been * notified as required. *

Assess Hazards *

*First Responder(s): **

- ** **Assess** the scene and determine; Level of Emergency (2.2.1 *Assessment * Matrix for Classifying Incidents*), what happened, how many people are * involved and ensure that there are no further dangers to yourself or others. * Always assume that hazards exist and resist the urge to rush in. Ensure * others know and are aware of your actions and intentions. *
- ** **Inspect** the scene from a safe distance; use binoculars if practical. *
- ** **Determine** the appropriate monitoring and safety equipment needed to * respond safely to this incident (example Breathing Apparatus) and confirm * its operation prior to entering the scene. *
- ** **Check** for toxic gases or explosive vapors with an electronic gas detector * (human sense of sight or smell cannot be trusted to determine hazards). *
- ** **Obtain** all relevant MSDS for the products that could be affected *
- ** **Establish** a 'cold, warm or hot' zone and work zone around the incident site. * See Section 7.8, "Site Control". *
- ** **Beware** of physical hazards such as debris, structural failures, impaired * access/egress, secondary fires, or explosions. *
- ** **Ensure** all sources of ignition are eliminated. *

Initiate Rescue Operations (as required) *

- ** With the aid of other first responders, **develop** a Plan of Attack by utilizing the Niska Health and Safety Plan *
- ** As determined by the scene assessment and the associated hazards, **don** the appropriate personal protective equipment. *
- ** When and only if it is safe to do so, **rescue** any victims to a safe area and administer first aid. *
- ** **Confirm** emergency services have been dispatched. *

Secure the Area *

- ** **Control** on going hazards and limit or restrict access to the area. *
- ** **Establish** barriers/road blocks as required. *

Initiate Control & Containment Operations *

- ** If safety of the first responders and workers is assured, **follow** the established Safe Work Procedures and **take immediate actions** to gain control, shut down, isolate, depressurize, or control sources of fuel to the fire. *
- ** **Retreat** to a safe area and allow fire to burn out. *
- ** **Extinguish** secondary fires as it is determined safe to do so. *

Protect the Public *

- ** **Refer** to Section 8.0, "Communication" for prepared resident notification texts. *
- ** **Consider** the need for an advisory communication with local neighbors. *

Follow up *

- ** **Ensure** the appropriate regulatory and government agencies have been notified at the termination of the incident. *
- ** **Complete** an Incident Investigation Report. *

*

*

7.2 * Loss of Well Control *

Evacuate *

- * * **Evacuate** the area and direct others to the predetermined muster point. *
- * * **ESD** the site from a safe location *

Sound the Alarm *

- * * **Alert** other personnel. *

Call for Help *

- * * **Notify** the control room and the on * * call supervisor. *
- * * **Ensure** the appropriate regulatory and government agencies have been notified as required. *
- * * **Initiate** the Incident Command System and **complete** sections 1 * 06 the * Niska Health and Safety Plan. *
- * * **Immediately contact** Gas Storage Drilling & Completions Specialist, John * Craig at: * *
 1. * Bus: 403 * * 513*8780.
 2. * Cell: 403 * * 540*0922.
 3. * Res: 403 * * 242*777. *
- * * **Request** assistance as appropriate from local emergency response services (911). *

Assess Hazards *

- * * **Assess** the scene and determine; Level of Emergency (2.2.1 Assessment * Matrix for Classifying Incidents), what happened, how many people are * involved and ensure that there are no further dangers to yourself or others. * Always assume that hazards exist and resist the urge to rush in. Ensure * others know and are aware of your actions and intentions. *
- * * **Inspect** the scene from a safe distance; use binoculars if practical. *
- * * **Determine** the appropriate monitoring and safety equipment needed to * respond safely to this incident (example Breathing Apparatus) and confirm * its operation prior to entering the scene. *
- * * **Check** for toxic gases or explosive vapors with an electronic gas detector * (human sense of sight or smell cannot be trusted to determine hazards) * *
- * * **Obtain** all relevant MSDS for the products that could be affected *
- * * **Establish** a 'cold, warm or hot' zone and work zone around the incident site. * See Section 7.8, "Site Control". *

- * * **Beware** of physical hazards such as debris, structural failures, impaired access/egress, secondary fires, or explosions. *
- * * **Ensure** all sources of ignition are eliminated. *

Initiate Rescue Operations (as required) *

- * * With the aid of other first responders, **develop** a Plan of Attack by utilizing the Niska Health and Safety Plan. *
- * * As determined by the scene assessment and the associated hazards, **don** the appropriate personal protective equipment. *
- * * When and only if it is safe to do so, **rescue** any victims to safe area and administer first aid. *
- * * **Confirm** emergency services have been dispatched. *

Secure the Area *

- * * **Retreat** to the 'cold zone' and wait for the arrival of the industrial fire fighter response unit. *
- * * **Control** on going hazards and limit/restrict access to the area. *
- * * **Establish** barriers/road blocks as required. *

Initiate Control & Containment Operations *

- * * If safety of the first responders and workers has been established, **take immediate actions** to gain control, shut down, isolate, depressurize or contain the release following established safe work procedures. *
- * * **Dispatch** third party well control specialists as soon as practical. *
- * * In the event of an uncontrolled release from a sour well, **ignition must be considered** as a means to protect the public from sour gas exposure. * * *

Protect the Public *

- * * **Refer** to Section 8.0 "Communication" for prepared resident notification texts. *
- * * **Consider** the need for an advisory communication with local neighbors. *

Follow up *

- * * **Ensure** regulatory/government agencies have been notified at the termination of the incident. *
- * * **Complete** an Incident Investigation Report. *

7.3 * Pipeline Rupture *

Evacuate *

- ** **Evacuate** the area and direct others to the predetermined muster point *

Sound the Alarm *

- ** **Alert** other personnel. *

Call for Help *

- ** **Notify** the control room and the on * call supervisor. *
- ** **Ensure** the appropriate regulatory and government agencies have been notified as required. *
- ** **Initiate** the Incident Command System and complete sections 1 * of the * Niska Health and Safety Plan. *
- ** **Request** assistance from the local fire responders (911) to standby for * secondary fire control if required (i.e. perimeter fire, structural fire, grass * fire etc.) *

Assess Hazards *

- ** **Assess** the scene and determine; Level of Emergency (2.2.1 Assessment * Matrix for Classifying Incidents), what happened, how many people are * involved and ensure that there are no further dangers to yourself or others. * Always assume that hazards exist and resist the urge to rush in. Ensure * others know and are aware of your actions and intentions. *
- ** **Inspect** the scene from a safe distance; use binoculars if practical. *
- ** **Determine** the appropriate monitoring and safety equipment needed to * respond safely to this incident (example Breathing Apparatus) and confirm * its operation prior to entering the scene. * * **Admittance to anyone where * the Lower Explosive Limit (LEL) exceeds 20%. ***
- ** **Check** for toxic gases or explosive vapors with an electronic gas detector ** (human sense of sight or smell cannot be trusted to determine hazards) * *
- ** **Obtain** all relevant MSDS for the products that could be affected *
- ** **Establish** a 'cold, warm or hot' zone and work zone around the incident site. * * See Section 7.8, "Site Control". *
- ** **Beware** of physical hazards such as debris, structural failures, impaired * access/egress, secondary fires, or explosions. *
- ** **Ensure** all sources of ignition are eliminated *

Initiate Rescue Operations (as required) *

- ** With the aid of other first responders **develop** a Plan of Attack by utilizing * the Niska Health and Safety Plan. *
- ** As determined by the scene assessment and the associated hazards, **don** * the appropriate personal protective equipment. *
- ** When and only if it is safe to do so, **rescue** any victims to safe area and * administer first aid. *
- ** **Confirm** emergency services have been dispatched. *

Secure the Area *

- ** **Control** on * goingzards and limit/restrict access to the area. *
- ** **Establish** road blocks/barriers as required. *

Initiate Control & Containment Operations *

- ** If safety of the first responders and workers has been established, **review** * the established Safe Work Procedures and **take immediate actions** to gain * control, shut down, isolate, depressurize, or control sources of fuel to the * fire. *

Protect the Public *

- ** **Refer** to Section 8.0, "*Communication*" for prepared resident notification * texts. *
- ** **Consider** the necessity for an advisory communication with local neighbors. *

Follow * *up

- ** **Ensure** the appropriate regulatory and government agencies have been * notified at the termination of the incident. *
- ** **Complete** an Incident Investigation Report. *

7.4 * Escaping Gas Including Gas Detected Inside a Building *

A major leak or gas detected inside or near a building must be given immediate attention to protect the general public and property. * * [192.615(a)(3)]

1. * When information is received which indicates a major leak or a pipeline break exists, appropriate personnel must be dispatched to the job site immediately as provided in Receiving Information and Notification. While these employees are en route to the emergency, they shall be given all available information about the emergency by radio so they can begin assessment of the danger involved as soon as they arrive at the job site. * * The On Duty Person and Supervisor shall, when arriving at the job site, report to the Fire Department officials or other civil authorities that might be on the scene and become apprised of the situation. * * After it is accomplished, determination shall be made of the area affected by the uncontrolled gas. * * The evaluation of the situation shall include the following: *
 - a. * The first employees on the site shall determine with a leak detector whether or not escaping gas is present in or under the building involved or in any adjacent buildings. * * If gas is detected, the affected buildings shall be evacuated, the gas meter shall be turned off, open flames shall be extinguished, electrical switches and telephones shall not be operated and all necessary precautions shall be taken to prevent the gas from being ignited. *
*
 - b. * Determine if traffic shall be stopped or rerouted to prevent possible ignition of the escaping gas. * * If it is determined that traffic shall be rerouted, the Police or Fire Department should be requested to direct the flow of traffic. *
*
 - c. * It shall be determined whether or not the gas is migrating into storm or sanitary sewers. * * If gas is found in either type of sewer, then necessary precautions shall be taken to prevent ignition. When gas is found in a sanitary sewer, the buildings in the immediate area shall be checked with a leak detector to determine if any gas is present under or in the buildings. Normally, gas in a sanitary sewer will vent from the sewer stack unless there is a leak in the sewer system under the building. * * At times, gas will get under the building by following the sewer ditch. * * If gas from a sewer is found under a building the dangerous condition can usually be eliminated by opening a hole in the sanitary sewer line and the gas will then vent to atmosphere. * * When gas is found in storm sewers, it will usually vent out at the nearest sewer inlets at the curb. * * Precautions shall be taken to prevent this gas from being ignited by either flames or vehicles. *
*
2. * During an investigation, reports of conditions found and precautions taken will be communicated to the On Duty Person. Company personnel at the leak will describe the intensity of the leak, probable hazards involved, and back up needed, such as welders, equipment operators and fire or police. * * The On Duty Person will notify supervisory, Claims, and Public Relations personnel if the seriousness of the leak warrants or when injury or personal property damage results. * * If the leak occurs after regular working hours, On Duty Person will notify the on call supervisor and call overtime personnel in

accordance with standard practice. Upon arrival, all personnel will be briefed by the supervisor on the situation and proceed with repair of the emergency.

- a. The On Duty Person shall determine the expected consequences of lowering the gas pressure or taking the pipeline out of service. Before a decision is made to take a line out of service or to isolate a section of the system, an analysis will be made of the system maps to determine which valves must be closed. The On Duty Person will normally plan this.
- b. Gas Operation will pay particular attention to leaks that may compromise the integrity of the Gas System. Compressors may be started or pressures of remotely controlled regulators may be raised as required to maintain an adequate supply of gas to the system. Remotely controlled block valves will not be closed without supervisory approval.
- c. After the decision is made as to how the escaping gas will be controlled, the "Supervisor in Charge" will request any additional personnel, equipment, and materials needed for the repair. The Supervisor at the dispatch office will arrange for dispatching employees to the valve locations and will coordinate the isolation.
- d. While the repair is being made on a pipeline or a section of the system that has had the flow of gas interrupted, the On Duty Persons will ensure that all laterals are turned off in the isolated section.
- e. After repairs are completed and the line has been purged, if necessary, and placed in service, additional checks shall be made in the immediate area by accepted leak detection methods to determine if other leaks exist in the immediate area.
- f. Upon completion of repairs, notification will be made to the "Supervisor in Charge" so gas may be restored to the affected area; buildings reoccupied, and traffic returned to normal. In addition all previously notified public agencies, company personnel, and insurance representatives will be informed that emergency conditions have been corrected.

7.5 * Natural Disasters *

Disasters such as floods, tornadoes, earthquake, and high winds might cause various operating problems within the gas system. Emergency procedures must be employed to survey the system and eliminate conditions that might endanger life or property. [192.615(a)(3)] *

1. * Immediately upon learning of such an occurrence, the appropriate supervisor shall assess the severity of the situation and decide whether it is necessary to initiate action. * * When a disaster does occur, civil authorities may declare a state of emergency. Under a state of emergency the civil authorities have control over the actions of all persons and equipment in the area. * * After the immediate hazardous conditions have been corrected, essential services shall be restored on the priorities established by the public officials. *

Notification shall be given to the appropriate personnel to report for work and equip their vehicles with emergency tools and stand by for further instructions. * It is most important to utilize radio * equipped vehicles and make maximum usage of portable radios or telephones. *

2. * Action shall be taken upon arrival at the scene of the emergency. *
 - a. * Communications shall be established with all rescue squads, police and fire departments, and the National Guard. Full advantage shall be taken of the services that these organizations can render. *
*
 - b. * One radio * equipped vehicle shall be staffed and located in a conspicuous and convenient location in the emergency area. * * The supervisor will appoint an employee at the scene to locate the person or persons in charge of each emergency agency that is present, and establish communications with them. * The supervisor will inform them of the location of the radio equipped vehicle and will request each agency to notify its members to report any gas * related problems to the employee at that location. * * The employee at this vehicle then will relay all information to the On * * Duty person and/or supervisor. *

3. * A survey shall be conducted as soon as possible to assess damage to our facilities. *
 - a. * During this survey, inspect district regulator stations for damages, paying particular attention to regulator control lines in an effort to prevent over * * pressuring. *
*
 - b. * In certain instances, it will be advisable to station someone at primary regulator stations to prevent the gas supply from being turned off by unauthorized personnel. *
*
 - c. * Leak survey crews with portable instruments shall be utilized to check the areas involved. * * After estimate of the severity of the situation is ascertained, a decision must be made as to isolating pipelines, shutting them off completely, or leaving gas on the system. * * Refer Procedure for Emergency Shutdown, if necessary. *
*

- d. * Consideration shall be given as to whether additional personnel and/or equipment *
will be needed. * In doubt, it is preferable to have extra crews standing by on the *
scene even though they may not be needed. * * This will allow more flexibility for *
unexpected requirements and also will be an aid in reassuring the public. * * *

7.6 * Major Fires and Explosions *

Emergency precautions must be taken after explosions and during major fires to protect system facilities and to ensure that the presence of gas will not create additional problems for fire fighting and damage control personnel. * * Refer Emergency Shutdown and Pressure Reduction Procedure. [192.615(a)(3)]. *

1. * When responding to a report of a major fire or explosion, the primary consideration shall be the safety of the public and employees. * A fire or explosion resulting from the leakage of natural gas requires immediate and urgent attention by all the company personnel involved. * * On * * duty person will be dispatched to the area immediately. * * The following actions and procedures shall be considered: *
 - a. * Immediately upon arrival, establish contact with any fire and police personnel on the scene. * If company personnel precede fire and police arrival, verify with the On * * Duty Person that proper notice has been given these agencies. * * On * * duty person will describe the nature and scope of the emergency to the On Duty Person by radio and request emergency back up crews and equipment to handle the emergency. * Gas Operation will dispatch the requested personnel and equipment to the area and notify other supervisory, emergency, and interested personnel in accordance with standard practice. *
*
 - b. * It must be determined immediately if gas is directly involved in the fire or explosion. * Gas is not involved, but is in close proximity, action shall be taken to ensure the protection of the public and the affected facilities. *
*
 - c. * If gas is involved and the presence is such that there is immediate danger to public and property, proceed to evacuate the areas. * * Request the Fire/Police Department's assistance in evacuation efforts if needed. * The On * * duty person, or his supervisor at the scene, will do what is necessary to eliminate any remaining hazard to persons or structures in the vicinity. * Occupants of adjacent structures will be advised to evacuate if there is danger of additional fire or explosion. * * They will be advised against turning on light switches or any appliance, which would likely cause a spark. * * Gas electric meters may be turned off to prevent ignition of trapped gas if present. * Traffic will be detoured around the area until the danger has cleared. * * Coordination and cooperation with the Fire and Police Departments by company personnel is imperative. *
*
 - d. * The On * * duty person at the scene of the emergency shall immediately attempt to locate the source of the leak. * * On * * duty person will have Gas Leak Repair Persons dispatched to the area without delay. * * At the same time, the On duty Person will continue to search for the leak using a combustible gas indicator. * He will investigate such things as sewer vents, manholes, curb lines, and cracks in sidewalks, driveways or pavement. * * Edges of sidewalks, driveways, or building foundations and any other discontinuity of the ground surface are also places to investigate. *
*

- e. * Measurement & Regulator Persons will be dispatched if the area requires isolation *
to prevent further leakage or pressure reduction to repair the leak. * * These
operations will be planned and executed by the Operations Person. *
- *
- f. * Tests shall be made by accepted leak detection methods to determine the *
presence of gas. * Detailed schematic showing readings and where readings were *
taken along with calibration of instruments shall be documented. *
- *
- g. * After initial action has been completed to assure the safety of the public, and to *
prevent damage to property, there are certain investigative actions that shall be *
considered by the supervisor in charge of the investigation. *
- *
- h. * Record all information concerning actions taken, so that necessary reports might *
be prepared. Refer to Checklist for Supervisors * (Form EM * * 5).
- *
- i. * Ensure that all persons necessary to conduct a completed investigation have been *
notified. *
- *
- j. * See that no action is taken that might disturb evidence necessary to conduct a *
complete investigation. Evidence shall be recorded with notes, photographs, and *
videotape, if possible. * * ~~At~~ certain components shall be brought to the Main *
Operations Office. *
- *
- k. * Review maintenance work and results of previous leakage surveys in the area. * *
Review the level of cathodic protection on the system. * * Determine if there has *
been recent construction work in the area by the company or others, which may *
have contributed to the emergency. * *

7.7 * Civil Disturbance *

Civil Disturbance is an unlawful act of a group of people whereby life and property are endangered or may be endangered and company pipeline facilities may be sabotaged. * [192.615(a)(3)] *

1. * The Gas Operations Person shall request police protection in areas of civil disorder. * * Personnel shall attempt to disrupt company operations and sabotage company equipment. * * The Gas Operations Person shall:
 - a. * Establish communications with appropriate civil authorities. *
 - b. * Determine the extent of the area and prepare to isolate the section. *
 - c. * Monitor the operation of the gas system at a safe location. * * Watch for signs of major changes in flow rates that would indicate volumes of gas escaping or loss of pressure. *
 - d. * Report all incidents of sabotage to civil authorities. *
2. * The Gas Operations Person shall request police protection for any personnel dispatched into the affected area. * * Company personnel shall not physically resist potential saboteurs or unruly persons. * Company personnel threatened by such persons shall secure the gas facilities and withdraw from the area. * * Under circumstances shall company personnel carry firearms. * * The Gas Operations Person shall make all arrangements for security guards. * * The Gas Operations Person shall consider the following actions to prevent disruption of service:
 - a. * Verify all public reports and requests for service by obtaining the telephone number from the person calling in and recalling the number. * * Telephone numbers can also be checked against city directories. *
 - b. * **Install locking devices on all above ground valves inside fenced enclosures and buildings.** *

7.8 * Site Control and the Emergency Response Site Specific Health & Safety * Plan *

Upon the outset of a Level 2 or Level 3 emergency, utilization of the Niska Gas Storage *
Emergency Response Site Specific Health and Safety Plan will assist the First Responder if *
the first six (6) initial steps are followed. * * *

The six (6) initial steps are identifying: *

1. * **Incident Information** * - What type of incident, date, location, time the *
incident occurred, name of incident (i.e. Regen Skid Fire) *
2. * **Products and Chemicals Involved** * In box 2, identify the type of product or *
chemical involved in the incident, by checking the appropriate box. * THE *
product or chemical is not displayed, write the name down in the 'Other' *
box. *
3. * **Primary Hazards** *
4. * **Personal Protective Equipment** *
5. * **Hot Zone Authorized Entrants** *
6. * **Site Map** *

Site Control *

The first act of the Incident Commander must be to establish control of the site. * * Site must *
be controlled for the protection of first responders and to exclude unnecessary personnel. * *
The basic approach is to establish three distinct zones, the exclusion zone (called the hot *
zone), contamination reduction zone (called the warm zone) and the support zone (called the *
cold zone). *The emergency area can be divided into as many different zones as needed to *
reduce accidental spread of contaminants, reduce the number of personnel authorized in the *
high * * risks, delineate required levels of personal protection to be worn and implement *
emergency evacuation routes. * * * *

Hot Zone *

The hot zone is the area where the actual incident occurred and contamination exists. All *
individuals entering the hot zone must wear the prescribed levels of personal protection and *
be decontaminated before leaving. * * Entry and exit check points will be established at the outer *
boundary of the hot zone to regulate the entry and exit of personnel and equipment. *The *
outer boundary of the hot zone is initially established by visually surveying the immediate area *
and determining where the hazardous materials involved are located. Monitoring equipment *
may also be used to define * the area. *

Warm Zone *

The warm zone is the transitional area between the hot zone and the cold zone. This zone *
generally contains the decontamination area and access control points through which *
personnel and equipment enter and exit. *Since this zone is less hazardous, personnel can *
wear lower levels of personal protection equipment. *

Cold Zone *

The cold zone is the outermost part of the site and is considered non ** contaminated.

This is where the command post is located, along with support equipment. Normal work clothes are acceptable in this area. The command post should be situated upwind and upstream of the hot zone and should be easily accessible to highways or other transportation routes. The press is allowed in this zone. * * Size and distances between the hot zone, warm zone, cold zone and the command post is based on conditions specific to each incident, the material involved, and the judgment of the incident commander. * *

Establishing the Work Zone *

The following criteria should be considered when establishing work zone boundaries: *

- * * Physical and topographical features of the site; *
- * * Weather conditions and wind direction; *
- * * Field measurements of air contaminants; *
- * * Air dispersion models of the chemical(s) involved; *
- * * Physical, chemical, toxicological, and other characteristics of the chemical(s) present; *
- * * Cleanup activities; *
- * * Potential for fire or explosion; and *
- * * Adequate roads, power sources, and water. *

NISKA GAS STORAGE - EMERGENCY RESPONSE SITE SPECIFIC HEALTH & SAFETY PLAN

Date / Time: _____

Complete Boxes 1 - 6 First


1. Incident Information:
 Incident Type: _____ Date: _____
 Location: _____
 Time of Incident: _____
 Incident Name: _____

2. Products / Chemical Involved:
 Gasoline Diesel Jet Fuel Methanol DKA
 Fuel Additive Ethanol Ethene Butane
 Natural Gas Isobutane MDC Lubricity
 Crude Oil Propane Ethyl Mercaptan
 Other _____
 (See Table 4 on back for chemical & physical properties)
 MSDS available and reviewed: YES

3. Primary Hazards:
 Fire Vapor Respiratory Skin
 Cold Zone / Staging Hardhat Safety Boots Traffic Vest
 Warm Zone / Decon - Level A B C D
 Hot Zone - Level A B C D
 (See Table 2 on back for description of PPE by level)

4. Personal Protective Equipment:
 Heavy Equipment
 Noise
 Confined Spaces
 Cold Stress
 General (slip, trip, fall, established smoking area)
 Other _____
 (See Table 3 on back for secondary hazard precautions)

5. Hot Zone Authorized Entrants:
 Fire Dept. Niska
 Agency Reps. Contractors

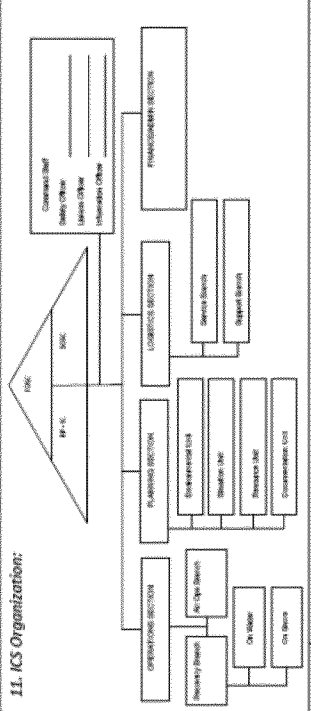
6. Site Map:
 Wind Direction (Out of the ...)


7. Secondary Hazards:
 Fire
 Excavations
 Confined Spaces
 Cold Stress
 General (slip, trip, fall, established smoking area)
 Other _____
 (See Table 3 on back for secondary hazard precautions)

8. Evacuation Plan:
 Evacuation Signal: _____
 Primary Evac. Area: _____
 Secondary Evac. Area: _____

9. Nearest Hospital:
 Address: _____
 Phone #: _____
 Directions: _____

10. Prop 65 Notices: (California Only)
 Incident is within Terminal or Station; notice(s) are posted at facility entrance(s)
 Incident of outside Niska property; notice(s) are posted along incident site boundaries

11. ICS Organization:


12. Enforcement / Regulatory Agencies (On Site):
 Agency (Fed/State/Local) _____ Name _____ Contact Number _____ Time of Arrival _____

13. Contractors (On Site):
 Envision Repair Clean Up Consultant

14. Hot Zone Entry Objectives:
 Objectives: _____
 Why are people entering the Hot Zone? What is their objective? _____

15. Decontamination Checklist:
 Establish and communicate location
 Plastic Tarps and trash bags provided
 Supervision of decon provided
 Entrant log maintained
 Container of absorbent material provided
 Boot brush provided
 Folding Chairs Provided
 Lighting provided (if needed)

16. Atmospheric Monitoring:
 Completed by: Fire Dept. Contractor Other:
 Results: SHEL _____ PFM _____ Time: _____
 Results: SHEL _____ PFM _____ Time: _____

17. Authorization Signatures:
 Incident Commander: _____
 Safety Officer: _____

INCIDENT COMMANDER PRIORITIES - SAFETY of NISKA PERSONNEL SURROUNDING COMMUNITY ENVIRONMENT

Chemical & Physical Properties							
Chemical Hazards	Flammability Range		Toxicity		Chemical / Physical Properties		Health Hazard/Reactive
	LEL	UEL	Flash Pt.	PEL(TLV)(S)	Vapor Pressure	Vapor Density	
<input type="checkbox"/> Gasoline	1.5%	7.6%	-43°F	300 PPM(A)	~200 mmHg	3	0.74
<input type="checkbox"/> Diesel	0.8%	7.0%	NA	NA	~1 mmHg	~3	0.86
<input type="checkbox"/> Jet Fuel	~0.8%	~6.0%	~110°F	300 PPM(A)	3	~3	0.81
<input type="checkbox"/> Ethanol	3.3%	19.0%	45°F	1000 PPM(S)	44 mmHg	~1	0.79
<input type="checkbox"/> Road Salts/NaCl*							
<input type="checkbox"/> Drag Reducing Agent (DMAc)*							
<input type="checkbox"/> MOC Lubricity			-140°F	NA	1.37 mmHg	~1	~35 - 54
<input type="checkbox"/> Natural Gasoline (Kerosene)	1.4%	7.6%	-50°F	NA	12-36 pf	2.7	0.65 - 0.71
<input type="checkbox"/> Butane	1.6%	8.4%	-40°F	800 PPM(A)	49 psf	2.39	0.38
<input type="checkbox"/> Ethane	2.6%	13.0%	-72°F	800 PPM	800 psf	1.1	0.36
<input type="checkbox"/> Isobutane	1.6%	8.4%	-116°F	800 PPM(A)	62 psf	2	0.563
<input type="checkbox"/> Propane	2.3%	9.5%	-118°F	1000 PPM(S)	132 psf	1.53	0.21
<input type="checkbox"/> Crude Oil	6.0%	36.0%	31°F	200 ppm	96 mm Hg	1.1	0.792
<input type="checkbox"/> Ethyl Mercaptan	2.6%	12.0%	-37°F	100ppm(S)/0.5ppm(S)	16.2 pf	2.1	0.845
<input type="checkbox"/> Natural Gas (Methane)	5%	15.0%	-128°C	NA	47,000 mmHg @ 15°C	0.334	0.7168
<input type="checkbox"/> Other**							

*Variable

**See MSDS

1 ammonia = 360 mg/m³ = 3.7 pd

Table 3. Secondary Hazards	
Hazards	Recommended Precautions
<input type="checkbox"/> Fire (potential)	<ul style="list-style-type: none"> Remain safe distance away. • Eliminate ignition sources • Keep upwind of support/mole • Provide vapor suppression if safe. • Do not approach fire Dept. efforts Qualified operators only • Firebars and safety boots needed around heavy equip. • Minimum 10% clearance from power lines • Make "one call" if excavating • Proper machine guarding in place
<input type="checkbox"/> Heavy Equipment	<ul style="list-style-type: none"> Trenching/excavations equal to or greater than 5ft. Deep must meet OSHA requirements • No one allowed to enter excavation > 5ft. Unless shored, diked or protected • Excavations < 5ft. And judged by competent person as cave-in hazard must also follow OSHA requirements
<input type="checkbox"/> Excavations	<ul style="list-style-type: none"> Portable generators & heavy equip. can generate potentially high noise levels • Hearing protection available to workers • Hearing protection must be worn in areas with noise levels above 85dBA.
<input type="checkbox"/> Noise	<ul style="list-style-type: none"> Site Safety Officer will determine whether confined space will be entered • All confined space entries must meet OSHA requirements (permits, atmospheric monitoring, attendants, etc.)
<input type="checkbox"/> Confined Spaces	<ul style="list-style-type: none"> Potential hazard when temp > 60°F • Workers should take more breaks and drink plenty of appropriate liquids • More PPE • Higher risk • Be aware of heat cramps (stomach cramps), heat exhaustion (excessive sweating, flushed/sweaty skin) • sweat with rest and liquids. Heat stroke (dry, hot, pale skin; no sweating) can be deadly • get medical help immediately, reduce core body temp by applying cool water to body & fanning.
<input type="checkbox"/> Heat Stress	<ul style="list-style-type: none"> Slip takes on gray/gassy look • Appendages become non-responsive • Blisters or sores may appear • Do not rub • Submerge affected areas in warm water or wrap in warm cloth.
<input type="checkbox"/> Cold Stress	<ul style="list-style-type: none"> Stop excavation activities during excessive rainfall. Avoid shock hazards by stopping work during thunderstorm or lightning. Present & control erosion & transport of soil out of incident area.
<input type="checkbox"/> Rain / Lightning	<ul style="list-style-type: none"> Slip, trip & fall hazards • Keep work area clear of debris • Smoking not permitted in work areas • Use hand tools safely.
<input type="checkbox"/> General	
<input type="checkbox"/> Other	

Table 2. PPE Levels			
LEVEL A	LEVEL B	LEVEL C	LEVEL D
<ul style="list-style-type: none"> Respiratory Protection SCBA or Air Line Positive Pressure Full Face Piece supplied air w/ escape SCBA 	<ul style="list-style-type: none"> Respiratory Protection Full / Half Face respirator w/ supplied air w/ escape SCBA Eye protection 	<ul style="list-style-type: none"> Respiratory Protection Full / Half Face respirator w/ supplied air w/ escape SCBA Eye protection 	<ul style="list-style-type: none"> Respiratory Protection None
<ul style="list-style-type: none"> Required Equipment Heavy encapsulating gas tight chemical resistant suit Inner chemical resistant gloves Chemical resistant safety boots 	<ul style="list-style-type: none"> Required Equipment Non-encapsulating chemical resistant suit Inner & outer chemical resistant gloves Chemical resistant safety boots Hard hat 	<ul style="list-style-type: none"> Required Equipment Non-encapsulating chemical resistant suit Eye protection Inner & outer chemical resistant gloves Chemical resistant safety boots Hard hat 	<ul style="list-style-type: none"> Required Equipment Conceals Safety boots Safety glasses Hard hat
<ul style="list-style-type: none"> Optional Equipment Hearing protection Hard hat Disposable glove & boot covers 	<ul style="list-style-type: none"> Optional Equipment Hearing protection Hard hat Disposable boot covers Face shield/safety glasses 	<ul style="list-style-type: none"> Optional Equipment Hearing protection Hard hat Disposable boot covers Face shield/safety glasses 	<ul style="list-style-type: none"> Optional Equipment Hearing protection Gloves Face shield/safety glasses

8.0 * Communication *

Section 8.1 provides a basic listing of essential communication equipment. The remaining sub ** sections provide a background on media relations and prepared texts that can be used by Niska personnel in communicating with third parties during an emergency response. *

8.1 * Communication Network *

The following communication equipment will be used to ensure that communication links are maintained between all emergency response personnel throughout the emergency situation. *

Emergency Response Role *	2 * * * * Way Radio *	Mobile * Telephone *	Land Line * Telephone *
First Responders *	* *	* *	*
On Site Commander *	* *	* *	* *
On Site Command Post (OSCP) *	* *	* *	* *
Emergency Operations Center * (EOC) *	* *	* *	* *
Evacuation Center *	*	* *	* *
Roadblock Crews *	* *	* *	*
Air Monitoring Crews *	* *	* *	*
Ignition Teams *	* *	*	*
EPZ Rovers *	* *	* *	*
Telephone Callers *	* *	* *	* *

*

Portable Radios *

All Wild Goose facility operators and maintenance personnel are equipped with portable UHF * hand * * held 2 way radios, or similar device, and shall be located at the On * * Site Command Post * (OSCP) to communicate with the first responders, roadblock crews, air monitoring personnel, * EPZ Rovers, evacuation personnel, ignition teams and all other on site personnel. * * *

8.2 * Communication with the Affected Public * *

The Public Safety Coordinator, Evacuation Center Representative, EPZ Rovers, and Telephone * Callers are responsible for communicating with the affected public at the onset and during the * emergency. * The following table describes the minimum information requirements to be * relayed to the affected public. *

To those evacuated or sheltered * * – at the onset *	To those evacuated or sheltered * * *during *
<ul style="list-style-type: none"> * Type and status of the incident. * * Location and proximity of the incident to people in the vicinity. * * Public protection measures to follow, * evacuation instructions, and any other * emergency response measures to * consider. * * Actions being taken to respond to the * situation, including anticipated time * period. * * Contacts for additional information. * 	<ul style="list-style-type: none"> * Description of the products involved and * their short * to and long term effects. * * Effects the incident may have on people in * the vicinity. * * Areas impacted by the incident. * * Actions the affected public should take if * they experience adverse effects. *
	<p style="text-align: center;">To the general public * * – during *</p> <ul style="list-style-type: none"> * Type and status of the incident. * * Location of the incident. * * Areas impacted by the incident. * * Description of the products involved. * * Contacts for additional information. * * Actions being taken to respond to the * situation, including anticipated time * period. *

*

8.3 * Media Relations *

Niska is committed to communicating to the media in a clear, concise and timely manner by providing accurate and detailed information. * * *

The news media can provide valuable assistance to Niska and play an important public service role during an incident, conveying important information to the public through radio, television, the Internet, and print. * *

It is important to understand that the media operates independently; each news organization competes with other news organizations. * * The primary concern is to get the story, not to resolve the issue. * * The easier it is for media personnel to get the story, the more favorable their coverage is likely to be. * * It is also important to note that news is about change and conflict, drama and emotion. Those elements make better stories. * * This is why the media will focus on the negative and the sensational. It is the job of Niska's Media Spokesperson to deliver a succinct message of order and calm. *

It is important to develop and maintain a good working relationship with the news media from the outset of any emergency. * The manner in which both field and corporate personnel interface with reporters will affect the public perception of both the effectiveness of the response and the company. *

When approached by media personnel you are seen as a credible source of information. * You can tell the facts as you know them or, the journalists will go elsewhere. * Therefore, it is critically important to assist and inform the media by providing factual information in a timely manner that recognizes their deadlines and demands. *

Note: All requests for interviews must be referred to the Communication Officer. *

The Communication Officer is responsible for preparing news releases. * * Press releases must be reviewed by the Legal Officer, the Crisis Management Team (CMT), and any government agency counterparts (if possible) prior to public distribution. *

A Corporate Spokesperson will be assigned by the Crisis Management Team (CMT) to issue news releases. * * *

The Corporate Spokesperson should be prepared to release the following information as soon as possible during the incident (provide factual information): *

- * * Type and status of incident, *
- * * Location and proximity of the incident to people in the vicinity, *
- * * Areas impacted by the incident, *
- * * Effects the incident may have on people in the vicinity, *
- * * Actions the general public should take if they experience adverse effects, *
- * * Description of the products involved and their short and long term health effects, *

- * * Public protection measures to follow, evacuation direction, and any other *
emergency response measures to consider, *
- * * Actions being taken to correct the situation and time period anticipated, *
and *
- * * Contacts for additional information. *

If the media arrive at the scene of the emergency prior to the preparation of an official statement, the Senior Niska on-site representative is authorized to release the following statement. *

"We are currently dealing with the situation at hand to ensure the safety of personnel and property. The cause has not been determined at this time. A statement will be released by the Niska Calgary office once the facts have been determined. *

*

Do not speculate on the cause of the emergency or provide the media with any type of statement that is "Off the Record". *

Never use the term **"No Comment"** Those two words arouse suspicion. * You do not have the answer say you do not have that information now but that it is currently being investigated * and you will attempt to provide the information as soon as possible. * * *

The media should be admitted to Niska property only if permission is obtained from the Incident Commander, who will do so only after consultation with the Crisis Management Team (CMT). *

The area must be safe and media presence must not hamper the emergency services or investigations. * *

Media personnel should always be accompanied by a Niska representative while on Niska property. *

Media releases must be generated and released as significant developments occur. * Media releases may have to be coordinated with a government agency prior to release to ensure consistency and accuracy of information. * Media releases will take place at least once in a six (6) hour period. *

8.4 * Next of Kin Notification *

Under no circumstances should the name of an accident victim or fatality be released without the permission from the Incident Commander, Crisis Management Team Leader, and the local police force (e.g. County Sheriff or California Highway Patrol (CHP)). *

It is important that the employee's next of kin be notified as soon as possible. The names, addresses and telephone numbers of next of kin are included in the employee's personnel file. *

Non * *Fatal Injury * (minor first aid or medical aid) *

- * * The injured person should make necessary phone calls, if possible. *
- * * If the injured person is not capable of making appropriate phone calls, the Incident Commander shall make the following statement: *

"A serious incident has occurred at the (location) and your (relationship), has been injured and taken to the (name) hospital at (location) for treatment. * * **Will keep you informed** of further details as we receive them." *

*

- * * Ask the next of kin if they require transportation assistance and ensure they do not attempt to drive themselves to the injured worker's location. *

Critically Injured *

- * * In the case of a fatality, the next of kin must not be notified until a doctor or coroner has officially pronounced the person deceased. Under no circumstances are the names of critically injured workers to be released before the next of kin have been notified. Discretion is given to the Incident Commander to work in consultation with the local police with respect to notification. *
- * * If a contractor's employee has been critically injured, the contractor is to notify the next of kin and keep Niska advised so the victim's name can be released to the media after notification. *
- * * Notification to the next of kin should be made in person. The local police force should be consulted and/or accompany the Niska representative. If known, the victim's clergyman should also be present. The local police will assist with notifying the family when company employees are not available. *
- * * Use extreme discretion and tact. Be prepared to provide the next of kin with appropriate support and assistance. *

Under no circumstances is the name of the victim to be released before the next of kin have been notified. *

*

8.5 * Resident Emergency Notification Text for Telephone Callers *

As per Section 4.2.5, Telephone Callers, this notification would be required for any level of a Gas Release. * may not be required for other lesser emergency incidents. *

* * Hello, this is * * _____ * of Wild Goose Gas Storage. *

* * Is this the * *(name)* * * _____ residence? *

* * We are currently experiencing an emergency situation at the Wild Goose * Gas Storage Facility. *

Resident Sheltering *

* * Please gather everyone inside your residence, close all windows and doors. * *
If possible, go to an inside room and stay away from outside windows and *
doors, and other places where gases may leak in. *

* * Extinguish all potential sources of ignition. * * *
Do not smoke or have an open flame. *

* * Please keep your phone line open. * Wild Goose Storage representative will *
contact you with further instructions. *

* * Please do not leave your residence; a Wild Goose Storage representative *
will advise you when the area is safe. *

Evacuation *

* * Please evacuate your premises by proceeding to the (location of evacuation *
Center) and check in with Wild Goose Storage personnel at that location. *

* * How many people are at your house? *

* * Is there anyone outside who you cannot easily contact? *

* * Do you have your own transportation? *

* * Do you require assistance? * ~~of~~, stay indoors. We will send a vehicle *
immediately. *

* * We suggest taking the (north/south/east/west) route from your location to *
the Evacuation Center. *

* * If you need accommodation or have any other concerns, please refer them to *
the company representative at the evacuation Center. *

* * Do you understand these instructions? *

8.6 * Sensitive Resident Notification Text for Telephone Callers *

(Level 1 Emergency) *

* * Hello, this is * * _____ * of Wild Goose Gas Storage. *

* * Is this the * *(name)* * * _____ residence? *

* * I am calling to advise you that we have a Level 1 Emergency at our Wild *
Goose Gas Storage facility. * * You are in no immediate danger, and at this *
level of emergency, evacuation is strictly voluntary. * * Do you wish to leave *
the area? (If the answer is "yes", explain the evacuation procedures listed *
below). *

Remaining sheltered indoors will protect you from possible explosion and / *
or reduce the possibility of coming into contact with the natural gas plume. *

Evacuation *

* * Please evacuate your premises by proceeding to the (location of evacuation *
Center) and check in with Wild Goose Storage personnel at that location. *

* * How many people are at your house? *

* * Is there anyone outside who you cannot easily contact? *

* * Do you have your own transportation? *

* * Do you require assistance? If so, stay indoors. We will send a vehicle *
immediately. *

* * We suggest taking the (north/south/east/west) route from your location to *
the Evacuation Center (provide them with the location of the evacuation *
Center). *

* * If you need accommodation or have any other concerns, please refer them *
to the company representative at the evacuation center. * *

* * Do you understand these instructions? *

8.7 * Industrial Operators Emergency Notification Text for Telephone Callers *

- * * Hello, this is * * _____ * * of Wild Goose Gas Storage. *
- * * Is this * * *(operator)* * * ? *
- * * We are currently experiencing an emergency situation in the area of the *
(location of emergency). *
- * * How many people are at your location at this time? *
- * * Do you expect other persons (contractors, employees) to be arriving at your *
facility in the near future? *
- * * As a safety precaution, please restrict your traffic around the Wild Goose *
Gas Storage facility. *
- * * If your field operators notice any transients in the area could you advise *
them of the situation and ask them to leave the area and to contact Wild *
Goose Storage at 1 * * 866*940*7351. *
- * * Does anyone at your facility need evacuation assistance? *
- * * If you have any questions they can be directed to Wild Goose Gas Storage at *
the above numbers. *
- * * Do you understand these instructions? *
- * * Thank you for your cooperation. *

8.8 * Initial Communication with Regulatory Agencies *

Upon initial communication with Niska personnel, the EHS&S Coordinator should be prepared to provide government agencies with the following information, depending on the nature and level of emergency: *

- ** Type of emergency and facility involved (refer to Section 15.0 * *Initial Notification Form*). *
- ** Weather conditions involved (refer to Section 15.0 * *Initial Notification Form*). *
- ** Control measures taken. *
- ** Evacuation and alert information (refer to Sections 6.1.12 * *Wild Goose Resident Lists* and 9.0 * *Evacuation*). *
 - o Whether an ERP is in place. *
 - o Communication with other government agencies involved (refer to Section 15.0 * *Initial Notification Form* and Sections 3.3 & 3.4). *
 - o Nearest resident. *
 - o Nearest downwind resident. *
 - o Whether evacuation has taken place. *
 - o If "yes", list of names of evacuees. *
 - o Evacuation Center (Location & Phone Number). *
 - o Whether contact has been made with all residents in the EPZ, and the method of contact. *
- ** Air Monitoring Information (refer to Section 15.0 * *LEL Detection Record*). *
 - o Quantity and type of monitors. *
 - o Initial results. *
 - o Wind direction and speed. *
- ** Ignition Information (refer to Section 10.0 * *Ignition Guidelines*). *
- ** Command Posts (refer to Section 1.4 * *Command Posts*). *
 - o Classification of emergency * * (Level 1, 2 or 3 * * * * to Section 2.0). *
 - o Whether On Site Command Post has been established and the location. *
- ** Environmental Concerns. *
- *

9.0 * EPZ Evacuation Procedures *

The general public within or immediately adjacent to the Emergency Planning Zone shall be evacuated if a harmful release of natural gas occurs, or if a dangerous situation develops which may affect their health and safety. *

An Emergency Planning Zone (EPZ) for a natural gas release from the storage wells, pipelines and facilities has been established to assist in the response and management of gas releases, both sweet and sour gas. The EPZ has been set at 2625 feet (0.50 miles / *800 meters) for all releases and is therefore not release rate dependent. A release rate dependent EPZ would not be readily determined as it would vary throughout the injection / withdrawal cycle. * However Niska Gas Storage Engineering should be consulted to confirm estimated release rates. *

The Wild Goose Facility ERP contains procedures to ensure public safety within the EPZ. *

The county is responsible for the public safety of residents living inside its boundaries, therefore in the event of an emergency Niska will maintain communication with the local county and discuss the emergency response actions they are implementing. * Close coordination of emergency response between Niska and the county will be maintained to fully utilize combined resources and thereby ensure public safety inside the EPZ and surrounding area. *

9.1 * Evacuation Centers *

Upon the declaration of a Level 2 Emergency involving Wild Goose, an Evacuation Center will be established at the following location in conjunction with the county. * Evacuees from the EPZ will be directed to the Evacuation Center or provided with assistance and/or transportation. *

Evacuation Centers will be established by the County Sheriff departments. *

Persons contacted to evacuate will be requested to report to the Evacuation Center where a Wild Goose representative and/or a local disaster services person will check them in using the Evacuation Center Registration Log **Section 15.0, and address any concerns they may have regarding their property or livestock. After registering and indicating where they can be contacted, the evacuees will be free to go where they please or if they wish, and at the discretion of Niska management provide assistance in arranging temporary accommodations. *

9.2 * Evacuation Criteria *

The Incident Commander in consultation with the Public Safety Coordinator, Operations Chief, and Incident Commander, will direct the evacuation of individuals from the EPZ if there is the potential to affect their health and safety. The following guidelines can be used to assist in the decision to evacuate any or all of the EPZ. *

*

*

9.2.1 * Level 1 Emergency *

Evacuation of the EPZ **may not** be required. Notify sensitive residents. *

A non-routine operating problem has occurred. The situation does not pose an immediate threat to public safety as it is confined to the boundaries of Niska property (facility site or pipeline right-of-way) and can be controlled entirely by Wild Goose personnel. * * Potential exists for the imminent loss of control due to deteriorating conditions. *

For a Level 1 Emergency ensure the protection of life safety. * * Immediately notify the facility supervisor and activate the facility Emergency Response Plan. * * Appropriate government officials will notify, at their discretion, the Federal Emergency Management Administration (FEMA) if individuals within the EPZ have been notified and other local authorities are required. *

9.2.2 * Level 2 Emergency *

Evacuation of the EPZ **is** required. *

A problem has occurred that has the potential to escalate into a more serious situation which may jeopardize the safety of the public. * * There is a serious potential for hazards to the public or personnel outside the boundaries of Niska property. *A Level 2 Emergency is an incident where control of the hazard has been lost but where imminent and/or intermittent control of the hazard is possible. * * *

For Level 2 Emergencies, evacuation of the EPZ is required. * * Immediately notify the facility supervisor and activate the facility Emergency Response Plan. * * Affected area residents / general public and area operators must be informed of the emergency situation and evacuated from the EPZ. *Develop and initiate a proactive regional media management plan. * * Appropriate government officials will notify, at their discretion, the Federal Emergency Management Administration (FEMA) and other local authorities as required. * * *

9.2.3 * Level 3 Emergency *

Evacuation of the EPZ **is** required. *

A serious problem has occurred that includes all situations where safe operating control has been lost, and a definite and immediate hazard to the public exists. *

Evacuation of the public outside of the EPZ may be required if the problem cannot be controlled and gas concentrations reach the allowable limits adjacent to the EPZ boundary. * * *

For a Level 3 Emergency, ensure the protection of life safety. * * Immediately notify the facility * supervisor and activate the facility Emergency Response Plan. * * Develop and initiate a proactive * regional media management plan. * Appropriate government officials will notify, at their * discretion, the Federal Emergency Management Administration (FEMA) and other local * authorities as required. * * *

9.3 * Evacuation Procedures *

Refer to the prepared texts for evacuation notification: *

- * * Section 8.5 *Resident Emergency Notification Text*. *
- * * Section 8.6 *Sensitive Resident Emergency Notification Text*. *
- * * Section 8.7 *Industrial Operator Emergency Notification Text*. *

9.3.1 * Evacuation Within The Emergency Planning Zone *

The Operations Chief, in consultation with the Incident Commander shall determine the level * of emergency and the location of the 2,625 feet (0.50 miles / 800 meters) Emergency * Planning Zone (EPZ) using the information contained in this manual. *

If the safety of the public is in question, the Public Safety Coordinator or Operations Chief shall * initiate evacuation of the EPZ. *

Evacuation of the EPZ occupants shall be prioritized in the following order: *

- * * Individuals located immediately downwind or adjacent to the incident site. *
- * * Individuals who have indicated they are sensitive or require assistance. *
- * * Individuals who cannot be contacted by telephone. *
- * * All residences visited will be posted with a Resident Evacuation Notice * identifying the time and date that the residence was visited (see Section * 15.0 *Report Forms*). *

9.3.2 * Evacuation Outside the Emergency Planning Zone *

The evacuation of the public outside of the Emergency Planning Zone may be required if the * problem cannot be controlled or if flammable or explosive concentrations reach the allowable * limits adjacent to the Emergency Planning Zone boundary. Refer to MSDS for further product * information. * *

The Butte County, State of California, or federal agencies shall coordinate evacuation outside * of the emergency planning zone (EPZ). Niska shall provide the necessary personnel and * equipment. *

*

*

9.3.3 * Stay in Shelter Procedures *

If an option, shelter is an effective and viable means for public safety when: *

- * * There is not enough time, or advanced warning, to initiate evacuation safely; *
- * * Residents are waiting for evacuation assistance; *
- * * The release is of limited volume or short duration (several minutes to half an hour); *
- * * The location of a release has not been identified; and / or *
- * * It is deemed that the public would be at a greater risk because evacuation may potentially expose individuals to hazards or toxic substances due to a slow departure from the area, or proximity of residence to the incident site (i.e. residence is located immediately downwind of a natural gas release). *

The following sheltering information and instructions should be given to residents: * *

- * * If you are advised to "Stay in Shelter", please do not leave your residence. Remaining sheltered indoors will protect you from potential hazards and / or reduce the possibility of coming into contact with a natural gas plume. *
- * * Gather everyone inside your residence, close all windows and doors. ** If possible, go to an inside room and stay away from outside windows and doors, and other places where gases may leak in. *
- * * Shut off exhaust fans, clothes dryers, furnaces, ventilation systems, and extinguish all potential sources of ignition. **Do Not Smoke.** *
- * * Please do not use your telephone. Wild Goose Storage representative will contact you with further instructions. *
- * * Please do not leave your residence; Wild Goose Storage representative will advise you when the area is safe. *

9.3.4 * Prolonged Evacuation *

If the problem cannot be readily corrected and the public are required to vacate the area for an extended period of time, then Niska shall, where required: *

- * * Provide a copy of the Daily Expense Claim Form contained in Section 15.0 "Report Forms", and instructions on how to claim for incurred expenses. * * * *
- * * Provide assistance in arranging food and temporary accommodation. *
- * * Make arrangements for feeding and watering of livestock. *
- * * Provide security for residences/places of business. *

9.3.5 * Method of Notification *

In the event of a Level 2 or Level 3 emergency situation requiring evacuation, all occupants in the EPZ will be contacted by the following methods: *

- * * Residents will be contacted by telephone callers. *
- * * Industrial Operators will be contacted by the telephone callers. *
- * * Residents and Industrial Operators not contacted by telephone will be contacted by the EPZ Rover or Wild Goose Storage personnel with assistance from the local police force, or any other government agencies (e.g. Environment, etc.), as required. *

All residences visited will be posted with a Resident Evacuation Notice identifying the time and date that the residence was visited. *

9.3.6 * Return of Evacuees *

Once the emergency is over, the decision to allow the return of persons to the area shall be made by the Incident Commander, in consultation with local, county or state authorities. *

The Evacuation Coordinator shall notify all persons previously requested to evacuate that the emergency condition has been terminated and all persons may return to their residences. Niska shall provide transportation and assistance where required and further instructions on how to claim for expenses incurred due to the emergency. *

9.4 * Facility Evacuation *

Practice *

It is the practice of Niska to develop step by step emergency evacuation procedures for facility personnel and contractors working on a Niska site. *

Activities *

1. * In case of an emergency, the facility evacuation alarm will be sounded (continuous horn and flashing red light) signaling immediate evacuation of the facility, at which time all Wild Goose Storage employees and all contractors are to proceed in an orderly fashion to the closest safe muster station. * Observing windsocks located throughout the plant site, workers will determine wind direction and assemble upwind of the plant. *
2. * Safely shutdown all equipment prior to assembling at the muster stations. * There are ESD (emergency shutdown) buttons in every building which will activate the alarm. * * *
3. * A Muster Station Marshal (e.g. Wild Goose Storage operator) at every muster station must compile a head count and names list for all personnel at their respective muster station. * * *

4. * The head count should be compared to an up to date employee list and contractor sign sheet. * * Wild Goose Storage operator shall be responsible for completing the head count at any secondary facility muster stations. *
5. * The Muster Station Marshal at a remote muster station shall call in the number and the names of all Wild Goose Storage and contract personnel listed at their muster station to the Operations Chief. * * *
6. * The Incident Commander and the Muster Marshal will determine if any Wild Goose Storage personnel or contractors are missing, based on the head count. * *
7. * The Incident Commander or their designate shall determine who from the muster area shall form the search and rescue team to look for any unaccounted persons. * Available, members from the Emergency Response Team shall be responsible for coordinating and conducting the plant sweep under the direction of the Operations Chief. * Otherwise the Incident Commander shall select the most trained individuals at the muster station. *
8. * All workers must stay at their respective muster station until directed otherwise by the Incident Commander or Muster Station Marshal. * * Should there be a need to evacuate the muster stations, all personnel and contractors are to muster to the Niska Administration Office Complex, and await further instructions from the Operations Chief. * * *
9. * Once the ERT team members are accounted for, they shall standby for direction from the Operations Chief. *

Rescue *

In the event of a Level 2 or Level 3 Emergency, emergency rescue procedures must be carried out in an orderly efficient manner. The responsibility for planning, organizing and initiating rescue procedures is that of the Niska Operations Chief in consultation with the Incident Commander. They shall facilitate the response utilizing any personnel and resources that are available to them. *

The following priority actions must be implemented in the event of a Level 2 or Level 3 Emergency: *

1. * Identify worker(s) or missing. *
2. * Confirm last known location (from work permits). *
3. * Assess emergency conditions. *
4. * Initiate rescue plans and procedures including, but not limited to, the following: *
 - o * Emergency area isolation (blinding, blocking, etc.), if required. *
 - o * Plant shut down, if required. *
 - o * Identification of known hazards. *

- * Identification and sourcing of necessary rescue equipment. *
- * Assembly of the rescue team with competent personnel, trained in the use of pertinent rescue equipment. *
- * Diagnosis of injuries and administration of first aid. *
- * Obtain emergency medical transportation to medical aid for injured personnel. *
- * If hospital care is required, notify medical personnel; give a brief appraisal of injuries. *

5. * Notify concerned parties: *

- * The Incident Commander shall notify all concerned parties as per the Wild Goose Emergency Response Plan. *
- * The External Liaison Officer shall notify all Government Regulatory agencies as determined by the Wild Goose Storage Emergency Response Plan. * *
- * In the event of a serious or critical injury or fatality, the Incident Commander or President of Niska Gas Storage shall make next of kin notifications following the procedures identified in Section 8.4. *

10.0 Ignition Guidelines *

The potential volume of natural gas released is minimized due to numerous flow control and leak prevention measures. However, accidents or facility servicing activities may result in an uncontrolled release of MVP natural gas requiring a decision regarding ignition procedures. *

10.1 Natural Gas Safety Hazards *

- * * A natural gas plume, being half as light as air (~0.55), will rise and accumulate in higher enclosed spaces (i.e. buildings). It is most likely to accumulate in hot, humid conditions. *
- * * With higher winds, the gas will dissipate faster. * * The additional turbulent mixing will then limit the plume's drifting distance. *
- * * Ignition (burning) of natural gas will produce Carbon Dioxide (CO₂) which will dissipate into the atmosphere more quickly. The heat generated by the combustion of the gas flow will transport the gas plume higher into the atmosphere where it will disperse over a substantial area, which in turn reduces the ground level concentrations of natural gas to safer levels. *

10.2 Ignition Authorization *

Authorization to ignite a natural gas release will be made after discussion between the Crisis Management Team, the First Responder, the Operations Chief, the Incident Commander and available government regulatory representatives. * * *

Note: The actual ignition procedure will only be conducted by well control specialists and not by Niska, including Wild Goose Storage personnel. *

10.3 Ignition Criteria *

The decision to ignite a significant or continuous flow of natural gas should only be considered as a last resort to protect human life or prevent environmental damage. *

Ignition should be initiated if: *

- * * Additional damage to equipment, the environment or human health or safety will occur if the gas release were permitted to continue; *
- * * Continued gas releases will complicate or increase the requirements of control efforts; *
- * * Other potential emergencies will increase the damage from the gas release to the environment, human health and safety, or company property; *
- * * Downwind monitoring is not being conducted due to unforeseen circumstances such as bad weather or a breakdown in communication. *

* * If evacuation of the EPZ cannot be accomplished (for any reason). *

Ignition of an uncontrolled gas release should **not** be considered if the ignition will: *

- * * Endanger human life, *
- * * Unnecessarily damage the environment, *
- * * Needlessly endanger private property, *
- * * Needlessly endanger Niska equipment of facilities. *

10.4 *Ignition Procedure *

The ignition procedure will only be conducted by well control specialists and **not** by Niska * personnel. *

Under the direction of the well * * control specialist contractor(s): *

- * * Evacuate the immediate area. *
- * * Establish the Hot, Warm, Cold Zone (see Section 7.8, *Site Control & Work * Zones*). * * Make sure that all sources of ignition such as vehicle engines and * tools or equipment that can produce an electric spark are kept well away * from the hazard zone. *
- * * Determine if the vapor can be ignited safely. * * Consider fire hazards, * ground cover, buildings and other relevant factors. *
- * * The well control specialist should form a Primary Ignition Team with two (2) * fully qualified individuals. * * Both individuals should be tethered to fireproof * ropes and equipped with, as a minimum: *
 - o * Flame resistant hard hat liners and coveralls, *
 - o * Hearing protection, *
 - o * Hard hats (with face shields), *
 - o * Self * * contained breathing apparatus (SCBA) equipment with 30 * minute air supply, *
 - o * Combustible electronic gas detectors, *
 - o * An ignition device (i.e. flare gun). *
- * * A Secondary Ignition Team assigned by the well * * control specialist should be * formed by two (2) fully qualified individuals equipped with: *
 - o * Self * * contained breathing equipment, *
 - o * Combustible gas detectors, *
 - o * Retrieval ropes. *

- * * Identify wind conditions. * * Always approach the release site from the upwind * direction. * *
- * * Ignition should be attempted as soon as the team is within range. If initial * attempts fail, the ignition team should assume that the flare is not in range * of the flammable vapor and advance a few yards and retry ignition * attempts. Continue in this manner until ignition is accomplished. *
- * * If there is no wind, the release site should be approached from the most * accessible direction. **From outside the explosive mixture area,** a first * attempt of ignition should be tried. If initial attempts fail, the ignition team * should assume that the flare is not in range of the flammable vapor and * advance a few yards and retry ignition attempts. * * Continue in this manner * until ignition is accomplished. *
- * * When approaching the release site stop approximately 300 feet (minimum) * from the suspected perimeter of the vapor plume. Remember, the * flammable perimeter will extend beyond the visible portion of the plume. *
- * * Ignite the release from the maximum range of the flare gun, shells shall be * shot towards the gas release in such a manner that ignition will occur at the * furthest outside edge of the gas plume; this is where the air to fuel mixtures * are correct for ignition (near the outer edge and at ground level). * * This * be achieved if the flare is skipped along the ground into the vapor (if ground * cover allows). *

At no time should the ignition team enter the explosive mixture area. *

- * * During ignition attempts, changes in wind direction should be continually * monitored by the ignition team. *
- * * If possible, remain on standby at the ignition site to re-ignite the release, if * required. *
- * * Fire the flare gun from a prone position or from behind a protective object * when at the correct range. *
- * * Following ignition proceed with steps necessary to control unwanted fire, * but do not extinguish the burning vapor plume. *

11.0 Isolation & Monitoring of the EPZ *

Isolating and monitoring the EPZ is a critical step in controlling any emergency situation. * * The process of isolating the EPZ is a simple procedure of blocking all access points into the EPZ. * * It is critical that access be restricted to the EPZ as soon as possible to prevent people from * entering the potentially hazardous area. *

Air quality monitoring in the EPZ must be initiated immediately after a natural gas release has * occurred to track and record the presence and concentrations of explosive gases in the * atmosphere. Air quality monitoring equipment will be used to track the plume, determine if * ignition criteria are met, determine whether evacuation and/or sheltering criteria have been * met (particularly beyond the EPZ boundaries), assist in determining when the emergency can * be downgraded, determine roadblock locations, and determine concentrations in areas being * evacuated to ensure that evacuation is safe. *

The Emergency Planning Zone (EPZ) can be isolated for a number of reasons detailed in * Section 2.0. * * In addition to Niska efforts to isolate the EPZ, government agencies may also take * the following measures: *

- * * Issue a Closure Order *
- * * Declare a State of Emergency *
- * * Issue a Closure of Air Space *

Following the initial incident report, the following steps should be followed to isolate and * monitor the EPZ. *

11.1 Monitoring the Emergency Planning Zone *

The monitoring of emergency situations is important to recognize any changes to the situation * which may change the level of the emergency. * * Following the report of the incident, * individuals will be dispatched to monitor the emergency. *

During implementation of the ERP, air quality monitoring for LEL of explosive gases shall be * conducted at the incident site and throughout the Emergency Planning Zone. *

Personnel shall maintain a record of the air monitoring results using the LEL Detection Record * contained in Section 15.0 "Report Forms", and immediately report any detection of explosive * gases to the Incident Commander and Public Safety Coordinator at the incident site (On * Site Command Post). *

Air monitoring information must be made available to government agencies, as well as the * public, on a regular basis throughout the emergency. *

11.1.1 * Personal Electronic Gas Detectors *

The Public Safety Coordinator, in conjunction with the Incident Commander shall dispatch * personnel equipped with the appropriate personal protective equipment (PPE) and personal * electronic gas detectors capable of detecting O₂, LEL & CO to monitor: *

- * * Any area in which an odor complaint has been received. *
- * * The nearest downwind non * * evacuated area from the incident site, if a * natural gas release occurs. *
- * * Any area in which natural gas is suspected. *

Observations at the emergency scene should immediately be relayed to the On * * Site Command * Post (OSCP) including: *

- * * Natural gas release source/volume *
- * * Liquid release volume *
- * * Number of and condition of injured parties *
- * * Size and location of fire *
- * * Wind direction and speed *
- * * Any other information relative to the emergency *

Most emergency situations can be monitored by Niska response personnel. * * Based initial * observations, the Incident Commander in consultation with the Operations Chief and First * Responders will determine the size of the emergency planning zone and the related hot, warm * and cold zones. *

11.1.2 * Level 1 Emergencies *

- * * Niska/ Wild Goose Storage personnel equipped with personal electronic gas * detectors will be dispatched to the emergency site and locations downwind * of the emergency site. *
- * * Readings and estimates of wind speed and direction will be periodically * relayed to the Public Safety Coordinator. *
- * * The *Public *Safety *Coordinator *and *Incident *Commander *will *use *this * information to continually re * * evaluate * level of the emergency and the * size of the emergency planning zone. *
- * * Dispatch mobile air monitoring units to the site. *

*

*

11.1.3 * Level 2 and 3 Emergencies *

- * * In addition to the Level 1 air monitoring activities, additional air monitoring services will be requested for determining LEL concentrations beyond the immediate vicinity of the release source and for tracking the direction and concentration of the natural gas plume. * * Type of air monitoring units and the number of monitors required will be based on the access and egress points, population density and proximity to urban density developments, and local conditions. *
- * * Wild Goose Storage personnel equipped with personal electronic gas detectors will be dispatched to the emergency site and locations downwind of the emergency site along the perimeter of the defined EPZ or at the nearest residence. Readings and estimates of wind speed and direction will be periodically relayed to the Public Safety Coordinator. *
- * * Mobile air monitoring services will be requested for determining LEL concentrations beyond the immediate vicinity of the release source and for tracking the direction and concentration of the natural gas plume. *

11.1.4 * Mobile Air Monitoring Unit(s) *

If a Level 1 Emergency is declared, a mobile air monitoring unit consisting of personnel and equipment may be dispatched to the area to commence air monitoring downwind of the incident site at the nearest non-evacuated residence. * * Once in place, the unit will monitor for gases, record wind speed and direction and maintain communications with the On Site Command Post. * * This information will be used to evaluate ignition and evacuation requirements, roadblock locations, and when the emergency can be downgraded. *

11.2 * Isolating the Emergency Planning Zone *

If a release of natural gas occurs or a potentially dangerous situation develops which could result in a natural gas release, a hazard area (the Emergency Planning Zone) shall be established, and isolated through the use of roadblocks and security entries comprised of Niska or contract personnel. *

(Refer to the maps at the back of the ERP for locations of the Emergency Planning Zones.) *

11.2.1 * Emergency Site *

The incident site shall be isolated during Level 1 Emergencies. * Security (road block crew) shall be stationed at the access road entrance into the area to only allow entry of authorized and necessary personnel. *

Persons allowed entry into the area shall be briefed on the existing conditions and be equipped with the appropriate Personal Protective Equipment (PPE) as deemed by the Incident Commander. *

11.2.2 * Emergency Planning Zone (EPZ) *

The Emergency Planning Zone shall be isolated during a Level 2 Emergency by establishing * roadblocks on all roads leading into the Emergency Planning Zone. *

The * California * State * transportation * department * (sometimes * including * the * highway * maintenance Contractor(s)) must be notified for highway closure approval. * * California Highway Patrol may also close highways if there is a serious risk to the public. *

The Operations Chief, in consultation with the Operations Chief and First Responders, shall * determine the Emergency Planning Zone (EPZ). * * The Public Safety Coordinator will designate a * Roadblock Supervisor to organize roadblock crews to isolate the determined EPZ. *

Additional roadblocks may be requested to state highway authorities by the Public Safety * Coordinator and Roadblock Supervisor based on additional observations of the emergency * incident as they become available. *

11.2.3 * Roadblock Personnel *

A roadblock crew will consist of one person for each roadblock location working a maximum * 6 * hours who should be equipped with: *

- ** 1 Vehicle *
- ** Intrinsically safe Hand Held 3 * * heat/electronic gas detector *
- ** Flashlight (Intrinsically safe) *
- ** Movable barricade *
- ** Area map *
- ** 2 * * way communication radio or similar device *
- ** Roadblock report forms and EEL Detection Records forms contained in * Section 15 *Report Forms". *
- ** Signage (e.g. Road closed, Stop) *
- ** Reflective Traffic Triangles *
- ** Stop & Slow Traffic Paddles *
- ** Safety Vests *
- ** Barriers *

*

12.0 Hazardous Materials Information *

This section contains specific information on the hazardous materials that are prevalent in Niska Operations including material characteristics and a related MSDS. *

12.1 Natural Gas Characteristics and Effects *

Natural gas consists mostly of methane (CH_4) 90-99%, with traces of ethane and propane * and is encountered at the Niska Gas Storage facilities. *

Methane is an odorless, colorless, tasteless, non * *poisonous, flammable gas, which is lighter * than air (~0.55). Methane burns with a pale, faintly luminous flame. Methane forms explosive * mixtures with air. Air containing less than 5.53% methane no longer explodes. *

Still air that contains 5% to 15% methane and 12% or more oxygen will explode. However, the * flammable and explosive ranges of methane are variable, and all occurrences of the gas * should be considered dangerous. * * The explosive range of methane is 5% to 15% and the * relative weight is 0.55. *

Methane tends to rise and accumulate near the higher, stagnant parts of enclosed buildings * and tightly closed storage pits. It is most likely to accumulate during hot, humid weather. *

Methane is extremely difficult to detect without gas detection instruments. Explosions * attributed to methane have occurred when there is not proper ventilation. *

Main Hazards *

- * * Potential explosion hazard. *
- * * Fire hazard from burning gas. *
- * * Critical health hazard because of oxygen deficiency. *

It is recommended that a maximum safe methane concentration for workers during an 8 hour * period is 1,000 ppm (0.1 percent) or 10% of the LEL which is 0.5%. *

Transport Information *

Proper Shipping Name: Methane, compressed; Hazard Class: 2.1; Identification Number: UN * 1971; Shipping Label: Flammable Gas. *

*

*

Concern *	Effects of Natural Gas (Methane) *
Human Health *	Oxygen deficiency during pregnancy has produced developmental * abnormalities. * Oxygen deficiency resulting from simple asphyxiates may include: * Rapid breathing, diminished mental alertness, impaired muscular * coordination, faulty judgment, depression of all sensations, emotional * instability, and fatigue. *

*

Types of * Hazard / * Exposure *	Acute Hazards * / Symptoms *	Prevention *	First Aid / Fire Fighting *
Fire *	Extremely * flammable. *	NO open flames, NO sparks, * and NO smoking. *	Shut off supply; if not * possible and no risk to * surroundings, let the fire * burn itself out; in other cases * extinguish with water spray, * powder, carbon dioxide. *
Explosion *	Gas/air * mixtures are * explosive. * *	Closed system, ventilation, * explosion * * protection * electrical * equipment and lighting. Use * non * * sparking tools. * *	In case of fire: Keep container * cool by spraying with water. * Combat fire from a sheltered * position. * *
Exposure *			
Inhalation *	Suffocation. * *	Ventilation. Breathing * protection if high * concentration. * *	Fresh air, rest. Artificial * respiration if indicated. Refer * for medical attention. * *
Skin *	Contact with * liquid * methane: * Frostbite. * *	Cold * * insulating gloves. * *	Frostbite (cryogenic burn): * rinse with plenty of water, do * NOT remove clothes. Refer * for medical attention. * *
Eyes *	*	Safety goggles. * *	First rinse with plenty of * water for several minutes * (remove contact lenses if * easily possible), then take to * a doctor. * *

*

*

*

Oxygen Deficient Atmosphere Effects *	
Concentration *	Symptoms of Exposure *
12 * * 16% Oxygen *	Breathing and pulse rate increased, muscular * coordination slightly disturbed. *
10 * * 12% Oxygen *	Emotional upset, abnormal fatigue, disturbed * respiration. *
6 * * 10% Oxygen *	Nausea and vomiting, collapse or loss of * consciousness. *
Below 6% Oxygen *	Convulsive movements, possible respiratory * collapse, and death. *

*

First Aid: *

Remove from exposure immediately. Get medical attention. *

Spill Control Measures: *

Avoid heat, flames, sparks and other sources of ignition. * * Stop if possible without * personnel risk. Should flame be extinguished and flow of gas continue, increase ventilation to * prevent flammable mixture formation in low areas or pockets. * * *

Extinguishing Media * Carbon dioxide, dry chemical or water spray. *

*

*

12.2 *Mercaptan Characteristics and Effects *

Mercaptan is a colorless flammable liquid used to odorize natural gas and NGL products. * *
Vapors may cause flash fires. *

At lower concentrations (0.001 ppm), Mercaptan has a Distinct Garlic Smell. At low levels *
Mercaptan irritates mucous membranes, causes headaches, dizziness, nausea and blue color *
skin, convulsions and coma (fluid in the lungs) with prolonged exposure. * *

The occupational safety ceiling for Ethyl Mercaptan is **10 ppm** and the recommended ceiling is *
0.5 ppm for 15 minutes. *

First Aid: *

Remove from exposure immediately. Get medical attention. *

Spill Control Measures: *

Avoid heat, flames, sparks and other sources of ignition. * * Stop if possible without *
personnel risk. * * Small spills can be absorbed with sand or other non combustible material. * *
Large spills should be diked and sprayed with foam to reduce vapors until clean up is possible. *

Contact with water or moist air may form flammable and/or toxic gasses or vapors. *

Thermal decomposition products are oxides and sulfur. *

Note to Physician: *

For ingestion, consider gastric lavage. *

Antidote: *

Amyl nitrite, inhalation; sodium nitrite, intravenous; pyridoxine, intravenous; urea, *
intravenous. *

*Refer to the appropriate MSDS for further information. *

*

13.0 Post Emergency Procedures *

13.1 Post Emergency Response Procedures *

The decision to terminate the emergency status will be made by the **Incident Commander**. * *
Emergency situations will be called down in consultation with the regulatory body (e.g. Cal * *
Fire, FEMA, OSHA) and other government agencies, as required). *

Once the emergency status has been terminated all persons informed of the emergency must *
be contacted and informed that the emergency is over. * * *

All personnel with an emergency role must attend an emergency debriefing meeting to *
discuss the emergency situations including: *

- * * Accident cause *
- * * Details of emergency response actions taken *
- * * Whether response actions were sufficient and response equipment was *
adequate *
- * * Whether Niska response personnel and support services were able to fulfill *
their emergency response responsibilities *

As soon as practicable but not more than 30 days after the detection of an incident a written *
report Niska must be submitted to the DOT, CPUC, and all applicable agencies an Operator *
Incident Summary Report structured as outlined in CFR Part 191.5 to 191.27. * * After reviewing *
the Operator Incident Summary Report, government regulatory agencies may require that *
Niska attend a meeting to further discuss the incident. * * A prescribed report form is *
referenced in CFR Part 191.19. * * General report content includes a summary of the incident, *
contacts made, public impact, release type, containment, operation type, air monitoring, *
evacuation and public health, and communications. *

13.2 Post Incident Appraisal *

Once the emergency has been terminated, the leader of the Crisis Management Team (CMT) *
will appoint a subcommittee to investigate the incident. * * This subcommittee will consist of *
appropriate management and technical specialists as required. The objective of the post *
incident appraisal will be to analyze and evaluate the incident in order to establish a cause, to *
provide advice on how to prevent a recurrence of the event and to make recommendations *
on procedures that will improve Niska's emergency response efforts in the future, using Form *
EM7 Post Incident Response Critique Checklist. *

The post incident appraisal should include: *

- * * A review of the events leading up to the incident, *
- * * An analysis of the on site remedial procedures, including an evaluation of the *
safety standards that were applied, *

- * * An evaluation of the effectiveness of the notification and communications systems between the incident site and the head office and internally within Niska, *
- * * An appraisal of the effectiveness of any media or public relations efforts, *
- * * An assessment of any potential legal or environmental issues that may be raised as a result of the incident or as a result of Niska's response efforts, and *
- * * A summary of current and future costs. *

The post incident appraisal report should outline the strengths and weaknesses of Niska's response. * * The report will be directed to the attention of the leader of the CMT. It will be their responsibility or the incident commanders responsibility to ensure all recommendations for improvements to the Emergency Response Plan are incorporated where appropriate and promptly communicated to the company staff. *

13.3 *Third Party Investigations *

Third party investigators such as police, government agencies and insurance companies may be required to investigate an incident site. * * It is important to cooperate with third party investigators. * * However, Niska personnel should be aware of the corresponding corporate guidelines. *

- * * Obtain the name, title, address and telephone number of all investigators and immediately inform Niska's Superintendent Operations before proceeding with the investigation. *
- * * Ensure a Niska representative accompanies the investigator at all times. * * Never leave investigators unattended. *
- * * Only give the investigator the information they request. * * Avoid offering additional information. * * Limit the tour to the specific area that the investigator wishes to investigate. *
- * * Always tell the truth. *
- * * Document all items of evidence that the investigator has retained. * * Where possible, keep copies of evidence provided to the investigator. *
- * * Wait until legal counsel is present before answering questions where the investigator indicates that any statements may be used as evidence or indicates that you have the right to counsel. *

13.4 *Documentation, Collection and Storage *

- ** Collect and file all documentation from the Emergency Response Team, Incident Command Team, the contract services and members of the Crisis Management Team. *
- ** If practical, photograph or video tape the incident site. *
- ** Ensure all statements, event logs; forms and documentation on the incident remain securely stored following the incident. *

13.5 *Report Documentation *

The complexity of an incident will determine the reporting and documentation requirements. There should, however, be a differentiation between: *

- ** A report that confines itself to the factual matters or to matters relating to remediation; and *
- ** A report that addresses causation and thus infers responsibility and liability for the incident. *

Reports that are intended to define responsibility, liability or appropriate corrective steps may be required to be produced as evidence in legal proceedings. *

It may be possible to avoid production of certain reports where the principal purpose of the preparation of such reports was to assist in the defense to the legal proceeding or, where the report was prepared by or for legal counsel who was consulted to provide a legal opinion concerning the subject matter of the report. * *such cases, the report that related to the causation and/or liability of Niska for an incident should be privileged and thus not producible to a plaintiff in legal proceedings. * *order to establish privilege, a report prepared by a non lawyer should be: * *

- ** Requested by legal counsel; *
- ** Addressed to legal counsel marked * *
"PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COUNSEL IN CONTEMPLATION OF LITIGATION". *

These reports should be clearly segregated from those intended to report factual matters or to address the manner in which remedial action is to be taken. *Such reports will also assist counsel in determining the Corporation's legal liabilities and the appropriate legal actions to be taken. *

13.6 *Critical Incident Stress Management *

Following a critical incident and in particular when a fatality has occurred, a meeting should be scheduled to debrief all Niska Response Team's personnel about issues related to the stress of the event. * * This will help enable the response personnel to work through their normal stress reaction and accelerate their recovery. *

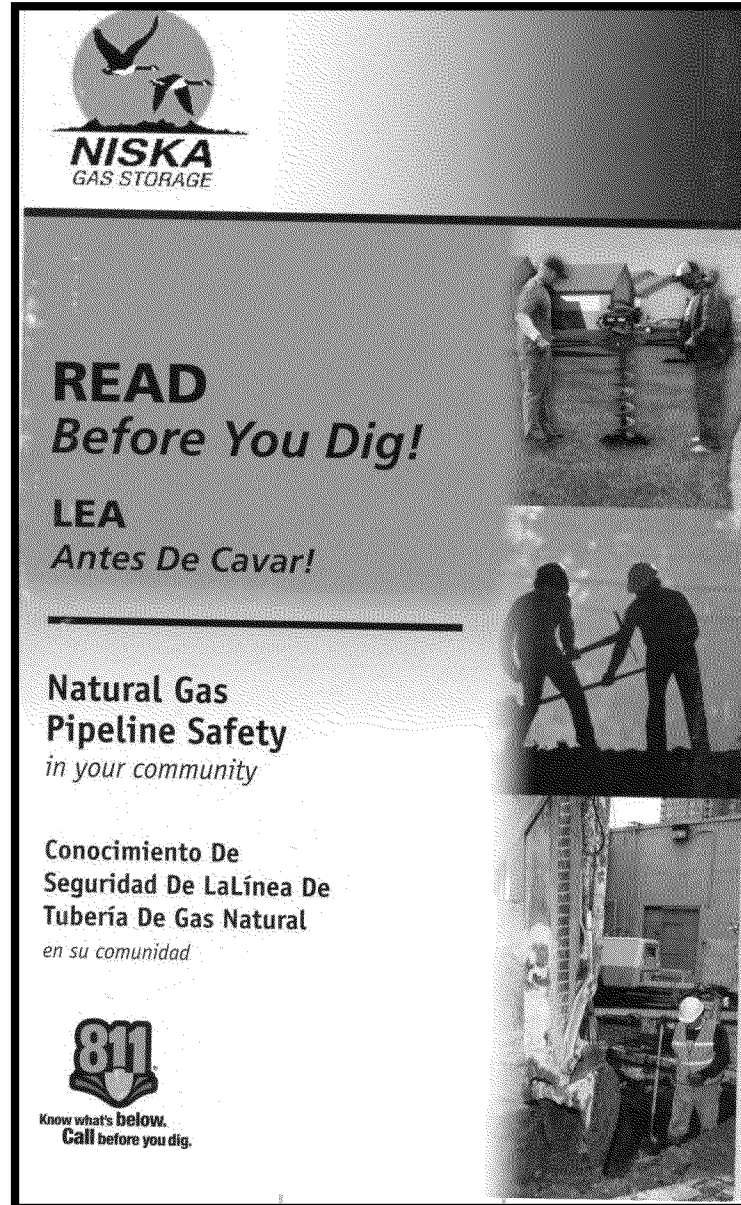
The meeting should be conducted as soon as possible by individuals trained in stress debriefing, ideally no later than three days after the conclusion of the response activities. *

Stress debriefing will allow individuals to express the circumstances they were confronted with, how they felt at the incident and what their reactions were after the incident. *The participants must understand that the meetings are strictly confidential. The meetings are not intended to judge or lay blame on individual actions. * * Recording devices and note taking should be prohibited. *Meetings should be limited to a maximum of 20 individuals. * * Persons directly involved in the incident may need to be met on a one * * one basis. *

14.0 Public Awareness Program *

Niska's Public Awareness Program was put in place to ensure that all stakeholders, both public and private, are aware and knowledgeable of Niska's operations. * * The program also ensures that Niska retains proper contact information of individuals, structures and facilities that are in proximity to Niska's operations. * * Niska has prepared resident lists through direct contact with individuals and has also prepared an information brochure that has been distributed to the general public, local governments, Niska contractors and other requested parties. * *

*



15.0 Report Forms *

The following forms are used as part of any emergency response procedures. Forms should be completed by any Niska personnel involved in emergency situations. Completed forms should be forwarded to the Deputy Incident Commander as a part of Post Emergency Procedures. *

Non ICS forms in this section are: *

- ** Initial Notification Form *
- ** Bomb Threat Form *
- ** Time and Event Log *
- ** Telephone / Evacuation Contact Log *
- ** Roadblock Control Log *
- ** LEL Detection Record *
- ** Evacuation Center Registration Log *
- ** Daily Expense Claim Form *
- ** Resident Evacuation Notice *
- ** Safety Message Form *

Copy forms before use. *

ICS forms in this section are: *

- ** ICS Form 201, Incident Briefing * *
- ** ICS Form 202, Incident Objectives *
- ** ICS Form 203, Organization Assignment List *
- ** ICS Form 204, Assignment List * *
- ** ICS Form 205, Incident Radio Communications Plan * *
- ** ICS Form 205A, Communications List *
- ** ICS Form 206, Medical Plan * *
- ** ICS Form 207, Organizational Chart * *
- ** ICS Form 208, Safety Message Plan *
- ** ICS Form 209, Incident Status Summary * *
- ** ICS Form 210, Status Change Card * *
- ** ICS Form 211, Check in List * *
- ** ICS Form 213, General Message * *
- ** ICS Form 214, Unit Log * *

- * * ICS Form 215, Operational Planning Worksheet * *
- * * ICS Form 215a, Incident Action Plan Safety Analysis * *
- * * ICS Form 216, Radio Requirements Worksheet * *
- * * ICS Form 218, Support Vehicle Inventory * *
- * * ICS Form 220, Air Operations Summary * *
- * * ICS Form 221, Demobilization Plan * *
- * * ICS Form 221 Page 1, Demobilization Checkout * *
- * * ICS Form 225, Incident Personnel Performance Rating * *

Copy forms before use. *

*

Initial Notification Form *

*
 Call Received By: * * * * * Time * * * * * Date * * * * *

Questions to ask the caller... *		
<ul style="list-style-type: none"> • * Who is the caller? * • * What is the emergency? * • * Where is the emergency and where is the caller? * * • * How did they notice the emergency? * <p style="text-align: center;">* * * * * * If possible, keep the caller on the line. *</p>		
Caller's Name * * * * * _____ *		
* Caller's Phone No. * _____ * *		
* Company Name * _____ * *		
Location of Emergency * _____ * *		
Emergency Level *		
Level 1 * * *	Level 2 * * *	Level 3 * * *
Incident Description... *		
* Plant Fire * * Building Fire * * Off Site Fire * * Chemical Fire * *	* Gas Leak * * Oil Leak * * Pipeline Rupture * * Well Blowout * *	* Operating Equipment * * Vehicle Accident * * Serious Injury * * Fatality * * * Other: *
Environmental Conditions *		
Wind Speed _____ *	Sunny * *	Snowing * *
Wind Direction _____ *	Raining * *	Fog * *
Lightning Strike * *	Flood * *	Tornado * *
Details: *	*	*
Contacts Made *		
First Responder * *	Incident Commander *	Plant Manager * *
EPA * *	WCB * *	*
Local Counties * *	local police * *	Fire Department * *

Bomb Threat Form *

*
 Call received by: * * * * * Time * * * * * Date * * * * *

Questions to ask the caller... *						
• *	When will the bomb go off? *					
• *	Where is the bomb? *					
• *	What does the bomb look like? *					
• *	Why are you bombing the Plant? *					
* * * * *	*If possible, keep the caller on the line. *					
Threat (exact wording): *						
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
*	*	*	*	*	*	
Voice and Background Sound Checklist... *						
Voice *	Attitude *	Background Sounds *	Accent *	*	*	
Slurred *	<input type="checkbox"/> *Calm *	<input type="checkbox"/> *Office Machines *	<input type="checkbox"/> *English *	<input type="checkbox"/>	*	
Distorted *	<input type="checkbox"/> *Angry *	<input type="checkbox"/> *Airplanes *	<input type="checkbox"/> *French *	<input type="checkbox"/>	*	
Deep *	<input type="checkbox"/> *Laughing *	<input type="checkbox"/> *Factory Sounds *	<input type="checkbox"/> *Italian *	<input type="checkbox"/>	*	
Raspy *	<input type="checkbox"/> *Emotional *	<input type="checkbox"/> *Traffic *	<input type="checkbox"/> *German *	<input type="checkbox"/>	*	
Intoxicated *	<input type="checkbox"/> *Accusatory *	<input type="checkbox"/> *Trains *	<input type="checkbox"/> *Asian *	<input type="checkbox"/>	*	
Stutter *	<input type="checkbox"/> *Incoherent *	<input type="checkbox"/> *Music *	<input type="checkbox"/> *Other *	<input type="checkbox"/>	*	
Nasal *	<input type="checkbox"/> *Righteous *	<input type="checkbox"/> *Children *	<input type="checkbox"/> * * *	<input type="checkbox"/>	*	

Time and Event Log

*
 Prepared By: _____ * Date: _____ *

Time	Call From	Call To	Telephone Number	Comments
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*

Telephone / Evacuation Contact Log

*
 Prepared By: _____ Date: _____ *

Name*	Map#*	Contact Time*	Assistance Or Transportation Required*	Comments*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*
* *	*	*	*	*

Roadblock Control Log

*
Prepared By: _____ Date: _____ *

Vehicle Type & Plate No.	Name of Driver	No. of Passengers	Time Entering EPZ	Time Exiting EPZ	Comments
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*

LEL Detection Record

Prepared By: _____ Date: _____

Time	LEL Reading (ppm)	Weather And Wind Conditions			Location Of Reading And Comments
		Temperature	Wind Direction	Wind Speed (mph)	
*	*	*		*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*
*	*	*	*	*	*

Mark estimated weather conditions with "E" if accurate measurements are not available.

Evacuation Center Registration Log

*
 Prepared By: _____ Date: _____ *

Evacuee Name* (List all names in party)*	Map &* Location*	Time of* Check In*	Destination*	Destination* Phone #*	Comments*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*
* *	*	*	*	*	*

Resident Evacuation Notice *

*
Niska Gas Storage Wild Goose Storage Facility (CA): * 1 * *866*940*7351

*
Niska Calgary Head Office 403 * *513*8600

*
Date: * * * * * * * * * * Time * * *

Dear Occupant, * *

This residence has been evacuated due to an emergency situation involving the **Wild Goose Gas Storage Facilities**. *

As a safety precaution, we request that you proceed in a north/east/south/west direction to the _____ and check in with **Wild Goose Gas Storage Facilities** personnel. *

After reporting to this location, you will be free to go where you please or we will make arrangements for your accommodation. *

Safety Message Form ± MSDS Attached *		
Incident Name: * * _____ *		
Operational Period Covered By Plan: *		
Start Time & Date: ____ :__ :__ h * * * * * End & Date: ____ :__ :__ h * * * * *		
First Aid Station(s) *		
Location *	Contact Information *	
*	*	
*	*	
Ground Ambulance *		
Location *	Contact Information *	
*	*	
Air Ambulance *		
Location *	Contact Information *	
*	*	
Hospitals *		
Location *	Contact Information *	
*	*	
Special Chemical/Toxic Hazards *		
Chemical *	Activity *	Personal Protective Equipment *
*	*	*
*	*	*
*	*	*
*	*	*
Specific Physical Hazards *		
Chemical *	Activity *	Personal Protective Equipment *
*	*	*
*	*	*
*	*	*
*	*	*

Appendix 1.0 Incident Command System Overview *

Niska Gas Storage utilizes the Incident Command System (ICS) emergency response structure. *

The Incident Command System (ICS) is a widely embraced emergency response coordination tool. * * While it provides a planning process, its primary use is in the coordination and integration of various response groups in the **reactive phase** of a response. However, many organizations have found they require an expanded documentation and tactical planning process, i.e., a management system. ICS comprises a sound basis on which to formulate a response management system. *

Typically, response management systems provide the advantage of designated roles and proper documentation. Often, they incorporate a procedure to support a shift from "reacting to the incident" to the development and implementation of a plan to "manage the incident". * * Management systems are often large and may require individuals to be dedicated to the operation of the system itself. * *

The Niska Incident Command System is based on eight principles: * * *

1. * **Common Terminology:** Although ICS is used to respond to all types of incidents and many of the standardized terms are "emergency" specific, the terminology used in the organizational structure and inter-departmental communications is generic to all situations. *
2. * **Modular Organization:** ICS has a predetermined organizational structure that must be utilized in any ICS-based system. The use of a "set" structure allows for the integration and coordination of various response organizations and agencies. * * While it does not allow for changes in the basic structure, sections can be increased or decreased as needed. * * *
3. * **Integrated Communications:** Communications are often the weak link during an emergency response. * A "Communications Plan" identifying an organization's needs and the way to communicate with other organizations should be developed prior to an incident. *
4. * **Unified Command:** The principle of Unified Command supports Incident Commanders from various responding organizations in setting response priorities and objectives by consensus. In practice, various organizations have the legal mandate to be in charge of all or part of an emergency response depending on the circumstances. * *
5. * **Span of Control:** In the heat of a response to an emergency, individuals are often willing to take on more work than they can reasonably be expected to handle. * * The Incident Command System suggests that no individual manager has more than 5 people directly reporting to them. While there will always be exceptions, it is important to recognize these "Span of Control" limitations when identifying response personnel requirements. * * *

*

*

6. **Pre Designated Facilities:** Pre designated facilities include "Command Posts", "Evacuation Centers", "Staging Areas", etc. Where possible, the need for these facilities should be identified and plans for set up and support completed prior to an incident.
7. **Comprehensive Resource Management ("Pre packaging")** Comprehensive Resource Management is a tool that can be used to manage services, equipment and consumables. Example: if it is determined that "teams" of workers will be required for vapor monitoring operations, then each "team" can be identified as a package. A monitoring team package will consist of equipment, personnel, services and support they need to complete their task.
8. **Incident Action Plans:** Incident action plans are developed during the "reactive" stages of an emergency response. They provide a tool for quantifying the development of a response and providing the Incident Commander with a focus for identifying and prioritizing objectives.

While the Niska ICS based response management system reflects these principles, the site may place limits on the level of integration with other agencies and organizations based on an assessment of the circumstances and the need generated by a given situation.

A1.1 * Documentation *

Documentation support for the ICS process is provided by: * *

- * * Task * *Sheet Form *
- * * Task Boards *
- * * Area Maps *

Task * *Sheet Form *

The Task * *Sheet Form is the tool used to obtain resources and personnel. It is also used to track * the various "Tasks" being undertaken during the emergency response. * * Task Sheet Forms are * identified by the Section that is responsible for the task, and by a sequential number. * *

Each Task * *Sheet Form represents a Task. * * Tasks physical actions taken in response to an * incident. *Tasks require response resources to be deployed. * * By taking all of the (limited) * response resources to tasks, the Incident Commander can prioritize their use. *

In the initial stages of an emergency response it may not be possible to fill in all of the * information asked for on the Task Sheet Form. * * Logistics will "flush out" the information upon * receipt. * * Because of this, it is important that the descriptions on the bottom of the page are * detailed enough to provide Logistics with an understanding of what is needed and how it will * be used. * * *

When Logistics receives a Task * *Sheet Form, they process it and return a copy to the "Section" * and submit it with an Estimated Time of Arrival (ETA) for delivery and comments. * * Logistics may also include changes that are necessary. *

The Finance Section of the Incident Command Team (ICT) will use a corporate payment * method and Purchase Order (P.O.) system for acquiring response resources. Items on * Purchase Order forms should note the Task * *Sheet Form number beside the item. When an * item on a Task * *Sheet is purchased, the PO# should be noted beside the item on the Task * * Sheet Form as well. It is imperative that Logistics and Finance work closely together. *

The Task Board and Area Map *

The Task Board and Area Map have two functions: *

1. * As a Briefing tool *

- * * All meetings, including Incident Command Team, Press Briefings etc. are held * in front of the Task Board and Area Map. The graphic format of the Area Map * makes the information easier to relate and understand. *The information on * the Task Board is detailed enough to provide a directional overview *and * answer questions without being so detailed that it leads to confusion. *

2. * Capturing/Documenting Information *

- * * The Task Board and Area Map are the only "boards" used by the system. Detailed information pertaining to resources, services etc. is captured and recorded by the specific Section that they relate to. *

A1.2 * Meetings During an Emergency *

Attendees: * *

1. * Crisis Management Team *

- o * Legal Officer, * *
- o * Communications Officer *

2. * Command Staff * *

- o * Incident Commander (Chair) *
- o * Deputy Incident Commander *
- o * Safety Officer, * *
- o * External Liaison Officer *
- o * Recorder (in attendance to take the minutes) *

3. * Incident Command Team *

- o * Operations Chief *
- o * Planning Chief *
- o * Logistics Chief *
- o * Finance Chief *

As soon as possible after the initial response to the emergency, the Incident Commander will call an initial meeting. * * Throughout the emergency response, these meetings will be held every 1 * 2 hours. Until the Incident Commander has a good understanding of the facts, these meetings may need to be held more often. *

- * * Meetings will be kept short and to the point with limited attendance. * * *

- * * The room will be closed and reserved for the Incident Command Team. *

- * * The meeting must be chaired; (e.g. Incident Commander or Deputy Incident Commander). *

- * * Each Section/Department Head will present a 20 30 second overview to introduce new "Tasks" or relate any changes and updates to their department's "Tasks" since the last meeting. * * The "Planning Section, Documentation Unit" records all of these changes. Upon completion, each Section relates any new business. * This meeting is **Not** meant as an opportunity to "work" the issues, but only as a way of disseminating information. * *

- * * From the information related at the meeting, the Incident Commander updates the Prioritized Objectives. *

After the meeting the Planning Section Documentation Unit updates the Task Board and the Area Map to reflect changes identified at the meeting. *

When the Incident Commander feels there is a sufficient understanding of the facts, the Planning Section will be authorized to begin the "Incident Action Plan Development Process". Regular meetings will continue while planning develops the Incident Action Plan. *

A1.3 * Plan Development Process *

The Planning Section is responsible for overseeing the development of an "Incident Action Plan". It is important that the Command Team and "Stakeholders" participate in this process. * Participation can be achieved by allowing representatives of the various "Units" and "Command Staff", identified on the Niska Incident Command System Organization Chart, to aid in the development of the Incident Action Plan. * Typically, representatives from external agencies who have a role to play in the planning process may be included, as appropriate. * *

Note: * During the initial response to the emergency, it may be impossible to fill out a Task Sheet Form for every task. * * As the initial response becomes more proactive work being performed will have to be documented retroactively. * * Until a general understanding of the resources being used and the action being taken is reached, it will not be possible to start the "Incident Action Plan Development Process". * * This highlights the need for pre planning and documentation. * *

Note: * Everyone has an opportunity to influence the Incident Action Plan's development. * By the time the "Draft Incident Action Plan" reaches the Incident Commander, its approval should be a formality. * * Because of this, it is often prudent to include the representatives of other Stakeholders (if appropriate). *

The Incident Action Plan Development process is the same regardless of the period of time for which the projected information is gathered, e.g., a shift change of manpower. * * See table on the next page "Step by Step Incident Action Plan Development Process". *

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"Step by Step" Incident Action Plan Development Process *			
Step 1 * Planning *	<ul style="list-style-type: none"> ** Gathers response information. (All information that will affect the response over the planning period). * ** Obtains all current Task Sheet Forms from Logistics and makes copies. * ** Returns the originals to Logistics. * ** Attaches a blank Sheet Form to the front of each current Task Sheet Forms. * ** Relates what can be expected during the planning period at the next meeting. (given the projected information). * ** Hands out copies of current Task Sheet Forms to the appropriate Sections. * 		
Step 2 * * Sections *	<ul style="list-style-type: none"> ** Review their current Task Sheet Forms in light of Planning's projection. * ** Make changes on the blank new Sheet Form attached to the front * of each current Task Sheet Form. * ** Adds or deletes Task Sheet Forms as appropriate. * 		
Step 3 * Planning *	<ul style="list-style-type: none"> ** Gathers updated Task Sheet Forms. * ** Photocopies * from pages. * ** Files originals with Logistics. * ** Based on the new information, Planning: * ** Creates new Task Board * ** Creates new Area Map * ** Relates significant changes to the Incident Commander. * 		
Step 4 * * * * Incident Commander *	<ul style="list-style-type: none"> ** Updates Prioritized Objectives to reflect the changes identified by the Sections * 		
Step 5 * Logistics * *	<ul style="list-style-type: none"> ** Reviews all updated Task Sheet Forms. * ** Determines if the changes and new tasks are possible to implement. * ** Itemizes current resources (Passes this information to Finance). * ** Itemizes resource changes needed to implement updated Task Sheet Forms (Passes this information to * Finance). * ** Passes updated Sheet Forms to Safety * 		
Step 6 * * * * Safety	<ul style="list-style-type: none"> ** Determines if changes and "new" tasks are safe to implement. * ** Updates the H&S plan if appropriate. * ** Passes updated H&S plan (see Section 4.3.3) & Task Sheet Forms to Planning. * 		
Step 7 * * * * Finance	<ul style="list-style-type: none"> ** Estimates costs based on information from Logistics. * ** Passes cost estimates to Planning. * 		
Step 8 * * * * Planning creates a "Draft Incident Action Plan" which includes: *	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> * (gathered at start of process) * ** Response information for the planning period * ** Duration & scope of response * * ** Response actions * ** Trajectory, weather * ** Sensitivities * ** Etc. * </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> * (based on team projections) * ** Incident Commander's "new" Prioritized Objectives * ** "New" Task Board & "new" Area Map * ** Logistical changes needed * ** Lists of resources needed * ** Health & Safety plan changes * ** Cost estimate </td> </tr> </table> <p>Planning then presents the "Draft Incident Action Plan" to the Incident Commander for approval (along with other Stakeholders * [Unified Command] as appropriate) *</p>	<ul style="list-style-type: none"> * (gathered at start of process) * ** Response information for the planning period * ** Duration & scope of response * * ** Response actions * ** Trajectory, weather * ** Sensitivities * ** Etc. * 	<ul style="list-style-type: none"> * (based on team projections) * ** Incident Commander's "new" Prioritized Objectives * ** "New" Task Board & "new" Area Map * ** Logistical changes needed * ** Lists of resources needed * ** Health & Safety plan changes * ** Cost estimate
<ul style="list-style-type: none"> * (gathered at start of process) * ** Response information for the planning period * ** Duration & scope of response * * ** Response actions * ** Trajectory, weather * ** Sensitivities * ** Etc. * 	<ul style="list-style-type: none"> * (based on team projections) * ** Incident Commander's "new" Prioritized Objectives * ** "New" Task Board & "new" Area Map * ** Logistical changes needed * ** Lists of resources needed * ** Health & Safety plan changes * ** Cost estimate 		

A1.4 * ICS Forms *

The ICS Forms which follow in this Appendix have been reproduced from the U.S. FEMA * website. * * <http://training.fema.gov/EMIWeb/IS/ICSResource/index.htm>*

Form content may therefore not be completely applicable to Niska's operations. *

* **Notes:**

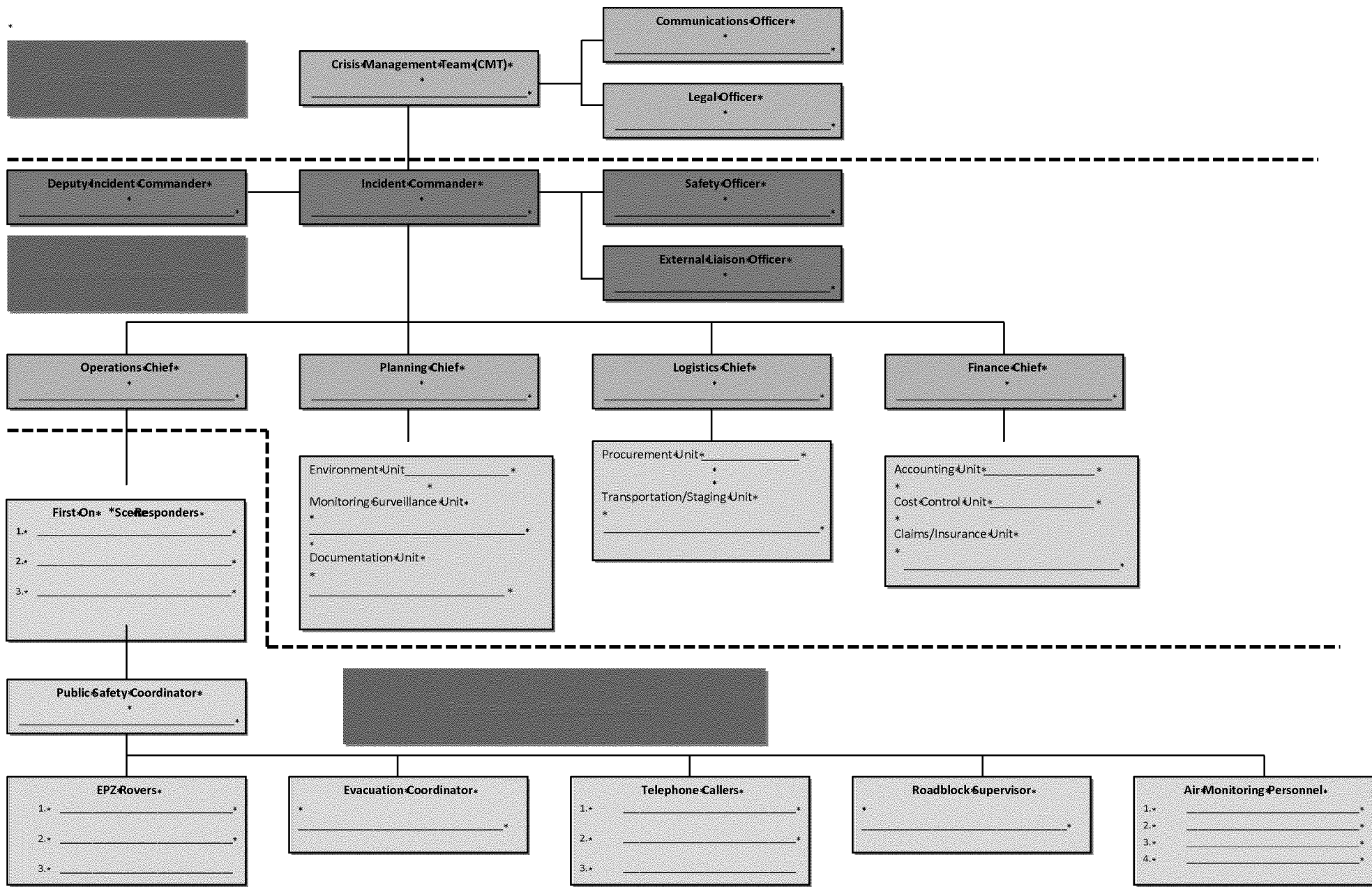
- * • In the following table, the ICS Forms identified with an asterisk (*) are typically included in an IAP.
- * • Forms identified with two asterisks (**) are additional forms that could be used in the IAP.
- * • The other ICS Forms are used in the ICS process for incident management activities, but are not typically included in the IAP.
- * • The date and time entered in the form blocks should be determined by the Incident Command or Unified Command. Local time is typically used.

ICS Form #:	Form Title:	Typically Prepared by:
ICS 201	Incident Briefing	Initial Incident Commander
*ICS 202	Incident Objectives	Planning Section Chief
*ICS 203	Organization Assignment List	Resources Unit Leader
*ICS 204	Assignment List	Resources Unit Leader and Operations Section Chief
*ICS 205	Incident Radio Communications Plan	Communications Unit Leader
**ICS 205A	Communications List	Communications Unit Leader
*ICS 206	Medical Plan	Medical Unit Leader (reviewed by Safety Officer)
ICS 207	Incident Organization Chart <i>(wall-mount size, optional 8½" x 14")</i>	Resources Unit Leader
**ICS 208	Safety Message/Plan	Safety Officer
ICS 209	Incident Status Summary	Situation Unit Leader
ICS 210	Resource Status Change	Communications Unit Leader
ICS 211	Incident Check-In List <i>(optional 8½" x 14" and 11" x 17")</i>	Resources Unit/Check-In Recorder
ICS 213	General Message <i>(3-part form)</i>	Any Message Originator
ICS 214	Activity Log <i>(optional 2-sided form)</i>	All Sections and Units
ICS 215	Operational Planning Worksheet <i>(optional 8½" x 14" and 11" x 17")</i>	Operations Section Chief
ICS 215A	Incident Action Plan Safety Analysis	Safety Officer
ICS 218	Support Vehicle/Equipment Inventory <i>(optional 8½" x 14" and 11" x 17")</i>	Ground Support Unit
ICS 219-1 to ICS 219-8, ICS 219-10 <i>(Cards)</i>	Resource Status Card (T-Card) <i>(may be printed on cardstock)</i>	Resources Unit
ICS 220	Air Operations Summary Worksheet	Operations Section Chief or Air Branch Director
ICS 221	Demobilization Check-Out	Demobilization Unit Leader
ICS 225	Incident Personnel Performance Rating	Supervisor at the incident

A1.5 * Incident Command Responsibility Form *

The large form on the following page should be used by the Incident Commander to identify *
personnel as they assume specific roles, as well as changes that may occur as the incident *
develops. *

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Gas Integrity Management Program Manual

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Wild Goose Storage, LLC Operator Qualification for Pipeline Personnel

December 2011

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Safety Tactics, Inc.
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Wild Goose Storage Operator Qualification for Pipeline Personnel

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Wild Goose Storage

Operator Qualification for Pipeline Personnel

SECTION 1.0 - GENERAL

1.1 Introduction

The objective of the written Operator Qualification program is to ensure that Wild Goose Storage, LLC has a qualified workforce capable of operating pipelines containing natural gas and to reduce the probability and consequences of accidents caused by human error. There are seven elements that will be addressed individually in this program.

1.2 Scope

This performance-based program contains operator qualification requirements for the safe operation of D.O.T. pipelines and associated facilities. It is intended that these procedures be applicable to all D.O.T. pipeline facilities, though it is recognized that only transmission pipelines and jurisdictional segments of gathering lines are subject to the regulations cited below. This qualification program will assist in evaluating company personnel and subcontractor abilities to perform covered tasks and to recognize and respond appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits.

1.3 References

49 CFR Subpart N, 192.801-809
API Pub. 1161

1.4 Regulatory Compliance

A written qualification program is required of D.O.T. pipeline operators and must be presented to D.O.T. representatives upon request. Operators must complete the qualification program of each individual performing covered tasks by October 28, 2002. Provisions are allowed to use historical work performance as a sole evaluation if the individual who is performing a covered task was doing so prior to August 27, 1999 and if the employer feels the individual can currently demonstrate competency of the task. However, after October 28, 2002 work performance history will not be allowed as the sole evaluation method.

1.5 Affected Personnel

The qualification program is applicable to any individual who performs a covered task and those personnel who have involvement in ensuring a qualified workforce. Descriptions or titles of individuals who may perform covered tasks include, but may not be limited to:

- Production Coordinator

Wild Goose Storage

Operator Qualification for Pipeline Personnel

- Lead Operator
- Operator
- I& E Technician
- Mechanic

Individuals who are involved in ensuring a qualified workforce include, but may not be limited to:

- Production Coordinator
- EH&S Coordinator

SECTION 2.0 – PREMISES AND DEFINITIONS

Abnormal operating condition – means a condition identified by the Company that may indicate a malfunction of a component or deviation from normal operations that may indicate a condition exceeding design limits; or result in a hazard(s) to persons, property, or the environment. Examples of abnormal operating conditions may include, but not be limited to:

- Unexpected natural gas or carbon dioxide encounter (unauthorized release, vapors, hazardous atmosphere, and contamination).
- Unexplained pressure deviations (increase, decrease, high, low, absent).
- Activation of a safety device (pressure relief, emergency shut downs, high pressure shut downs, case pressure shutdown, high temperature shutdowns, etc.)
- Unexplained flow rate deviations (high flow, low flow, no flow).
- Unexplained status change (unit start-up, unit shut-down, valve open, valve close, gravity change, tank level, temperature, flash, co-mingling of product, etc.).
- Fire/explosion.
- Interruption or failure of communications/control system/power.
- Pipeline system damage (line hit, lightning strikes, tornado, flood, earthquake, damaged pipeline support, etc.).
- Abnormal facility condition (exposed pipe, low cathodic protection levels, missing line markers, frayed or broken test lead wires, line crossing, excessive atmospheric corrosion, exposed river crossing).
- Component failure or malfunctioning component (field and SCADA components including meter failure).

Items listed above may be indications of an abnormal condition or may create an abnormal operating condition related to a specific covered task.

NOTE: A deviation from normal operation does not necessarily mean an abnormal operating condition exists. Refer to Figure 2-1 for the Abnormal Condition Decision Flow Chart

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Covered Task – means a discrete activity performed by an individual or group of individuals that:

- Has a beginning and ending point;
- Has two or more steps;
- Can be observed and measured;
- Identified by the Company that it will be performed on a pipeline facility;
- Meets all four of the conditions discussed below.

1. **Performed on Pipeline Facility** – means an activity that is performed by an individual or group of individuals whose performance directly impacts the pipeline facility. (An individual who works on a pipeline component that is physically connected to the pipeline system is performing work “on a pipeline facility” and may be subject to the rule, regardless of whether or not product is flowing through the pipeline.)
 - a. Pipeline Facility – means new and existing pipe, rights-of-way and any equipment, facility or building used in the transportation of natural gas.
 - b. Activity – means physical, visual or mental effort directed at achieving a result.
 - c. Removed from the system – means that a part of the pipeline system is physically removed or isolated from the pipeline system. (A person who repairs a pipeline component or appurtenance that has been removed from the system is not performing work on the pipeline and, therefore, would not be performing a covered task.)
 - d. Pipeline System – means all parts of a pipeline facility through which a natural gas moves in transportation (line pipe, valves, appurtenances, pumps, meters, tanks, etc.).
2. **Operations and Maintenance Tasks** – means activities done by an individual or group of individuals (1) to perform a function on a pipeline facility; or (2) to provide upkeep of a pipeline facility.
 - a. A new construction task changes to an operations and maintenance task when the pipeline facility is being commissioned or during the act of connecting to an active pipeline facility.
 - b. The following are not operations and maintenance tasks:
 - Activities on pipelines that have never been in service and not physically attached to an operating pipeline.
 - Fabrication of new installations.
 - Emergency response activities.
3. **Required by Part 192** – means only those tasks specifically required to be addressed in Part 192. State and local requirements are not applicable to this rule.
4. **Affects the operation or integrity of the pipeline** – means any activity that could directly or indirectly cause the release of natural gas to the environment or result in a hazard to person or property.

Wild Goose Storage Operator Qualification for Pipeline Personnel

- a. Pipeline means pipeline system. (See 1.d. above)
- b. Affect – can be either immediate (direct) or delayed (indirect).
- c. Integrity of the Pipeline – refers to the pipeline’s ability to operate safely and to withstand stresses imposed during operations.

Evaluation – means an established, objective, consistent process that is documented by the operator to determine an individual’s ability to perform a covered task by any of the following:

- a. Written examination;
- b. Oral examination;
- c. Work performance history review;
- d. Observation during:
 - 1. Performance on the job,
 - 2. On the job training, or
 - 3. Simulations; or
- e. Other forms of assessment

Individual – means a person, who on behalf of the Company performs one or more covered tasks on a pipeline facility operated by the Company.

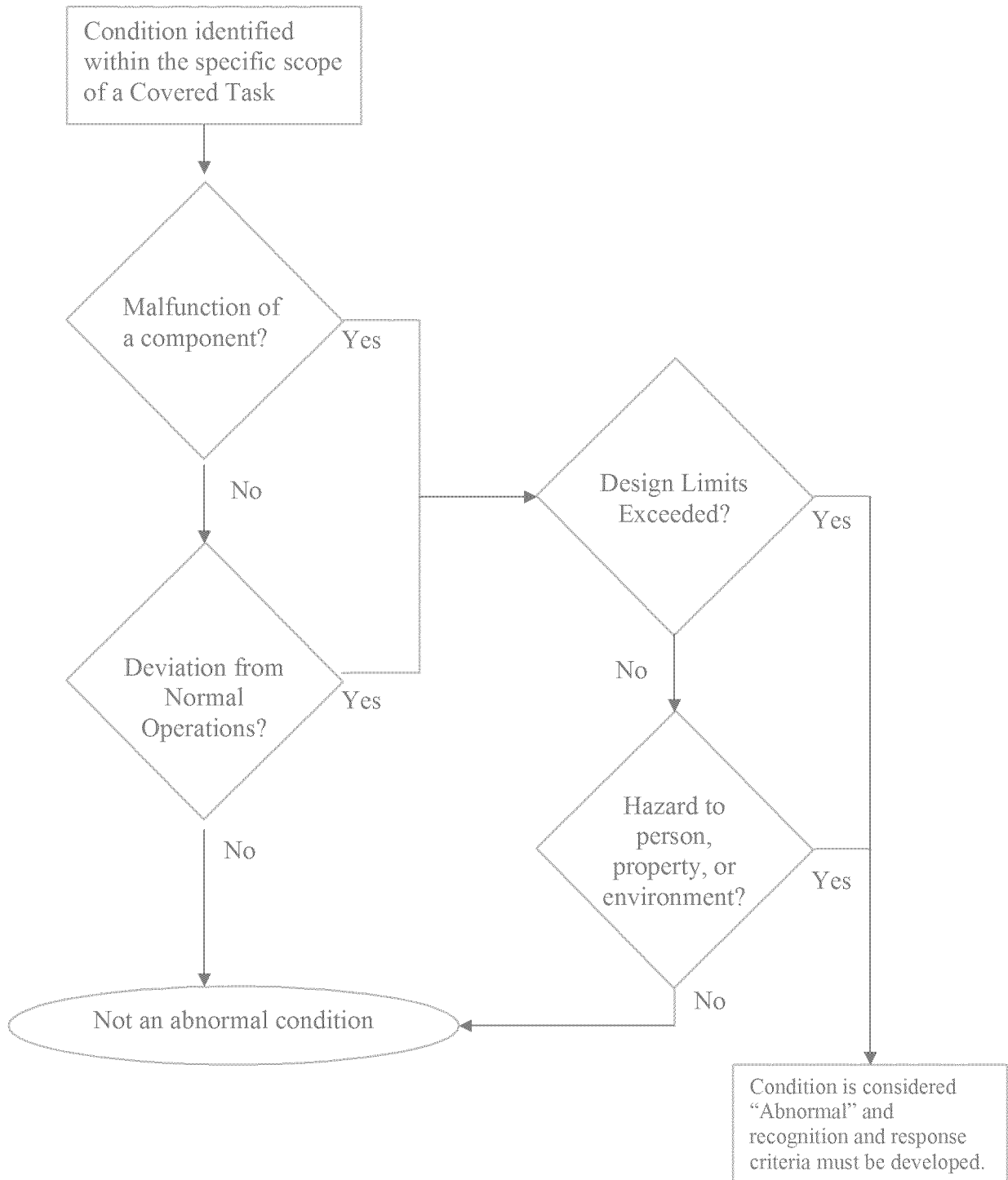
Operate – means to start, stop and monitoring.

Qualified – means that an individual has passed an evaluation and:

- a. Can perform assigned covered tasks;
- b. Can recognize and react to abnormal operating conditions; and
- c. Compliance documentation is completed.

Wild Goose Storage Operator Qualification for Pipeline Personnel

Figure 2-1 Abnormal Condition Decision Flowchart



Wild Goose Storage Operator Qualification for Pipeline Personnel

SECTION 3.0 – TASK IDENTIFICATION AND ANALYSIS

3.1 Identifying Covered Tasks

Each position required by Wild Goose Storage, which performs operations or maintenance activities, will be analyzed and have covered tasks identified for each position. The Company will identify covered tasks by considering specific activities and not the job activities. (For example, an individual with the job classification “Equipment Operator” may be assigned activities other than operating equipment that could be covered tasks so that individual would need to be qualified for those covered tasks.) Covered tasks will be identified by:

- Reviewing Parts 192;
- Interviewing individuals within each job position;
- Reviewing operations, maintenance and safety manuals; and
- Reviewing the identified task list for Wild Goose Storage.

A master task list is used to track covered tasks. An additional database, identifying employees with associated covered tasks, is used to track and keep current, operator qualifications. These databases will be used to track employees that are qualified to operate D.O.T. pipelines. Refer to Appendix I for identified covered tasks and required frequencies.

3.2 Four-Part Test for Identifying Covered Tasks

Wild Goose Storage identifies activities as covered tasks by utilizing the four-part test identified in the Company’s premises. The four-part test consists of the criteria listed below:

- Is it performed on a pipeline facility?
- Is it an operations or maintenance task?
- Is it performed as required by 49 CFR Part 192?
- Does it affect the operation or integrity of the pipeline facility?

All four questions must be answered “yes” for the activity to be a covered task. Documentation is required for activities that do not meet the criteria in the four-part test so the rationale may be referenced in the event of a regulatory review.

SECTION 4.0 – EVALUATION AND METHODS

4.1 Evaluation

Wild Goose Storage has identified all covered tasks and evaluates individuals to determine their ability to perform covered tasks. This includes the individual’s ability to recognize and respond to abnormal operating conditions that the Company could reasonably anticipate the qualified

Wild Goose Storage

Operator Qualification for Pipeline Personnel

individual to encounter while the individual is performing the covered task. The Company may choose from one or more acceptable evaluation methods shown in the Table 4-1.

The evaluation method(s) chosen should sufficiently measure the individual's knowledge and skills to perform the covered task. Individuals are qualified for covered tasks based on criteria level such as a passing score on a written examination or correctly completing steps during a performance evaluation.

Persons performing evaluations (evaluator) shall possess the required knowledge to:

1. Ascertain an individual's ability to perform covered tasks and
2. Substantiate an individual's ability to recognize and react to abnormal operating conditions that might surface while performing those tasks.

The evaluator does not necessarily have to be physically able to perform the covered tasks themselves, but the Company should responsibly select appropriately knowledgeable individuals to perform evaluations. An "Evaluator's Instruction" checklist is included in Appendix 2.

For performance based evaluations, an evaluator utilizes an "Evaluator's Question and Response Form" and a "Job Performance Measure (JPM) Checklist" (located in Appendix 2) to ensure accurate and consistent assessment when conducting an oral examination, on-the-job performance observation, or an on-the-job training observation of an individual.

There are three types of qualification:

1. Transitional,
2. Initial and
3. Subsequent.

Each covered task performed by an individual must be analyzed as to which type of qualification the individual can use to qualify under that covered task, meaning, an individual may not be able to qualify for all covered tasks using the transitional method if he/she doesn't meet the requirements of transitional qualification; the same explanation applies to "initial" and subsequent" qualifications. Each of these has differing requirements as follows:

Transitional qualification may rely on a work performance history review as the sole evaluation method if the individual is qualified prior to October 28, 2002 **and** provided the individual was performing the covered task prior to August 27, 1999. After October 28, 2002, work performance history **cannot** be used as the sole evaluation method.

Initial qualification may not rely on only a work performance history review.

Subsequent qualification may rely on work performance history review if used in conjunction with at least one other evaluation method.

Wild Goose Storage

Operator Qualification for Pipeline Personnel

Should the occasion arise to qualify an individual by using work performance history, the Company will consider the following information for the review:

1. Record search of existing records for documentation of an individual's past satisfactory performance of a covered task;
2. Review of an individual's work performance history to verify that it contains no indications of substandard work or involvement in an accident caused by an error in performing a covered task; and/or
3. Verifying that the individual has successfully performed the covered task on a regular basis prior to the effective date of the rule.

Training may occur to bring an individual's performance up to the acceptable criteria and this training may be conducted in a group setting. However, at the time of evaluation, individuals are evaluated solely on their own merits and not that of a group. The exception would be for a written exam that can be administered in a group setting but be reflective of an individual's ability.

4.2 Frequency of Re-Training / Re-Evaluation

Wild Goose Storage has determined the frequency for re-evaluation for each covered tasks. These time intervals are based on:

- The frequency of performance of the covered task
- The complexity of the task
- The risk and consequences involved if the task is incorrectly performed.

Part of the criteria for choosing the frequency is based on how often the task is performed and the complexity of the task. For example, the task is:

- Performed infrequently, is highly complex and has severe consequences (high risk) it may require a more frequent re-evaluation.
- Performed weekly or more often and has a low degree of complexity with moderate to low consequences, it may require infrequent re-evaluation.

This frequency can be found in Appendix 1 for each covered task. Employees must be re-trained and re-qualified based on the frequency noted in Appendix 1 or Section 7.

4.3 Methods

One or more of the methods identified in Table 4-1 may be used to evaluate individuals for qualification on covered tasks.

Wild Goose Storage Operator Qualification for Pipeline Personnel

Table 4-1 Acceptable Evaluation Methods			
Evaluation Method	“Transitional” Qualification ¹	“Initial Qualification ²	“Subsequent” Qualification ³
Written Exam	YES	YES	YES
Oral Exam	YES	YES	YES
Work Performance History Review	YES	May not be used as the sole evaluation method.	May not be used as the sole evaluation method after 3-year compliance date. (August 1999 – October 2002).
Performance On the Job	YES	YES May not be used as the sole evaluation method.	YES May not be used as the sole evaluation method.
On-the-Job Training	YES	YES	YES
Simulation	YES	YES	YES
Other	YES	YES	YES

NOTES:

- 1 Transitional qualification** shall be completed by October 28, 2002 for individuals who have been performing a covered task on a regular basis prior to August 27, 1999. However, if the Company feels the employee is not meeting qualification requirements despite having performed a covered task prior to August 27, 1999, the Company can elect to have the employee go through initial qualification.
- 2 Initial qualification** shall be completed any time for individuals who were not performing a covered task prior to October 26, 1999 (effective date of rule).
- 3 Subsequent qualification** shall be at intervals deemed appropriate by the Company for the purpose of re-evaluating an individual’s performance of covered tasks. Any of the following can trigger a re-evaluation of employee performance of covered tasks:
 - When the time interval, as established by the Company, has expired;
 - If there is reason to believe the employee’s performance of a covered task contributed to an accident; or
 - If there is reason to believe an employee is no longer able to satisfactorily perform a covered task.

Upon completion of training/evaluation, the evaluator will review all missed questions/items with individual(s) to ensure individual(s) has 100% understanding of the questions/items he/she is being evaluated on.

Wild Goose Storage

Operator Qualification for Pipeline Personnel

Individuals will be issued an Operator Qualification card that identifies the covered tasks he/she is currently qualified to perform. This card shall be in the individual's possession anytime they are performing covered tasks.

SECTION 5.0 - NON-QUALIFIED INDIVIDUALS

There may be instances when the Company must utilize non-qualified individuals to perform covered tasks. Such individuals would be new employees in training, temporary employees assisting full-time employees, subcontractor personnel, relief employees, etc. In such situations, a non-qualified individual may perform the covered task, provided a qualified person is directing and observing the non-qualified individual. Under no circumstances shall a non-qualified individual perform a covered task without qualified person supervision.

Factors to consider when allowing qualified persons to supervise non-qualified individuals are:

- The qualified person must be close enough to each non-qualified individual to direct and observe his/her work and take immediate corrective action in the event an abnormal condition occurs. A qualified person can effectively observe multiple non-qualified individuals performing covered tasks in a close proximity area.
- There should be no obstructions or distance between the non-qualified individuals and the qualified person, which would impede the qualified person's ability to directly observe and take immediate corrective action.
- The ratio of non-qualified individuals to qualified individuals should be kept to a minimum. Employees shall inquire with the Production Coordinator what the ratio is and comply with the requirement.

SECTION 6.0 – EVALUATION OF INDIVIDUAL IN RESPONSE TO AN INCIDENT

Management will evaluate an individual if the Company has reason to believe the individual's performance of a covered task contributed to an incident as defined in 49 CFR Parts 191 and 192.

An incident investigation will occur to determine if an individual contributed to the incident and needs to be evaluated. The root cause analysis may also indicate if other individuals performing the same covered tasks need additional training to prevent recurrence of the same error. Any evaluation should sufficiently address both the knowledge and skill components of the covered task to ensure that the individual has been properly evaluated and to determine if the individual continues to be qualified to perform the covered task. All evaluations must be documented and placed in the individual's qualification file. Refer also to Section 10.0 Record keeping for more details.

Wild Goose Storage Operator Qualification for Pipeline Personnel

SECTION 7.0 – INDIVIDUAL IS NO LONGER QUALIFIED TO PERFORM A COVERED TASK

Management will exercise due diligence when necessary to identify individuals who are no longer able to perform a covered task. When there is reason to believe this is the case, the Company will evaluate and re-train/re-qualify the individual prior to allowing them to perform a covered task. Examples of when this may occur are when:

- The individual has spent excessive time away from the job due to a disability, special assignment, or a change in job duties. Excessive time is defined as greater than one (1) year.
- The individual displays unsatisfactory performance of a covered task.
- There are significant changes to equipment or procedures.
- The frequency of the covered task qualification is due. (Refer to Appendix 1)

SECTION 8.0 – COMMUNICATING CHANGES IN COVERED TASK PROCEDURES

Management communicates changes in covered tasks to individuals performing the affected covered tasks, by one or more methods that may include written notice, verbal communication at daily operations briefing, or weekly or monthly safety meetings.

When significant changes occur, consideration is given as to whether additional qualification requirements are necessary and whether individuals performing the covered task should be evaluated again.

The Management of Change (MOC) process may be used to communicate changes in covered tasks for the following cases:

- Modifications to company policies or procedures
- Changes in state or federal regulations
- Utilization of new equipment and/or technology
- New information from equipment or product manufacturers.

As required by MOC, all applicable training documentation and evaluation materials should be updated to reflect the changes.

SECTION 9.0 – SUBCONTRACTOR PERSONNEL

The Production Coordinator will take the responsibility of ensuring the qualifications of subcontractor personnel performing covered tasks just the same as being responsible for ensuring the qualifications of Company employees.

Wild Goose Storage Operator Qualification for Pipeline Personnel

Subcontractor personnel may qualify under their own or a third party qualification program provided that Wild Goose Storage has approved the applicable qualification program. Subcontractor's using their own, or a third-party, qualification program will be requested to show the Production Coordinator the qualification procedures and documentation of an individual's qualification to performed covered tasks.

Non-qualified subcontractor personnel may perform covered tasks if directed and observed by a qualified person. The qualified person may be a Company employee, a Company representative (third-party inspector), or a subcontractor representative (refer to Section 5.0 Non-Qualified Individuals).

SECTION 10.0 – RECORD KEEPING

Wild Goose Storage keeps records on qualified individuals that include the following information:

- The qualified individual's name;
- The covered tasks that the individual is qualified to perform;
- The date(s) of current qualification and;
- The qualification method(s).

Records of an individual's current qualifications (i.e. graded examination or on-the-job training evaluation checklist, etc.) must be maintained while the individual is performing the covered tasks for which he/she is qualified. An example of a written Individual Qualification Record is found in Appendix 3. When an individual has subsequent qualification, the previous records of qualification must be maintained for five years. Qualification documentation is also kept for five years after an individual stops performing covered tasks (i.e. retirement, promotion, job change, etc.). The primary records will be kept as paper files in personnel files, and electronically.

SECTION 11.0 – PROGRAM MAINTENANCE

Wild Goose Storage evaluates the qualification program every (3) three years to verify its effectiveness. Items that are reviewed include any changes to regulations, covered tasks, evaluation methods, evaluation materials, and associated training materials. Upon completion of the evaluation, any changes needed to make the program more effective will be incorporated and this written program revised. Any changes to the program will be communicated to all affected employees and subcontractors.

**Wild Goose Storage
Operator Qualification for Pipeline Personnel**

**APPENDIX 1
COVERED TASKS**

Wild Goose Storage Operator Qualification for Pipeline Personnel

WILD GOOSE STORAGE COVERED TASKS

COVERED TASKS	Re-Evaluation Frequency
Fundamentals of Natural Gas	3
AOCs	3
CP Survey	3
Rectifier Inspection	3
Rectifier Maintenance	3
External Pipe Surface Inspection	3
External Coatings Application & Repair	3
Line Markers	5
Patrols & ROW Inspections	5
Navigable Waterway Crossing Inspection	3
Marking & Locating Prior to Excavation	3
Inspection After Excavation & Leak Survey After Blasting	3
Maintain Valves	3
Valve Inspection	3
Repair Valves	3
Inspect, Test and Calibrate Pressure Limiting Devices	3
Pressure Switches & Transmitters Inspection, Testing and Calibration and Calibrate Pressure Switches & Transmitters	3
PLC or Instrumentation Control Loops	3
Pressure Vessel Inspection & Repair	3
Security for Pipeline Facilities	5
Pig Launchers/ Receivers	3
Purging and Air Movers	3
Field Operations of a Pipeline, Including Startup/Shutdown	3
Control Center Operations of a Pipeline, Including Startup/Shutdown	3
CPM leak Detection	3
Gas Leak Survey	3
Prevention of Accidental Ignition	3
Compressor Station Startup & Shutdown	3
Compressor Station: Test Remote Shutdown Devices	3
Compressor Station Gas Detection and Alarm	3

Wild Goose Storage Operator Qualification for Pipeline Personnel

Abnormal Operating Conditions	
Abnormal facility condition	5 years
Activation of safety device	5 years
Communications, control system or power interruption or failure	5 years
Component / Material / Equipment failure	5 years
Emergency Alarms	5 years
Facility Damage	5 years
Fire/Exposition	5 years
Leakage of product from pipeline	5 years
Pipeline System damage	5 years
Pressure Related Conditions	5 years
Unexpected natural gas or carbon dioxide encountered	5 years

**Wild Goose Storage
Operator Qualification for Pipeline Personnel**

**APPENDIX 2
JOB PERFORMANCE MEASURE GUIDELINES FOR
COVERED TASKS**

Wild Goose Storage Operator Qualification for Pipeline Personnel

EVALUATOR'S INSTRUCTIONS FOR JOB PERFORMANCE MEASURES OF A COVERED TASK

NOTE

Questions asked by the evaluator will be limited to the information contained in the Job Performance Checklists and associated operating procedures pertaining to this covered task.

1. Use the objectives in the "Job Performance Measure Checklist" (JPM) to develop questions to be discussed prior to performance of a Covered Task.
2. Knowledge Questions will be documented on the "Evaluation Questions and Response" Form.
3. Attach any supporting documentation used during the performance of a Covered Task.
4. Complete all sections of the JPM checklist.
5. Circle whether the evaluation is satisfactory (SAT) or Unsatisfactory (UNSAT), Sign and date the applicable items in the Job Performance Measure Checklist, and write any supporting comments on page two.
6. Forward JPM evaluation to the Production Coordinator for review.

THE EVALUATOR SHALL REVIEW THE FOLLOWING WITH THE TRAINEE:

1. The evaluator shall explain the JPM initial conditions and clarify as required.
2. The trainee may use any references that are normally available.
3. The trainee shall indicate all required steps, safe work practices/procedures, communications, etc.
4. The trainee shall make oral reports for any abnormal indications that could be observed. The examiner will act as the "Contact" or other operators for communications purposes if the covered task (JPM) is to be simulated.
5. The trainee shall verbally inform the evaluator of all actions performed during the performance of this JPM to ensure knowledge and understanding.

Wild Goose Storage Operator Qualification for Pipeline Personnel

EVALUATION QUESTIONS AND RESPONSE

Evaluator Instructions: Prior to starting the skills portion of the JPM, the evaluator shall ask questions, based on the steps as defined in the Job Performance Measure Checklist, that are specific to the tasks being performed. The evaluator will document the questions and answers below.

Covered Task: _____

Question 1: _____

Response: _____

Question 2: _____

Response: _____

Question 3: _____

Response: _____

Question 4: Describe abnormal operating conditions that could be observed while performing this covered task. _____

Response: _____

Evaluator Name: _____ Signature: _____

Date: _____

Trainee Name: _____ Signature: _____

Date: _____

Wild Goose Storage Operator Qualification for Pipeline Personnel

EXAMPLE – JOB PERFORMANCE MEASURE CHECKLIST

Covered Task: _____

STEP	ELEMENT	ACTION P=Perform S= Simulate	SATISFACTORY / UNSATISFACTORY Circle one	COMMENTS (Required for UNSAT)
1	Isolate and tag hydraulic supply to valve actuators:	P	Sat / Unsat	
2	Identify trap bypass valve Identify trap isolation valve Identify trap block valve	P	Sat / Unsat	
3	Depressurize and drain trap as follows:	P	Sat / Unsat	
4	Open vent valve to sump	P	Sat / Unsat	
5	Open trap drain valve	P	Sat / Unsat	
6	Open atmospheric vent valve	P	Sat / Unsat	
7	Monitor booster station sump to ensure that trap stops draining.	P	Sat / Unsat	
8	Place STOP signs on driveway	P	Sat / Unsat	
9	Ensure safety vent indicates no pressure	P	Sat / Unsat	
10	When trap is drained, loosen safety clasp nut on top of Trap door.	P	Sat / Unsat	
CAUTION				
Water must be running on concrete pad before tray is pulled out of trap to prevent pad from becoming saturated with product.				
STANDARD				
Trap is depressurized and open.				

Evaluator Name and Signature: _____

Date: _____

Trainee Name and Signature: _____

Date: _____

Wild Goose Storage Operator Qualification for Pipeline Personnel

JOB PERFORMANCE MEASURE CHECKLIST

Covered Task: _____

STEP	ELEMENT	ACTION P=Perform S= Simulate	SATISFACTORY / UNSATISFACTORY	COMMENTS (Required for UNSAT)
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
			Sat / Unsat	
CAUTION				
STANDARD				

Evaluator Name and Signature: _____

Date: _____

Trainee Name and Signature: _____

Date: _____

**Wild Goose Storage
Operator Qualification for Pipeline Personnel**

**APPENDIX 3
INDIVIDUAL QUALIFICATION RECORD**

Wild Goose Storage Operator Qualification for Pipeline Personnel

INDIVIDUAL QUALIFICATION RECORD
(Successful Completion consists of Satisfactory Performance of ALL Critical Step Items defined within)

Company Name: _____

Employee Name: _____

Covered Task	Date of Qualification	Re-Qualification Due Date	Method of Evaluation*	Sat / Unsat	Evaluator's Name	Comments

* Attach documentation if necessary

Qualified Operator Name _____

Signature: _____ Date: _____

Appendix A to the Wild Goose System Operator Safety Plan - Table of Concordance: Operator Qualifications Matrix

California Public Utility Codes	RE-EVALUATION PERIOD	Stacy Brackin		Grant Bozarth		Justin Jaramillo		Lee Killough		Dana Moffett		Daniel Pleger*	
		QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test
CP Survey	3	3/14/2012	3/11/2012				3/7/2012		2/29/2012	3/8/2012	2/27/2012		
Rectifier Inspection	3	1/23/2012	2/10/2012	2/2/2012		1/20/2012	3/7/2012		2/29/2012	3/14/2012	2/27/2012		
Rectifier Maintenance	3	1/23/2012	1/25/2012										
External Pipe Surface Inspection	3	3/14/2012	3/11/2012	3/6/2012		3/6/2012	3/7/2012	3/6/2012	3/6/2012	3/8/2012	2/27/2012		
External Coatings Application & Repair	3	3/14/2012	3/11/2012						3/6/2012	3/8/2012	3/14/2012		
Line Markers	5	1/12/2012	2/10/2012	3/6/2012		3/6/2012	3/7/2012	3/6/2012	2/29/2012	3/6/2012	3/7/2012	12/14/2007	
Patrols & ROW Inspections	5	1/30/2012	2/10/2012			3/8/2012	3/8/2012	3/8/2012	2/29/2012	3/8/2012	2/27/2012	12/13/2007	
Navigable Waterway Crossing Inspection	3	3/14/2012	3/10/2012						3/6/2012	3/8/2012	3/7/2012		
Marking & Locating Prior to Excavation	3	1/27/2012	2/10/2012	1/14/2012		1/26/2012	3/7/2012	1/26/2012	2/29/2012	3/14/2012	2/27/2012	12/14/2007	
Inspection After Excavation & Leak Survey After Blasting	3	3/14/2012	3/11/2012							3/8/2012			
Maintain Valves	3	1/19/2012	2/10/2012			3/8/2012	3/7/2012	3/8/2012	3/6/2012	3/8/2012	3/14/2012	12/13/2007	
Valve Inspection	3	3/14/2012	2/10/2012			3/8/2012		3/8/2012		3/8/2012		12/13/2007	
Repair Valves	3	N/A	N/A										
Test remote shut-down	3	3/14/2012	2/13/2012			3/5/2012	3/7/2012	12/11/2007	3/6/2012	3/5/2012	3/7/2012	12/14/2007	
Maintaining Critical Valves - Distribution / Transmission	3	1/19/2012	2/10/2012	1/21/2012			1/20/2012	1/19/2012					
Periodic Checking Of Odorant / Detector Tube test only	3	1/23/2012	1/25/2012				1/25/2012	1/24/2012	2/29/2012				
Pressure Vessel Inspection & Repair	3	N/A	N/A										
Security for Pipeline Facilities	5	1/23/2012	2/10/2012	2/2/2012		1/25/2012	3/7/2012	2/7/2012	2/29/2012	1/26/2012	2/27/2012		
Pig Launchers/ Receivers	3	3/14/2012	3/10/2012			1/26/2012		1/26/2012	3/6/2012	3/14/2012	3/7/2012		
Purging and Air Movers	3	2/13/2012	2/13/2012			3/5/2012	3/8/2012		2/29/2012	3/8/2012	3/14/2012		

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California Public Utility Codes	RE-EVALUATION PERIOD	Stacy Brackin		Grant Bozarth		Justin Jaramillo		Lee Killough		Dana Moffett		Daniel Pleger*	
		QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test	QUAL DATE	Test
Operations of a Pipeline System	3	1/23/2012	1/24/2012	2/8/2012		3/8/2012	1/25/2012	2/7/2012		3/8/2012	2/27/2012	12/14/2007	
Control Room Operations of a Pipeline	3	1/30/2012	1/25/2012	2/8/2012		1/24/2012	3/8/2012	2/7/2012	3/6/2012	1/25/2012	2/27/2012		
CPM leak Detection	3	N/A	N/A			3/8/2012		3/8/2012					
Gas Leak Survey	3	11/6/2008	3/10/2012				3/7/2012	12/11/2007	2/29/2012	3/8/2012	3/14/2012	12/14/2007	
Prevention of Accidental Ignition	3	3/14/2012	3/11/2012			3/8/2012	3/7/2012	3/8/2012	3/6/2012	3/8/2012	3/7/2012		
Compressor Station Startup & Shutdown	3	1/23/2012	2/10/2012	2/8/2012		1/24/2012	3/7/2012	1/25/2012	3/6/2012	1/25/2012	3/7/2012	12/13/2007	
Operations of a pipeline system	3	1/24/2012	2/13/2012	2/8/2012		1/24/2012		12/12/2007	3/6/2012	12/13/2007		12/13/2007	
Gas Detection and Alarms	3	3/14/2012	2/10/2012				3/7/2012	12/12/2007	2/29/2012	3/14/2012	3/7/2012	12/13/2007	
AOCs	3							12/10/2007		12/13/2007		12/13/2007	
Leak Survey	3	3/14/2012	3/10/2012			5/10/2011							
													* This employee no longer operates

6/27/2012



Wild Goose Storage, LLC
Operations and Maintenance
Procedures Manual
Gas Pipeline

Last edit June 2013

Operations and Maintenance Procedures Manual
Gas Pipeline

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SECTION 1.0 - GENERAL

SECTION 1.0 – GENERAL

1.1 Introduction

This manual contains basic operating, maintenance, and inspection procedures for natural gas pipelines and associated facilities. These procedures contain instructions necessary for compliance with U.S. Department of Transportation regulations.

1.2 Scope

These procedures contain operating and maintenance requirements for the safe operation of pipeline and associated facilities. It is intended that these procedures be applicable to all Wild Goose Storage pipeline facilities, though it is recognized that only transmission pipelines and certain segments of gathering lines are subject to the regulations cited in this manual. Although these procedures have been derived from practical experience to conform to regulatory requirements, they are not intended to be all-inclusive, or to overrule the application of competent judgment.

1.3 References

Title 49 CFR Part 190 – Pipeline Safety Programs and Rulemaking Procedures
Title 49 CFR Part 191 – Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports, and Safety-Related Condition Reports
Title 49 CFR Part 192 - Transportation of Natural and Other Gas by Pipeline; Minimum Federal Safety Standard
Title 49 CFR Part 199 – Drug and Alcohol Testing
California Public Utilities Commission General Order No. 112-E

1.4 Distribution of Manual

Copies of this manual will be issued to designated employees at the Headquarter and Field offices. These copies will be controlled and subsequent changes or additions will be sent to the assigned individuals, who will be responsible for maintaining the currency and accuracy of the manual. Additional uncontrolled copies of the manual may be requested by other personnel; however updates to the uncontrolled copies will not be distributed.

1.5 Revisions to Manual

Revisions to this manual will be made as operating conditions or code requirements dictate. Recommended changes should be sent in writing to the Production Coordinator of Wild Goose Storage, LLC, who will consider the validity of the proposed changes and publish the revisions on a periodic basis. This manual will be reviewed each calendar year, not to exceed 15 months.

1.6 Anti-Drug and Alcohol Misuse Plans

The Company has an anti-drug and alcohol misuse plan as required by 49 CFR 199 as a separate document from this manual.

1.7 Definitions

Administrator - means the Administrator, Pipeline and Hazardous Materials Safety Administration or his or her designee.

CPUC means California Public Utilities Commission.

Gas means natural gas, flammable gas, or gas which is toxic or corrosive.

Incident means any of the following events:

- 1.) An event that involves a release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility and
 - (i) A death, or personal injury necessitating in-patient hospitalization; or
 - (ii) Estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more.
- 2.) An event that results in an emergency shutdown of an LNG facility.
- 3.) An event that is significant, in the judgment of the operator, even though it did not meet the criteria of paragraphs 1.) or 2.).

Operator means a person who engages in the transportation of gas.

OPS - means the Office of Pipeline Safety, which is part of the Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation.

PHMSA - means the Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation.

Pipeline or Pipeline System means all parts of those physical facilities through which gas moves in transportation, including, but not limited to, pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies

Regional Director - means the head of any one of the Regional Offices of the Office of Pipeline Safety, or a designee appointed by the Regional Director.

Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas in or affecting interstate or foreign commerce.

SECTION 2.0 – NORMAL OPERATIONS

SECTION 2.0 – NORMAL OPERATIONS

2.1 Annual Pipeline Report

CODE REFERENCE: Title 49 CFR 191.1, 191.3, 191.7, 191.9, 191.11, 191.13 and 191.19

PURPOSE: The purpose of this procedure is to establish responsibilities for preparing and submitting of pipeline annual reports.

GENERAL: The Production Coordinator is responsible for communicating information and data to State and Federal Agencies regarding pipeline annual reports of transmission and gathering pipeline facilities (**DOT Form PHMSA 7100.2.1**).

PROCEDURE: The procedure for submitting the report shall include collecting data, such as number and kind of leaks, cause of the leaks, their disposition, etc., for preparation and submitting of the annual pipeline report.

The following regulated lines should be included in the report:

- Gas transmission lines, distribution lines, branch lines, sales lines, and associated facilities, such as compressor stations, meter stations, regulator stations, etc.
- Onshore gas gathering lines in an area within the limits of any incorporated or unincorporated city, town or village and any distributed residential or commercial area such as a subdivision business or shopping center, or community development.

Online submission via PHMSA Portal is required unless an alternative reporting method is granted by PHMSA. The completed form must be submitted no later than March 15 of each year for the preceding calendar year. If unable to submit

Incident and annual reports for intrastate pipeline transportation subject to the jurisdiction of a State agency pursuant to a certification under section 5(a) of the Natural Gas Pipeline Safety Act of 1968 may be submitted in duplicate to that State agency if the regulations of that agency require submission of these reports and provide for further transmittal of one copy within 10 days of receipt for incident reports and not later than March 15 for annual reports to the Information Resources Manager.

NOTE: Operators must have an Office of Pipeline Safety (OPS) Operator ID (OPID) and Personal Identification Number (PIN) to complete the Portal enrollment process. If you do not have an OPID, please go to the following URL <http://opsweb.phmsa.dot.gov> and select "**request an Operator ID**" which should be the third bullet in the bulleted list on the page. If you already have an OPID but do not have a PIN, navigate to the same URL and select "**request a PIN**" and one will be sent to the email address listed in your request.

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If electronic reporting imposes an undue burden and hardship, an operator may submit a written request for an alternative reporting method to the:

Information Resources Manager,
Office of Pipeline Safety,
Pipeline and Hazardous Materials Safety Administration,
PHP-20, 1200 New Jersey Avenue,
SE Washington DC 20590.

The request must describe the undue burden and hardship. PHMSA will review the request and may authorize, in writing, an alternative reporting method. An authorization will state the period for which it is valid, which may be indefinite. An operator must contact PHMSA at 202-366-8075, or electronically to informationresourcesmanager@dot.gov or make arrangements for submitting a report that is due after a request for alternative reporting is submitted but before an authorization or denial is received. Operators should request and receive authorization from PHMSA prior to the use of alternative reporting methods.

A copy of the report shall also be sent to the CPUC.

RECORDS: The Field Office will maintain the official files on the annual pipeline report DOT Form PHMSA 7100.2.1. The file will be kept for the life of the pipeline facilities.

2.2 Incidents – Reporting and Control

CODE REFERENCE: Title 49 CFR, Sections 191.1, 191.3, 191.5, 191.7, 191.15 and 191.19; 192.605(b)(4); CPUC General Order No. 112-E 121-122

PURPOSE: To establish responsibilities for activities associated with certain pipeline facility incidents. These activities include, but are not limited to, incident control, repair, reporting, investigation and documentation.

GENERAL - D.O.T. / PHMSA Reporting:

For natural gas transmission incidents involving regulated pipelines and satisfying the Incident Criteria, the U.S. Department of Transportation must be notified. For all pipeline incidents/accidents occurring on or after January 1, 2010, D.O.T./PHMSA requires operators to file the applicable approved pipeline incident and accident reporting forms for Gas Distribution Systems, Gas Transmission & Gathering Systems (**PHMSA F 7100.2** (Incident Report Gas Transmission and Gathering Systems Form)) at the Electronic Incident Accident (EIA) forms system website at the following URL:

<http://pipelineonlinereporting.phmsa.dot.gov/>

The company's operator ID and PIN currently used for the ODES system will be the same for the EIA system.

If for any reason you're unable to submit your report online send your hard copy (after making telephonic notice) to:

Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Information Resources Manager PHP-10
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

The **WGS Form 100 Incident and Service Interruption Report Form** and **WGS Form 101 Notice and Disposition of Reported Incident** shall be completed to assure accurate documentation of the incident. Copies shall be made readily available to personnel who may report or receive reports of incidents. It is recognized that only limited details will probably be available when the initial call on an incident is made. Every effort shall be made to follow up with the incident and document all the information regarding such incident.

Report incidents to Federal and State safety and regulatory agencies within two hours of discovery. The report shall be made by telephone 800-424-8802 and shall include the following:

1. Name(s) of operator and person(s) making report and their telephone numbers.
2. The location of incident.
3. The time of incident.
4. The number of fatalities and personal injuries, if any.
5. All other significant facts that are known by the operator that is relevant to the cause of the incident or extent of the damages.

CPUC Reporting:

In the event of an incident listed in the Incident Criteria section below, the Production Coordinator shall go to the CPUC's website, select the link to the page for reporting emergencies and follow the instructions thereon. <http://www.cpuc.ca.gov/PUC/emrep/>

1. If the Company is notified of the incident during its normal working hours, the report should be made as soon as practicable but no longer than 2 hours after the Company is aware of the incident and its personnel are on the scene.
2. If the Company is notified of the incident outside of its normal working hours, the report should be made as soon as practicable but no longer than 4 hours after the Company is aware of the incident and its personnel are on the scene.
3. All reports required by this section shall be followed by the end of the next working day by an email or telefacsimile (fax) of the standard reporting form, **"Report of Gas Leak or Interruption," CPUC File No. 420.**

CPUC Written Incident Reports:

1. The Company shall submit to the CPUC on DOT Form PHMSA_F7100.1 <http://ops.dot.gov/library/forms/forms.htm#7100.1> for distribution systems and on DOT Form PHMSA F7100.2 <http://ops.dot.gov/library/forms/forms.htm#7100.2> for transmission and gathering systems a report describing any incident that requires notice as described in the Incident Criteria below.
2. Together with the form required above, the Company shall furnish a letter of explanation giving a more detailed account of the incident unless such letter is deemed not necessary by the CPUC staff. The Company may confirm the necessity of a letter of explanation while making the telephonic report. If, subsequent to the initial report or letter, the Company discovers significant additional information related to the incident, the Company shall furnish a supplemental report to the CPUC as soon as practicable, with a clear reference by date and subject to the original report. These letters, forms, and reports shall be held confidential under the provisions of Paragraph 2, Exclusions, of General Order 66-C and Public Utilities Code Section 315.
3. The Company of a distribution system serving less than 100,000 customers need not submit the DOT forms required by paragraph (1) above; however, the Company must submit the letter of explanation required by (2) above, subsequent

to any telephonic report to the CPUC, unless such letter is deemed unnecessary by the CPUC staff.

Quarterly Summary Reports. The Company shall submit to the CPUC quarterly, not later than the end of the month following the quarter, a summary of all CPUC reportable and non-reportable gas leak related incidents which occurred in the preceding quarter as follows:

1. Incidents that were reported through the Commission's Emergency Reporting website.
2. Incidents for which either a **DOT Form PHMSA F7100.1 or F7100.2** was submitted.
3. Incidents which involved escaping gas from the Company's facilities and property damage including loss of gas in excess of \$1,000.
4. Incidents which included property damage between \$0 and \$1,000, and involved fire, explosion, or underground dig-ins.

California Public Utilities Commission
Commission's Docket Office
505 Van Ness Avenue
San Francisco, California 94102
415.703.2782
800.848.5580 (Toll Free)
415.703.1758 Fax

INCIDENT CRITERIA- Incidents, which meet criteria listed below, shall be reported and controlled under this procedure.

An event that involves release of flammable, toxic or corrosive gas from a pipeline facility and resulting in:

1. A death or personal injury requiring in-patient hospitalization of an employee or member of the public.
2. Estimated damages of \$50,000 or more. Estimated damages include value of gas lost, repair cost, cost of temporary measures, and damage to property. If in doubt, report the incident to the Production Coordinator.
3. The occurrence of a ruptured pipeline or component, which allows a gas release requiring the isolation and blowdown of the facility other than planned repair and maintenance.
4. Any incident in which a regulatory agency inquiry may result due to such things as media coverage, proximity to major metropolitan areas, evacuation of buildings, traffic diversion or loss of service to a community.
5. Incidents which have either attracted public attention or have been given significant news media coverage, that are suspected to involve natural gas, which occur in the vicinity of the Company's facilities; regardless of whether or not the Company's facilities are involved (**CPUC Requirement**).
6. Any incident, which is significant in the judgment of the Production Coordinator.

PROCEDURE:

First Responder responsibilities include the following:

1. Establish initial control of each incident.
2. Immediately after initial control is established and a preliminary assessment or conditions can be made, call the Production Coordinator, if not present, and report those incidents meeting one of the above Incident Criteria.

Production Coordinator Responsibilities include the following:

1. Receive telephone reports of those incidents meeting one of the above listed Incident Criteria.
2. Communicate the situation to designated people within the **Field Office** and **Niska Operation & Engineering** office.
3. Coordinate all on-site activities including such things as repair, responding to reports, preservation of the evidence and materials, internal reporting and documentation of events and actions.
4. Secure the site and maintain as undisturbed as possible. If the site cannot be left undisturbed, document the site and incident details and preserve the site details as indicated in the appropriate system specific Emergency Response Plan or in Incident Investigation Procedure.
5. The documentation and/or investigation of incidents are necessary to meet operational requirements. Use the **WGS Form 100 Incident and Service Interruption Report Form** as a reference for information to be reported.
6. Arrange for interviews of employees as required.
7. Arrange for the shipment of materials or evidence to specified locations.
8. Arrange for outside professional services to assist in an investigation (e.g., corrosion specialist, land surveyor, metallurgist, or welding engineer) if deemed necessary.
9. Analyze for outside data collected, operation history of facility and results of lab testing to establish cause of failure or condition and write reports as necessary.
10. Provide recommendations for changes or facility modifications as appropriate.
11. Review written recommendations for operational procedure changes prior to issuing for field use.
12. Evaluate reportability in conjunction with legal staff, if appropriate.
13. Complete all required forms.
14. Receive request for data, information or on-site investigation and respond to those requests after collaboration with other persons (Operations, Engineering, Safety, Legal staff, etc.) as determined necessary or appropriate.
15. Provide on-site investigation of incidents meeting one of the Incident Criteria, on a case-by-case basis.
16. Submit Department of Transportation **Form PHMSA F 7100.2** (for gathering and transmission line incidents) as soon as practical but not more than thirty

(30) days after detection of a reportable incident to D.O.T. via internet reporting.

Note: All relevant cost must be included in the estimated property damage total on the initial written incident report as well as supplemental reports. This includes (but is not limited to) cost due to property damage to the Company's facilities and to property of others, commodity/product not recovered, facility repair and replacement (including fittings used during repair which became permanently attached to the system), leak locating, right-of-way clean up and environmental clean up and damage. Facility repair, replacement or change that is not related to the incident but is done by the Company as a matter of convenience (for example, to take advantage of access to facility unearthed because of incident) should not be included.

Where additional related information is obtained after a report is submitted, the Production Coordinator shall submit a supplemental report using Form **PHMSA F-7100.2** as soon as practical, but not less than 30 days after acquiring the additional information with a clear reference by date and subject to original report.

For intrastate pipelines, and in states where the state is an Agent for D.O.T., a report may be submitted in duplicate to the State agency if the regulations of that agency require submission of these reports and provide for further transmittal of one copy, within ten (10) days of receipt for incident reports to the Information Resources Manager.

Submit copies of all incident reports (including supplemental reports) to other agencies as required and to the Field Office.

For incidents where liability is in question, the **Niska Chief Operation Officer** or designate will:

1. Become an advisor to the Incident Command staff.
2. Respond to the media and/or government agencies in a positive, cooperative manner.
3. Review planned responses to outside parties, such as government agencies, outside investigators, and attorneys for information.
4. Provide advice regarding press releases.
5. In general handle all aspects of media coverage.

RECORDS: The Production Coordinator will maintain the official files on incidents meeting one of the incident criteria that are reported to outside agencies.

Copies shall be filed by the Production Coordinator for the field location files.

Files will be kept for the life of the pipeline.

Legal department shall be contacted.

2.3 Investigation of Failures and Serious Incidents

CODE REFERENCE: Title 49 CFR, 191.5, 192.617

PURPOSE: To establish responsibilities for activities associated with investigation, analysis, and documentation of pipeline facility failures and incidents.

INCIDENTS REQUIRING INVESTIGATION (Title 49 CFR 192.617)

GENERAL: The purpose of an incident investigation is to determine the probable cause and thus to minimize the possibility of a recurrence; not to reach initial conclusions and determine guilt. The scope of the investigation usually depends upon the nature and seriousness of the accident or failure. All incidents are to be reported on **WGS Form 100 Incident and Service Interruption Report** and the investigation results are to be reported on **WGS Form 101 Notice and Disposition of Reported Incidents**.

PRODUCTION COORDINATOR RESPONSIBILITY - All accidents or potential accidents which occur on the pipeline system, or that are natural gas related shall be reported to the Production Coordinator as soon as possible following occurrence. These accidents, or near accidents, include, but are not limited to, leaks, fires, equipment failures, human errors, operational problems, natural disasters, pipeline ruptures, etc.

The Production Coordinator shall take necessary action to render the situation safe following an accident. The primary concern is to ensure that persons and property are protected from danger.

After the situation is under control, the Operations Personnel shall notify the Production Coordinator of the nature and scope of the incident.

ALL COMPANY PIPELINE EMPLOYEES – All Operations Personnel shall take necessary action to render the situation safe following an accident. The Production Coordinator shall review the actions taken and affirm or take additional actions to render the situation safe.

PRODUCTION COORDINATOR RESPONSIBILITY - The Production Coordinator shall determine the extent of follow up investigation necessary, ranging from a brief written account of the incident to a full-scale on-site investigation utilizing the Company's accident investigation procedure. In making this decision, the Production Coordinator shall consider if the incident involved:

- Any injuries or deaths (major investigation),
- Significant property damage (major investigation),
- Requirement for assistance from other public agencies (major investigation),
- Attraction of news media (major investigation), and
- Potential for larger-scale accident (major investigation)

The Production Coordinator shall review all accidents and near-accidents for possible code non-compliance and to make recommendations regarding education of field personnel concerning the incidents.

INVESTIGATION CRITERIA

The following criteria or considerations may be of assistance to personnel responsible for conducting an accident or incident investigation.

PRELIMINARY INVESTIGATION - If possible, ascertain the sequence of events preceding the incident, including times of occurrence. If this cannot be accomplished immediately, set forth the available facts in chronological order and work toward developing a logical sequence of events while conducting the investigation.

Visit the site and view the area in light of preliminary knowledge of the incident.

If more than one person is involved in conducting the investigation, designate one specific person to maintain a record of all data collected and provide custody of all specimens or samples collected.

Obtain names, addresses, and telephone numbers of all witnesses.

Obtain witness statements (tape recording, if possible) as soon as possible. Some questions to ask:

- Where were they when the incident occurred?
- What were they doing?
- Did they hear, see, or smell anything unusual prior to the incident?
- What was their first indication of the accident?
- What exactly did they see happen?
- Were flames and/or smoke visible before or after the incident?
- What was the color of the flames/smoke?
- Did the flames change color?
- Did they hear an explosion? One or more?

Document any and all observations prior to beginning clean-up operations through the use of notes, videotapes, photographs, and drawings. The following should be included in the documentation:

- Distribution of debris
- Any building destruction (if applicable)
- Location of the obvious center or source of the explosion or fire, if any
- Condition of Company equipment and right-of-way involved in and adjacent to the accident
- Location of other utilities and underground facilities in the vicinity
- Location of nearest inhabited building to the accident site
- Description (class location) of surrounding area

- Indication of flash burns, paint blistering, singeing, or melting of materials.

If possible, obtain or request copies of pictures or reports taken by other employees, other public officials, news media, etc.

INITIAL POST-OCCURRENCE ANALYSIS

Arrange a meeting of all personnel involved as soon as possible after the emergency situation is under control.

Review and document all facts and observations.

Ensure that all physical evidence (samples of failed equipment) is maintained as found and in proper custody.

Determine if any failed specimens or gas samples require analysis of independent laboratory or metallurgist.

Determine what Company records should be accumulated and reviewed, such as:

- Recent customer complaints (odor, etc.),
- History of pipeline involved (specifications),
- Results of last patrol/leakage survey,
- Cathodic protection records,
- Odorant sampling records, if applicable,
- Dispatcher logs,
- Gas measurement charts,
- Line spotting reports, and
- Other maintenance activities.

Request legal assistance, as necessary.

DETAILED INVESTIGATION OF THE SITE AFTER OCCURRENCE

Prepare detailed site drawings showing location and dimensions of all pertinent facilities.

Prepare or obtain any building floor plans, if applicable.

Prepare accurate plans of all gas piping and controls in the area.

If combustion occurred, determine the source of ignition and the source of gas.

Establish the integrity of all area Company gas piping and related facilities using such techniques as:

- Surface sampling with gas detector equipment
- Barholing the soil adjacent to Company gas facilities using a combustible gas indicator
- Pressure testing the gas system
- Test gas odorant level (if applicable)

- Review recent construction activity
- Review system leakage history, and
- Determine system pressure at or near the time of the incident.

If unidentified combustibles are present, collect samples for laboratory analysis.

Investigate sewer systems as a possible source of flammable vapors. Search the general area for sources of combustible liquids or flammable gases or vapors, which may have been dumped or leaked into the sewer system.

Evaluate the general area for potential sources of flammable liquids or gases which, through improper use of storage, may have caused or contributed to the incident.

Review materials, design and construction standards, and operating and maintenance procedures for lack of sufficient compliance with applicable codes and recognized industry standards.

ANALYSIS OF THE FACTS AND CONCLUSIONS

Use open mind in analyzing pertinent information. Weigh each item of information carefully. Consider value of each piece of evidence:

- Historical data of the facility,
- Statement of witnesses,
- Observations of investigator(s),
- Physical evidence,
- Test results, and
- Laboratory analysis.

Consideration should be given to the use of outside experts for legal reasons or to determine key missing facts. Conclusions supported by the facts are preferable to unsupported opinions.

Reach conclusion as to the cause or probable cause of the accident or failure.

Cite contributing factors.

Develop recommendations to minimize recurrence of similar incidents.

Prepare report.

REPORTING OF LEAKS TO REGULATORY AGENCIES

GENERAL - All incidents, which occur on Company pipeline, or pipeline facilities, shall be classified as either "reportable" or "non-reportable" to regulatory agencies - The U.S. Department of Transportation.

The Production Coordinator shall be responsible for determining which leaks are "reportable" and for submitting the necessary reports to the regulatory agencies and make the report by telephone to the following:

Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Information Resources Manager PHP-10
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Telephone 800-424-8802

REPORTABLE - The telephonic notice for a reportable leak must be made as soon as practical following discovery of the leak, generally within four hours. Report the following information:

1. Names of Company and person making report and their telephone numbers.
2. The location of the incident.
3. The time of the incident.
4. The number of fatalities and personal injuries, if any.
5. All other significant facts that are known by the Company that are relevant to the cause of the incident or extent of the damages.

A leak, the involuntary release of gas from a pipeline or pipeline facility, shall be classified as "reportable" to regulatory agencies if it occurs on Company transmission or jurisdictional gathering system pipelines and meets at least one of the following criteria:

- Causes a death or personal injury requiring hospitalization to either employees or the general public,
- Causes estimated damage to the property of the Company or others, or both, of a total of \$50,000 or more (including gas loss),
- Is significant enough to attract widespread media attention, even if the first two criteria above are not met.

NON-REPORTABLE - "Non-reportable" leaks are those leaks, which do not meet one of the criteria listed for "reportable" leaks. Generally, "non-reportable" leaks are minor in nature and cause no hazard to persons or property. Only leaks are reportable. Other potentially hazardous situations (such as line hits, etc.) are not reportable unless gas leakage occurs.

REPORTING - The Production Coordinator shall have the responsibility of completing the required written reports and mailing them to the following address:

Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Information Resources Manager PHP-10
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Telephone 800-424-8802

The U.S. Department of Transportation requires submittal of a written report on Form **D.O.T.-F-7100.2** within 30 days after detection of "reportable" leaks listed above which require telephonic notice.

O.S.H.A. REPORTING AND RECORD KEEPING REQUIREMENTS (Title 29 CFR SECTION 1910)

O.S.H.A. INDIVIDUAL INCIDENT REPORT - Any employee's occupational (on-the-job) related illness and/or injury must be recorded on OSHA Form No. 101 or Company equivalent at the time of the incident. If a fatality or accident hospitalizing five (5) or more persons occurs either written or oral notification must be given to the OSHA area office within forty-eight (48) hours. The operating district where the incident occurred is to keep the completed OSHA Form No. 101 or Company equivalent and send one copy each to the Production Coordinator.

OSHA ANNUAL SUMMARY REPORT - The annual Log Work Related Injuries and Illnesses, **OSHA Form No. 300**, is to be completed along with **OSHA Form 301 Injury and Illness Incident Report** or Company equivalent for each recordable incident. A copy of the completed form should be sent to the Production Coordinator. In addition, each field office and headquarters office is required to post the **Form 300A - Annual Summary of Work-Related Injuries and Illnesses** in a place allowing easy inspection by all employees. It must be posted for inspection no later than February 1st and taken down not prior to April 30 of the year following the reporting term. The Company must maintain **OSHA Forms 101 or equivalent, 300 and 300A** for five (5) years following the year in which it applies.

2.4 Class Locations

CODE REFERENCE: Title 49 CFR 192.5, 192.179, 192.605(e), 192.609, 192.611 and 192.613

PURPOSE: To establish methods to be used in determining and updating class locations and their boundaries.

GENERAL: Class location is the means of designating the population density near a given pipeline segment. The number and types of buildings intended for human use or occupancy in the vicinity of the pipeline determine class location. The class location unit is an onshore area that extends 220 yards on either side of the centerline of any contiguous one-mile length of pipeline. For the purposes of classifications, each separate dwelling unit in a multiple dwelling building is counted as a separate dwelling intended for human occupancy. A class location unit can be less than one mile in length; however, this unit is referred to as a cluster for designation purposes (any class location unit listed below can be designated by the cluster reference).

CLASS 1 - A Class 1 location is any class location unit that has 10 or fewer buildings intended for human occupancy or an offshore location.

CLASS 2 - A Class 2 location is any class location unit that has more than 10, but less than 46, buildings intended for human occupancy.

CLASS 3 - A Class 3 location is any class location that has 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of a building or small well-defined outside area (playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons during normal use on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive).

CLASS 4 - A Class 4 location is any class location unit where buildings with four or more stories above ground are prevalent.

When a cluster of buildings intended for human occupancy requires a Class 2 or 3 locations, the Class 2 or 3 locations ends 220 yards from the nearest building in the cluster. A Class 4 location ends 220 yards from the nearest building with four or more stories above ground.

Designated personnel will observe new construction along the pipelines during all routine operations including aerial surveys, patrolling, leak surveys and corrosion surveys and inform the Production Coordinator of the changes.

PROCEDURE: Conduct class location surveys at least once per calendar year, with intervals not to exceed 15 months, or whenever an increase in population density indicates a change in class locations for a pipeline segment. Monitor more frequently the pipelines where class locations are likely to occur.

Record locations of new buildings and gathering places on pipeline drawings.

Update records and document the survey on the **WGS Form 102 Class Location Survey Report**.

Plot buildings and high occupancy locations on an alignment sheet or class location map and determine class location by following 49 CFR 192.5.

The Production Coordinator shall review any class change and determine if actions are required to maintain the existing maximum allowable operating pressure. The Production Coordinator shall initiate and follow-up on facility modifications or pressure reductions required by class changes. Modifications or pressure reduction will be completed within 18 months from the time the class location change occurred.

If a class location has changed, it will be necessary to check the sectionalizing block valve(s) spacing to determine if the existing spacing is adequate and conforms to the code. If not, additional valves may be required.

An appeal, or request for waiver can be made to the D.O.T./PHMSA Associate Administrator in Washington, D.C. if an equivalent level of safety exists without additional valves.

CLASS LOCATIONS: INITIAL DETERMINATION (Title 49 CFR 192.5)

GENERAL: Prior to pipeline construction, population density indexes are to be determined by aerial photography or field survey in order to identify all locations for proper engineering design and testing consideration. The Production Coordinator shall be responsible for the initiation of class location surveys necessary to prepare the pipeline density indexed. The class locations obtained from these initial surveys will be recorded on construction and "as-built" drawings for Company documentation and future reference.

CLASS LOCATIONS: CONTINUING EVALUATION (Title 49 CFR 192.5, 192.613)

GENERAL: Any data furnished as a result of field or aerial survey, routine pipeline patrol reports, or extraordinary situations occurring near the pipeline shall be reviewed by the Production Coordinator upon receipt of such data for any potential impact on class location.

Examples of situations affecting class location would be new residential development or construction of a school, church, park, or business near the pipeline. Any person detecting a possible change in class location shall notify the Production Coordinator of the change. The Production Coordinator shall initiate a confirmation study to be conducted in accordance with 192.609. Routine pipeline patrol reports will be made on **WGS Form 102 Class Location Survey Report**. If the confirmation survey affirms the

class location change, the Production Coordinator will initiate a study created by the class location change (See below.)

**CLASS LOCATIONS: REQUIRED STUDY FOR CLASS LOCATION CHANGES
(Title 49 CFR 192.609)**

GENERAL: The Production Coordinator, upon notification of a change in class location for a segment of an existing steel pipeline operating at hoop stress that is more than 40 percent of SMYS, or indicates that the hoop stress corresponding to the established maximum allowable operating pressure for a segment of existing pipeline is not commensurate with the present class location, shall immediately initiate a study to determine the following:

1. The present class location for the segments involved.
2. The design, construction, and testing procedures followed in the final construction, and a comparison of these procedures with those required for the present class location.
3. The physical condition of the segment to the extent it can be ascertained from available records.
4. The operating and maintenance history of the segment from the date of installation.
5. The maximum actual operating pressure and the corresponding operating hoop stress, taking pressure gradient into account, for the segment of pipeline involved.
6. The actual area affected by the population density increase, and physical barriers or other factors, which may limit further expansion of the more densely populated area.

The Production Coordinator shall, upon completion of the above referenced study, initiate appropriate action as specified in Title 49 CFR 192.611.

RECORDS: Record applicable new construction on an alignment sheet or class location map.

Schedule and document survey dates.

When class changes occur, document the change on alignment sheets or class location maps.

Retain records for at least five years.

2.5 Communications

CODE REFERENCE: Title 49 CFR Section 192.605(c)(3)

PURPOSE: To ensure the availability to communicate with personnel in an abnormal or emergency event.

GENERAL: Personnel in the field are in communication via cellular telephone and two-way radios.

2.6 Construction Records, Maps and Operating History

CODE REFERENCE: Title 49 CFR Section 192.605(b)(3)

PURPOSE: Construction records, maps and operating history of regulated pipelines will be maintained to document the operation and maintenance of a pipeline.

GENERAL: Construction records, maps and operating history shall be updated in a timely manner as changes take place as required by 49 CFR 192.605(b)(3).

The files shall be kept in a location that will provide field personnel with convenient access as the need arises.

The files shall be available for historical purposes and for decision making for pipeline operations and maintenance.

RECORDS: The Company shall maintain construction records, maps and the operating history of each of its regulated pipelines for the life of the pipeline.

Files shall be kept for each individual pipeline.

2.7 Continuing Surveillance

CODE REFERNECE: Title 49 CFR, Section 192.613

PURPOSE: To describe the continuing surveillance program for identifying segments of pipeline facilities requiring evaluation as well as taking action if appropriate.

GENERAL: Surveillance procedures are to be reviewed with employee(s) at time of inspection and on an intermittent basis such as operation meetings and work planning sessions.

Periodically communicate to employees that the purpose of continuing on-site inspections and their records is to detect changing conditions that could eventually result in a hazard to the public.

PROCEDURE: As a means of maintaining the safety and integrity of each pipeline, continuing surveillance through the analysis of completed pipeline inspection and maintenance records, daily operating reports, and other operating records shall be conducted so as to identify any pipeline facilities experiencing abnormal or unusual operating and maintenance conditions.

MONITORING - The Production Coordinator shall utilize his personnel and records to continuously monitor all pipeline facilities within his area for any changes in class location, failures, leakage history, corrosion, cathodic protection requirements, pipeline efficiency, and unscheduled equipment maintenance conditions.

Immediate action shall be taken by the Production Coordinator and his personnel to correct a hazardous or potentially hazardous condition that may influence the integrity of the pipeline or pipeline facility.

If a segment of pipeline is determined to be in unsatisfactory condition, but no immediate hazard exists, the Production Coordinator shall initiate action to recondition or replace, if necessary, the segment involved.

A complete investigation shall be initiated by the Production Coordinator should any such changes occur. If necessary, the Production Coordinator may request additional technical support from the Niska Operation & Engineering office.

The Production Coordinator shall document the following:

- A statement of the problem
- Documentation of facts related to the problem
- Proposed plan of correction, and
- Timetable for plan of correction.

RECORDS: The records that should be monitored and maintained may include, but not limited to the following:

- Pipeline Patrolling
- Class Location Survey
- Leak and Failure Records
- Pipeline Inspection Records
- Pipeline Repair Records
- Test Records
- Corrosion Control Records

This documentation must be filed and made available to personnel in a convenient manner.

2.8 Damage Prevention Program

CODE REFERENCE: Title 49 CFR, Sections 192.614 and 198.37

GENERAL: Each operator of a buried pipeline must have a written program to prevent possible damage to a buried pipeline facility by excavation activities. For the purpose of this plan, the excavation activities include:

- Excavation
- Blasting
- Boring
- Tunneling
- Backfilling
- Removal of above or below ground structures by either explosive or mechanical means
- Plowing (installation of flexible pipe, such as drain tile, or cable without open trenching)
- Other earth moving or earth disturbing activities

Excavation activity near Company operated pipelines requires the presence of a knowledgeable Company representative to ensure the safety of the public, excavation personnel, and the protection of the Company's facilities.

The Company shall develop and maintain a current list of contractors and other persons who are normally engaged in excavation activities in the area in which the pipeline is located.

NOTIFICATION – The Company shall provide general notification of the public living in the vicinity of the pipeline and actual notification of the individuals identified as persons engaged in excavation in the area of the pipeline and make them aware of the damage prevention program. Refer also to Section 2.15, Public Awareness program in this manual.

Excavation contractors are required by law to provide 48-hour advance notification to operators of underground facilities through the statewide Underground Service Alert North notification center. It is the duty of all Company employees to promote the use of Underground Service Alert North in their relationships with contractors.

In the event that an excavation contractor bypasses the Underground Service Alert North and notifies the Company directly of his intention to excavate adjacent to Company pipelines, Company personnel shall:

- Direct the contractor to call Underground Service Alert North,
- Make necessary arrangements to go ahead and spot the line, and
- Document information received as specified below:

- Name of person making notification and date,
- Name and telephone number of Company represented,
- Location, date, and time of the planned excavation,
- Notify Production Coordinator responsible for the facilities affected by the excavation.

RECEIVING AND RECORDING PLANNED EXCAVATION ACTIVITIES – The Company shall provide for the receipt of routine notices of planned excavation activities. This can be accomplished indirectly through the Underground Service Alert North notification systems or by direct telephone communication.

The Company shall maintain a file of all notifications requesting line marking or excavation activity on the Dig Alert Fax unless **WGS Form 103 Pipeline Inspection Report** is required.

RESPONDING TO NOTICE OF PLANNED EXCAVATION ACTIVITIES – Each Dig Alert or notice received will be determine if excavation activity will be conducted in the vicinity of a Company pipeline. If the excavation will be in the vicinity of a Company pipeline, then the pipeline must be marked.

Advise the requestor that a Company representative must be present during the excavation.

Inform the requester if a Company pipeline is located in the area of the planned excavation activity and tell him when the pipeline will be marked, what type of marking will be provided and how to identify the marking.

PIPELINE LOCATION AND MARKING - Company pipelines are marked at all points where public rights-of-way are crossed and at many other locations where the potential for excavation exists. The markers advise those planning excavation activities to call:

Underground Service Alert North – California North
811 or 1-800-227-2600
www.usanorth.org

Wild Goose Storage, LLC 530-846-7351

Additional markings must be completed within 48 hours of receipt of notification, unless the notifying party agrees to extend this time, and before any excavation begins.

The Company representative directed to the site shall utilize pipeline maps and a pipe locator for locating and marking activities.

Marking will be accomplished by use of flags, stakes, spray paint or other method, depending on the type and duration of the activity. The minimum length of pipeline to be

marked shall be as required by conditions of the site and job. If practical, locate and mark pipelines when a requester's representative is present.

Bends and other changes of direction need to be marked so that the location of the pipe is clearly delineated.

Spacing of temporary markers is dependent upon the judgment of the Company representative. Pipe depth data shall be provided to excavation supervisory personnel by making notations on the temporary markers.

Remove temporary markers when the work has been completed.

INSPECTION AND MONITORING OF EXCAVATION ACTIVITIES – A Company representative is to be present when excavation occurs that will expose or may be reasonable expected to expose the pipeline.

If the pipeline is to be crossed, depth will be determined by hydrovacing and daylighting at the point of intended crossing if practical and necessary. The Company employee may use a line locator and prodding bar, as appropriate.

The Company employee will advise the excavator that he may proceed with excavation across the pipeline in a slow and controlled manner (if the exact depth and location are known) at least 24" of clearance (undisturbed soil) will exist from the bottom of the excavation to the top of the Company pipeline. Monitor the excavation as it occurs to assure that the depth of the excavation is maintained as planned.

If less than 24" clearance will exist from the top of the Company pipeline to the bottom of the excavation or the crossing will be below the Company pipeline, prohibit the excavator from approaching the unexposed pipeline closer than 24" from the top or 24" from the side of the pipeline with mechanical equipment. Require the excavator to dig the remaining soil by hand excavation.

The Company shall retain the right for inspection of pipelines that they have reason to believe could be damaged by excavation activities at the cost of the excavator. The inspection must be done as frequently as necessary during and after the excavation activities to verify the integrity of the pipeline.

BLASTING – If blasting occurs and it is determined that there is possible damage a leakage survey must be done immediately to verify the integrity of the pipeline.

RECORDS: Record pertinent information on **WGS Form 103 Pipeline Inspection Report** or its Underground Service Alert North equivalent. Retain forms for one year from date of last entry. In the event of litigation or other unresolved situations, do not destroy records until they are no longer needed for such situations.

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Complete the **WGS Form 103 Pipeline Inspection Report** each time a buried pipeline is inspected, crossed or an above or below grade pipeline is damaged or hit by an outside party. These records are to be retained for at least five years.

2.9 Excavations

CODE REFERENCE: Title 49 CFR Section 192.605(a)

PURPOSE: To provide a safe method of performing excavations to protect personnel and the public.

GENERAL: For personnel safety, all excavations shall be planned in advance giving consideration to such items as underground installations, soil stability, weather conditions, and other construction activities.

PREPARATION FOR EXCAVATIONS – Notify other operating companies affected and request them to locate their underground structures. Utilize Underground Service Alert North by calling 811 or 1-800-227-2600.

Notify all effected landowners.

Remove or stabilize trees, boulders and other surface encumbrances that create a hazard, when feasible.

PROTECTION OF PERSONNEL FROM GROUND MOVEMENT – Protect personnel from ground movement in any excavation using a support system or sloping.

Use slope or support system for:

- Banks 5 feet high or greater
- Trenches less than 5 feet deep if hazardous ground movement may be expected, when soil or excavation is wet or after heavy rains.
- Trenches 5 feet deep or more

Use support system for trenches 5 feet or more deep and 8 feet or more long. In lieu of support system, use sloping above the 5-foot level at a rise not steeper than 1 foot rise per ½ foot horizontal.

Trench shields or boxes may be used in lieu of shoring or sloping.

Provide a means of exit such as ramps, ladders, or steps located so the maximum travel distance is 25 feet when employees must work in trenches 4 feet deep or more.

Move bracing or shoring along with the excavation.

Remove trench supports from the bottom as backfilling operations progress. Release trench jacks slowly. In unstable soil use ropes to remove them after personnel have been cleared from the trench.

PRECAUTIONS FOR ALL EXCAVATIONS – Inspect all excavations at least daily and after every rainstorm or other hazard-increasing occurrence.

Do not allow hazardous accumulations of water that can weaken the walls, hinder a person's ability to escape from an emergency situation, or otherwise endanger personnel.

Store excavated material at least 2 feet from the edge of excavations or use effective barriers to prevent material from falling.

Do not allow any person to stand under loads handled by lifting equipment.

Properly mark or barricade any excavations left open after working hours.

Protect personnel from flammable and/or toxic gases when ventilation is inadequate. Additional safety and monitoring information is available from the Company Confined Space Entry standard.

Provide emergency rescue equipment including breathing apparatus and rescue harness and lines where unsafe accumulations of vapor or gas are present in an excavation requiring personnel to enter or work.

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

PROTECTIVE SYSTEMS DESIGN – Design all support systems using accepted engineering principles or State requirements if they are more stringent.

See OSHA regulation or applicable state or local regulations for sloping and trench shoring requirements.

RECORDKEEPING – If pipeline is exposed during excavation complete **WGS Form 104 Pipeline Exposure and Inspection Report**.

2.10 Maximum Allowable Operating Pressures

CODE REFERENCE: Title 49 CFR, Sections 192.605, 192.605(e) 192.611, 192.619 and 192.553

PURPOSE: To outline the responsibility for establishing the MAOP of each pipeline segment and the related operating requirements.

ESTABLISHMENT OF MAXIMUM ALLOWABLE OPERATING PRESSURES (Title 49 CFR SECTION 192.619)

GENERAL: Maximum Allowable Operating Pressure (MAOP) is established by the Company in accordance with Title 49 CFR Section 192.619.

RESPONSIBILITY - The establishment of Maximum Allowable Operating Pressure shall be the responsibility of Engineering. An Engineer shall complete a Pipeline Qualification Record for any pressure piping installation or revision. MAOP will be established upon completion of any of the following:

- Pipeline construction or modification,
- Compressor station construction or modification,
- Meter and regulator installation or modification,
- Installation or modification of related pressure piping, and
- Upgrading or re-qualification allowed by the Code.

MAXIMUM ALLOWABLE OPERATING PRESSURES CONFIRMATION OR REVISION: CLASS LOCATION CHANGES (TITLE: CFR 49 SECTION 192.611)

Upon the discovery or notification of a change in class location affecting a transmission line or jurisdictional gathering line, the Engineer for the affected pipeline shall develop a plan for confirmation or revision of the Maximum Allowable Operating Pressure of the segment of pipeline involved. This confirmation or revision must be completed within twenty-four (24) months of the change in class location.

If the segment involved has been tested in place to at least 90 percent of its Specified Minimum Yield Strength (SMYS) for a period of not less than eight (8) hours, the Maximum Allowable Operating Pressures must be confirmed or reduced so that the corresponding hoop stress will not exceed:

72 percent of Specified Minimum Yield Strength in Class 2 locations,
60 percent of Specified Minimum Yield Strength in Class 3 locations,
50 percent of Specified Minimum Yield Strength in Class 4 locations.

If the segment involved has not been previously tested in place as described above, the MAOP must be reduced so that the corresponding hoop stress in the segment is not more than that allowed in 49 CFR Section 192.611 for a new segment of pipeline of the same materials in the existing class location, as follows:

60 percent of Specified Minimum Yield Strength in Class 2 locations,
50 percent of Specified Minimum Yield Strength in Class 3 locations,
40 percent of Specified Minimum Yield Strength in Class 4 locations.

If the segment involved has not been qualified for operation in accordance with either procedure above, it must be retested in accordance with 49 CFR Section 192, Subpart J. The MAOP must then be re-established and after the re-qualification test, the MAOP is equal to:

0.8 times the test pressure for Class 2 locations,
0.667 times the test pressure for Class 3 locations,
0.555 times the test pressure for Class 4 locations.

The revised MAOP may not exceed the previously established MAOP.

The corresponding hoop stress may not exceed:
72 percent of Specified Minimum Yield Strength in Class 2 locations,
60 percent of Specified Minimum Yield Strength in Class 3 locations,
50 percent of Specified Minimum Yield Strength in Class 4 locations.

The revision of MAOP does not preclude the applicable requirements of 49 CFR Part 192.553 Uprating.

NOTE: Class 1 locations for MAOP confirmation are not addressed by the regulation.

MAXIMUM ALLOWABLE OPERATING PRESSURES MONITORING (Title 49 CFR SECTION 192.605)

GENERAL: All Pipeline Operations personnel will be instructed regarding the MAOP of the pipelines in their area so that they can monitor line pressures to guard against exceeding MAOP on a routine basis as part of their normal work activities.

DOCUMENTING OF MAXIMUM ALLOWABLE OPERATING PRESSURES DISCREPANCIES (Title 49 CFR SECTION 192.605(e))

REPORTING - In the event an established MAOP is exceeded, the Lead Operator shall submit a written report to the Production Coordinator. The report shall include:

Name of pipeline or pipeline system(s),
Pipeline number,
Location of MAOP violation (include meter station or well name of nearest chart showing pressure data),
Date and time of incident,
Duration of incident,
Maximum allowable operating pressures of affected pipeline,
Class Location where violation occurred,
Highest pressure observed, and

Any other facts that may be pertinent to the incident.

ACTION - The Production Coordinator shall analyze the data furnished by the Lead Operator and any other available information, in order to recommend corrective action.

UPRATING OF PIPELINES (Title 49 CFR PART 192.553-557)

INCREASED PRESSURE - Uprating is required when it is necessary to increase the previously established maximum allowable operating pressure (MAOP) of a pipeline segment.

LIMITATIONS - The limitation on increase in MAOP is set as the maximum pressure allowed under 49 CFR Section 192.619 for a new segment of pipeline constructed of the same materials in the same class location. Before increasing operating pressure above the previously established MAOP, the Engineer shall review the design, operating and maintenance history, and previous testing of the pipeline and determine whether the proposed increase is safe and consistent with code requirements.

PROCEDURE: Prior to the uprating, the Engineer shall prepare a written procedure for accomplishing the uprating in a safe, controlled manner.

A completed Preliminary Uprating Data Sheet will assist in this review and serve in developing the required written procedure.

Any repairs, replacement, or alternations to the pipeline that is necessary for safe operation at the increased pressure shall be made prior to beginning the uprating process.

All pressure increases made during the uprating shall be done gradually, in a controlled manner, in increments according to code requirements.

At the end of each pressure increase, the pressure must be held constant while the affected pipeline is checked for leaks. Leaks that are found must be repaired before a further pressure increase is made.

Air, inert gas, or natural gas may be used as the test medium, subject to the class location and maximum hoop stress requirements of 49 CFR Section 192.503(c).

DOCUMENTS AND RECORDS: All written documents and records associated with the uprating shall be included in the original file for the pipeline and retained for the service life of the pipeline segment. This includes the written plan, all inspections and leak surveys, any repairs made, and pressure charts.

2.11 Odorization of Gas

CODE REFERENCE: Title 49 CFR, Section 192.625

PURPOSE: To establish requirements for the odorization of natural gas transported by transmission or distribution pipelines and branch lines.

GENERAL: Odorization of a natural gas transmission line is required if the line is located in a Class 3 and Class 4 location, unless:

- At least 50 percent (50%) of the length of the line downstream of the Class 3/Class 4 location is in a Class 1 or Class 2 location.
- The line transports gas to any of the following facilities, which received gas without an odorant from that line before May 5, 1975:
 - An underground storage field;
 - A gas processing plant;
 - A gas dehydration plant;
 - An industrial plant using gas in a process where the presence of an odorant makes the end product unfit for the purpose for which it is intended, reduces the activity of a catalyst, or reduces the percentage completion of a chemical reaction.
 - In the case of a lateral line, which transports gas to a distribution center, at least fifty percent (50%) of that line is in a Class 1 or Class 2 location.

It shall be the responsibility of the Engineering to determine the need for odorization of any newly constructed transmission lines or any transmission lines where the class location has changed to Class 3/Class 4 since the previous population density count.

NOTE: Currently Wild Goose Storage does not odorize the gas in, or leaving, its facilities. It is odorized by PG&E after receiving it in their pipeline and they do all the necessary monitoring.

2.12 Pipeline Isolation – Lock and Tag

CODE REFERENCE: Title 49 CFR Section 192.605(a)

PURPOSE: To establish a procedure to be used during isolation of pipeline facilities for maintenance or alteration and to protect people and machinery against unauthorized operation of equipment, valves, or electrical switches while work is performed on facility equipment.

GENERAL: Isolation of pipelines and associated facilities will occur to protect people and machinery against unauthorized operations of equipment, valves, or electrical switches while work is performed on facility equipment.

Prior to the actual maintenance being performed, a completion plan and a pre-job safety meeting will be held and adequate communications between the various sections of the overall work site will be maintained.

Locks and tags will be used to prevent inadvertent operation of valves, controlling devices, circuit breakers, electrical switches, electrically driven equipment, or other equipment that must not be operated while maintenance or construction is performed on facilities.

Include actions to insure safe ditching conditions, backfill disposal, and sufficient fire extinguishers.

PIPING AND EQUIPMENT ISOLATION - Identify all valves, lines, electrical switches, and equipment-controlling devices, which must be de-energized, de-pressured, drained, or isolated before maintenance work can safely begin.

Isolate all piping and equipment associated with the maintenance or construction activities to be performed.

Remove all hydrocarbon gas or volatile liquids within the work area by draining or venting to atmosphere following established purge practices.

LOCK AND TAG - Safety locks and “Danger- Do No Operate” tags shall be used where applicable to prevent inadvertent operation of those devices that pose a hazard if operated while performing maintenance or construction activities.

Complete a “Danger – Do Not Operate” tag showing the date, time, contact phone number, reason for tagging, and name of person performing the lockout. Secure this lock and tag to the equipment to preclude unauthorized operation.

VERIFICATIONS AND CHECKS - Verify that the equipment is:

- Shut down
- De-energized

- De-pressured and drained
- Isolated from all process or utility lines

After isolation and venting, conduct a check for leakage. If leakage occurs and cannot be controlled by adjustments and/or grease sealing, the use of skillets, blind flanges, or other suitable means will be employed to prevent gas and/or volatile liquids from entering the isolated section.

Ensure that the work area remains properly ventilated throughout the course of work. Use a combustible gas indicator to verify that adequate ventilation is maintained before and during the maintenance period.

RESTORING ISOLATED SECTIONS OF SERVICE - Purge isolated sections of piping and related equipment in accordance with approved purge practices before placing in service. Give consideration to the purge gas and venting locations to assure that all possible air entrapments are removed and to insure that no combustible mixtures reside within the piping and/or equipment at the completion of the purge period.

After the purge is completed and vents are closed, a low pressure hold may be used to allow for leak checks. Upon full pressurization, conduct a final leak check.

After all related operating checks are completed and pertinent piping and/or equipment are ready to be placed in service, remove the locks and tags. Removal of the lock and tag must be by the person who placed them.

Refer to the Wild Goose Storage Lock Out / Tag Out (Hazardous Energy Control) procedure for further details.

2.13 Pipeline Conversion of Service

CODE REFERENCE: Title 49 CFR, Sections 192.14 and 192.452

PURPOSE: To outline the steps required to convert a pipeline previously not used for gas service to gas service.

GENERAL: This procedure outlines the steps required to convert a pipeline previously not used for gas service to gas service.

A written procedure must be prepared for the line conversion covering at a minimum, the procedures and requirements described below.

Notwithstanding the date the pipeline was installed or any earlier deadlines for compliance, each converted pipeline must meet the requirements of Section 3.5 Corrosion Control of this manual specifically applicable to pipelines installed before August 1, 1971, and all other applicable requirements within one year after the pipeline is readied for service.

However, the requirements of Section 3.5 Corrosion Control of this manual specifically applicable to pipelines installed after July 31, 1971, apply if the pipeline substantially meets those requirements before it is readied for service or it is a segment, which is replaced, relocated, or substantially altered.

For any regulated onshore gathering line under Sec. 192.9 existing on April 14, 2006, that was not previously subject to this part, and for any onshore gathering line that becomes a regulated onshore gathering line under Sec. 192.9 after April 14, 2006, because of a change in class location or increase in dwelling density the requirements of this subpart specifically applicable to pipelines installed before August 1, 1971, apply to the gathering line regardless of the date the pipeline was actually installed; and the requirements of 192.9 specifically applicable to pipelines installed after July 31, 1971, apply only if the pipeline substantially meets those requirements.

PROCEDURE: Review design, construction, operation, and maintenance history of the pipeline. If sufficient historical records are not available, then appropriate tests must be conducted to determine if the pipeline is safe to operate.

Visually inspect the pipeline right-of-way, all aboveground segments, and appropriate underground segments of the pipeline for physical defects or other conditions, which could impair the strength or tightness of the line.

Correct any defects or conditions discovered during reviews and/or inspections prior to line commissioning.

Determine new MAOP for the line, as directed in Section 2.10 Maximum Allowable Operating Pressures of this manual.

Pressure test the line to substantiate the new line MAOP.

RECORDS: Appropriate documentation of all investigations, tests, repairs, replacements, and alterations will be on **WGS Form 106 Conversion of Service** form and maintained in the field office for the life of the pipeline.

2.14 Pressure Piping Materials

CODE REFERENCE: Title 49 CFR, Sections 192.53, 192.55, 192.63, 192.505, 192.619 192.719

PURPOSE: To establish specifications for piping materials that will ensure the safe operation of pipelines.

GENERAL: All materials used for pipe and components on the Company's pipeline system must meet the following requirements:

- Able to maintain the design structural integrity of the pipeline under temperature and other environmental conditions that may be anticipated;
- Chemically compatible with any gas that will be transported and any other material in the pipeline; and
- Qualified in accordance with the applicable requirements of 49 CFR, Part 192.

ORGANIZATIONS - All pipe components used on the Company pipeline system shall be manufactured in accordance with the applicable specification listed in Appendix B of Part 192, and designed and installed in accordance with the applicable codes. Appendix B of Part 192 incorporates by references the various material standards and specifications qualified by certain organizations as being suitable for natural gas service. The organizations listed are:

American National Standards Institute (ANSI)
American Petroleum Institute (API)
The American Society of Mechanical Engineers (ASME)
American Society of Testing and Materials (ASTM)
Manufactures Standardization Society of the Valve and Fittings Industry (MSS)
National Fire Protection Association (NFPA)

IDENTIFICATION AND MARKING OF MATERIALS - Each component to be used on the gas pressure piping system must be marked and readily identifiable as to specification and grade. This applies to each length of pipe, each valve, flange, fitting, or smaller components. Items purchased for use in gas pressure service should be marked as prescribed in:

- The specification or standard to which they were manufactured, or
- Manufacturer Standardization Society's, (MSS) Standard Practice SP-25.

Care shall be exercised to maintain the identity of small items, which are marked or labeled in boxes, bundles, etc., during storage and handling. All coated and wrapped pipe will be marked at the coating yard using the National Association of Pipe Coating Applicators (NAPCO) Bulletin 4-68.

Field operations personnel should check each item delivered to the field job site to insure that it is identifiable as to that specified on the requisition or list of materials.

Marking and identification of pressure components transferred from one warehouse to another shall be maintained at the receiving location.

USE OF USED MATERIALS ON PIPELINE SYSTEM - The U.S. Department of Transportation's 49 CFR Part 192 Minimum Federal Safety Standards for the Transportation of Natural Gas by Pipeline define the terms pipe, pipeline, and pipeline facility, as follows:

- Pipe - Any pipe or tubing used in the transportation of gas, including pipe-type holders.
- Pipeline - All parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenances attached to pipe, compressor units, metering stations, regulator stations, delivery stations, and fabricated assemblies.
- Pipeline Facility - New and existing pipelines, right-of-ways, and any equipment, facility or building used in the transportation of gas or in the treatment of gas during the course of transportation.

APPLICATION OF USED MATERIALS - Any items used by this Company in the transportation of natural gas are subject to the above definitions and must comply with the referenced specifications listed in Appendix B of 49 CFR Part 192.

Any used item or material which is included in the above definitions is suitable for reuse in the pipeline system only if its history can be properly documented from date of purchase of original installation and its operational effectiveness can be verified with proper inspection and testing.

RESPONSIBILITIES - The Production Engineer shall be responsible for the proper identification and documentation of all used material installed. Prior to installation, he shall assure himself, through appropriate testing or inspection, of the adequacy of design for all material components installed through maintenance operations. He shall assure himself the material will not compromise the integrity of the existing facilities. He shall maintain and keep all necessary records on location at the field storage area to be made available for inspection by Federal and State authorities upon request.

EMERGENCY PIPE - Lengths of pipe of each size is available for emergency repair and that emergency pipe has been tested, properly marked, and made readily accessible.

PROCEDURES: Before storing, emergency pipe should be prepared externally and internally as follows:

- The pipe selected must be new pipe (not used in previous service) with purchase order available, and coated and wrapped in accordance with Company specifications.

- The pipe must be tested for a minimum time period of four (4) hours to a pressure that equals 90% of Specified Minimum Yield Strength (SMYS). Normal and reasonable safety precautions are to be followed during the testing operations.

Following the test, each length of pipe shall be marked with the following information:

Diameter,
Wall thickness,
Grade,
Specification,
P.O. number,
Date of test,
Test pressure, and
Test location.

The field location may test its own pipe or may obtain pre-tested pipe by material transfer provided copy of the purchase order and test chart is furnished with the pipe.

Once tested and marked, emergency pipe should be cleaned and prepared for storage on racks.

Storage should be on racks reserved for emergency pipe (separate from line pipe). Nesting of pipe should be kept to a minimum to allow ready access and prevent damage. The ends of the pipe should be protected or padded from the pipe racks.

The pipe should be stored at least two feet above ground level, slightly tilted to allow water to drain, and with both ends open.

Emergency pipe should be inspected periodically to insure that the marking is legible and that the coating is in good condition.

Any damaged or poorly coated pipe should be removed from the emergency pipe racks, reconditioned or scrapped, depending on the severity of the damage.

RECORDS: The field office shall maintain a permanent file for use of emergency pipe, including purchase orders, test charts, material transfers, and disposition (job or maintenance orders where pipe is used).

2.15 Public Awareness

CODE REFERENCE: Title 49 CFR Sections 192.614(b)(2) and 192.616

PURPOSE: To outline the public awareness education program that will provide customers, the public, appropriate government organizations, and persons engaged in excavation, and related activities with information on to how to learn the location of underground pipelines, and how to recognize and report a gas pipeline emergency.

GENERAL: The Field Office shall carry out a public education program that meets the requirements of this procedure. The program must be a written continuing public education program that follows the guidance provided in the American Petroleum Institute's (API) Recommended Practice (RP) 1162.

The Field Office is responsible for monitoring the effectiveness of educational programs and advising the Production Coordinator if changes are necessary, or could be made, to improve effectiveness. **NOTE:** The Company has a detailed Public Awareness Program in a document separate from this O&M manual.

PROCEDURE: Identify customers, the public, appropriate governmental organizations, and persons or organizations who are involved in excavation activities or conduct business or live in the vicinity of Company pipelines. Communicate the following with the applicable individuals or organizations as determined in the Public Awareness Program established as a separate document from this manual.

1. Use of a one-call notification system prior to excavation and other damage prevention activities;
2. Possible hazards associated with unintended releases from a gas pipeline facility;
3. Physical indications that such a release may have occurred;
4. Steps that should be taken for public safety in the event of a gas pipeline release;
5. Procedures for reporting such an event.
6. Advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.
7. The program and the media used must be as comprehensive as necessary to reach all areas in which the operator transports gas.

IDENTIFICATION CRITERIA - Include the owner, manager or tenant actively involved with use of the property where the pipeline is located.

Include occupants of dwellings (single and duplex) and managers or operators of other building, public use areas, and multi-family (3 or more units) dwellings, who are not included above, and are located within the distances shown in Table 2.15.A or within the pipeline hazardous footprint.

Identification by mailing address is adequate for individuals and business locations where turnover is frequent.

Identification of excavators, public officials, organizations, other builders, and similar persons should normally include the name of the organization or facility, (e.g. ABC Excavators, Inc.).

The Field Office shall determine if a significant number of concentrations of non-English speaking population exist along a pipeline, and shall review individual situations to determine if communication media are needed in languages other than English.

MEDIA COMMUNICATION - Communication media for use in the program may consist of calendars, letters, newspaper notices, maps, advertisements (television, radio, or other media), brochures or other materials (pens, key chains, etc.). Communication may be via a one-call organization.

Communicated information may be the following:

- Company name and telephone number,
- Facts about the gas being transported,
- Importance of recognizing and reporting a gas emergency,
- What action to take in an emergency or if gas leaks are detected or suspected,
- How to identify a pipeline marker.

RECORDS: The identity of each of the individuals or organizations included above shall be maintained on **WGS Form 107 DOT Pipeline Liaison Record of Meeting** or other type of listing from the Public Awareness Program. Where mailings are involved, mailing addresses shall be included.

Update the listings at least once each calendar year.

Document the transmittal of information or the participation in activities publicizing the Company's damage prevention program and public education program.

The operator's program documentation and evaluation results must be available for periodic review by appropriate regulatory agencies.

Retain documentation for at least five years.

Table 2.15.A can be used to identify populations for targeting for individual mailing when a hazardous gas release cloud footprint for the pipeline is not available. (This table is not intended to be used as the criteria for Class Location determinations).

TABLE 2.15.A
CLASS LOCATION – POPULATION DENSITY

<u>Class Location</u>	<u>Structure Distance to Center Line of Pipe (in feet)</u>
Class 1	660'
Class 2	
Cluster *	100'
Non-cluster	300'
Class 3	
Building count 46 or more	100'
Building / area used by 20 or more persons 5 times a week	300'
Class 4	100'

* Cluster is a group of buildings intended for human occupancy that are closely spaced and have a distant increase in the density of buildings over the surrounding areas. Examples may include platted subdivisions, trailer parks, multiple dwelling unit buildings or a group of houses in otherwise open country.

Note: When these distances give unreasonable results, they may be modified for particular situations. The intent is to include persons who would be most likely to hear, see, or otherwise identify a pipeline problem so they can notify the Company or appropriate public officials.

2.16 Purging of Pipeline and Use of Air Movers

CODE REFERENCE: Title 49 CFR Section 192.629; 192.751

PURPOSE: To establish guidelines for purging air from new or modified gas pipelines, using natural gas, prior to placing them in service or when purging pipeline of natural gas prior to maintenance, testing or abandonment.

GENERAL: Purging is defined as replacing the air (or gas) within a pipeline by direct replacement with gas (or air) so rapidly that only a minimum amount of mixing occurs at the interface.

Purging a gas line is the act of introducing natural gas, air, or, sometimes, an inert gas in order to put a pipeline back into service or take a pipeline out of service without creating a combustible mixture within the pipeline.

All newly constructed lines and all lines previously in service that have been opened to atmosphere for any reason will be purged of air before placing in service.

PROCEDURE: At the gas (or air) supply end of the section to be purged, a pressure gauge will be installed. Purge pressure of 50 to 75 pounds are recommended.

A constant purge pressure will be maintained throughout the purging operation. When purging with gas, a gas detector will be used at the vent end of the section of line.

The time required for the gas to travel the length of the purged section, as indicated by the detection equipment, will be recorded. When the gas has been detected at the vent end of the purged section, theoretically, the section has been purged since one volume has been replaced with gas. However, due to possible channeling or layering, a total of two (2) volumes will be required; therefore, the total required purging time will be double the time it takes the gas to travel the entire length of the section.

Old lines may be removed or returned to service by the process of purging. In cases where gas in a pipeline is to be displaced with air and the rate at which air can be supplied to the line is too small to adequately purge the line, a slug of inert gas shall be introduced in the line to prevent the formation of an explosive mixture at the interface between gas and air. Nitrogen or carbon dioxide can be used for this purpose. (Reference "Purging Principles and Practices." American Gas Association.) Combustible gas or oxygen detectors may be used to detect the air/gas interfaces.

AIR MOVERS

PROCEDURE: The purpose of this procedure is to establish practices when using pipeline air movers to purge gas from pipelines in conjunction with cutting and welding.

RESPOSIBILITY: The Production Coordinator or designee is responsible for maintaining a sequence of events that will accomplish the work in a safe and successful manner.

AIR MOVER DEVICE

Air movers are essentially portable ventilating devices that have no moving parts and are employed as either blowers or exhausters. Like many other tools used on natural gas pipelines, they must be used with care, discretion and advance planning. When air movers are properly utilized, cuts or repairs on the pipeline that contains natural gas at atmospheric pressure can be made without the danger of gas venting or flowing through open ends into a work area.

The air mover device converts the pressure of a compressed air or gas into a large induced volume of moving atmosphere. In the air mover, the supply air or gas is expanded at high velocity through an annular orifice. The design of the device produces a powerful venture effect. This causes the atmosphere being moved to be drawn through the bell of the air mover, and delivered with the expanded air oar gas supply through the outlet horn.

AIR MOVER GENERAL

Pipeline air movers are intended to improve the safety of welding and cutting on gas pipelines by providing positive air purging of gas pipelines and a gas free welding atmosphere.

When air mover are used, cutting and welding is limited to the following:

- Cutting of access holes only in preparation of air mover use.
- Cutting or welding after the air movers are in operation and it has been established that an explosive mixture is not present.

In the absence of a gas supply to operate the air movers, air compressors may be used. If this is done, the time required to evacuate the gas from the pipeline will be longer because the amount of energy available from air compressors is usually less than normally available from high pressure gas in the pipeline.

If compressed air is to be used to operate the air mover, establish radio communication between the control and work areas or make available an alternate source of air supply for use in case the primary source fails.

All safety precautions shall be strictly observed at all times. This includes ensuring that whenever a hazardous amount of gas is being vented into open air, each potential source of ignition is removed from the area, and that a minimum 20 lb. fire extinguisher is provided.

AIR MOVER INSTALLATION

Install air movers on blowoff on each end of a blowdown section to draw air into the pipe at the work site and move combustible gas through the pipe toward the air mover.

Seal the gap between the air mover and the blowoff valve face by using a gasket cut from ¼" thick soft sheet rubber.

Attach the air mover to the blowoff with three 6" sharp pointed "C" clamps, spaced evenly around the bell. The sharp points provide the metal to metal contact across the soft rubber gasket necessary to drain off effectively any possible buildup of static electricity during the operation of the air mover.

If a single mover is utilized to purge a continuous section of pipeline, the opening at the inlet to the line being purged must be at least as large as the air mover being used to produce a successful purge with a minimum amount of mixing.

Install a 0-100 psig (0-689 kPa) pressure gauge on supply gas to allow the operator to make any adjustment in supply necessary to produce the desired control of draft at the point of severance in the blowdown section.

AIR MOVER SELECTION

Velocity – When selecting size and air or gas pressure requirements, select the conditions that will produce a velocity of 100 feet per minute or more in the pipe.

Table 2.16A shows the capacity of air movers for various conditions as shown by lines for full size access hole. Plug valve with air supply and plug valve with gas supply. To the right of these lines is a velocity of less than 100 feet per minute and to the left is a velocity of more than 100 feet per minute.

Selection – From Table 2.16A select pressure and size to obtain minimum 100 feet per minute velocity of air within the pipeline.

When an air mover is mounted on a plug valve, the air mover capacity is 40% of the listed induced air value and when gas is used as the supply, the corrected volume of induced air is further reduced by 60%.

Examples of Use

Determine velocity of air within a 30" pipeline (0.312" wall thickness) using a 6" air mover at 50 psig (345 kPa) through a full size access hole and gas supply and through a plug valve.

$$\text{Velocity of Air} = \frac{\text{Induced Air} \times 40\% \times 60\%}{\text{Inside Air}} = \frac{2058 \times .40 \times .60}{4.71} = 105 \text{ ft per minute}$$

PLANNING

Plan the project so that the start of hot cutting begins as soon as possible after the completion of the blowdown. Prior to reducing the pressure in the isolated section to just above atmospheric the following items should be accomplished:

- Inform all persons assigned to the project and explain their responsibilities.
- Check material and equipment required to complete the scheduled work.
- Lubricate and operate all valves involved
- Isolate other sources where gas may enter the section to be isolated.
- Deactivate remote control or automatic valve operators.
- Shut off rectifiers with a pre-described distance from the work sites.
- Establish a reliable communication system.
- Provide sufficient fire extinguishers of the proper type which must be located at each work site.

If liquid hydrocarbons are present, removal of the liquids is necessary and may be accomplished by the following:

- Install a siphon drip.
- Drill holes in the pipe.
- Sever the pipe with mechanical cutters.
- Internally clean the pipe.

PROCEDURE

Cutting of Access Holes

The procedure for cutting access holes is described below in a sequence that should be followed after the isolated section has been reduced to just above atmospheric pressure.

- Move excess personnel away from openings in the pipe before beginning cutting or welding on a pipeline.
- No air should be allowed to enter the blowoff prior to cutting out the access coupon or hot cutting the pipe.
- Install air movers on blowoff at each end of the isolated section
- Install shut wire and ground at the work site. The shut wire should remain attached to the pipe until the stringer weld has been completed.
- A handle may be welded at the access coupon for ease of handling when removing the access coupon from the pipe.
- Drill or cut a small hole near the access coupon area. Close this hole with tape until air movers are in use. This hole is used to check the gas pressure and also enables the person in charge to aid controlling the fire using the blowdown while noting the flame height. Electric drills are not to be used.

Cut an elliptical shaped access coupon at the approximate center of the segment of pipe to be removed. Size of access coupon should be:

Length:

Size of pipe	Size of Access Coupon
26" to 36"	24" elliptical hole
12" to 24"	16" elliptical hole
10" and under	Sever and separate pipe

In hot cutting the pipe, leave one inch or more of metal on the top side of pipe if it shows evidence of being twisted or contracted. This should be carefully watched for by the cutting torch operator during the progress of the cut. Before completing the cut, the pipe should be restrained by clamps, side boom or blocking.

As the cut is being made, seal and extinguish all fires in the work area. Inspect inside of pipe and coupon for liquids and iron sulfides to determine if air movers may be used.

No additional cutting or welding is permitted until the air movers have adequately removed all gas from the work area.

Air Mover Operation

The procedure for operation of an air mover is described below in a sequence that should be followed after the air access hole has been cut and the fire extinguished.

Attach ribbons to center of air mover outlets so operation of the air movers can be visually observed and monitored at all times.

Attach ribbons at each end of access hole or end of pipe and observe angle of streamers to determine that air is flowing into the pipe toward both air movers.

When authorized by the supervisor at the work location, fully open blowoff valves.

When authorized, slowly open control valve to air movers for five minutes until the desired set pressure is achieved at the work location. Control volume of air through air movers by regulating gas or air pressure supply and observing supply pressure. Do not exceed 80 psig (551 kPa).

Operate air mover for five minutes at reduced pressure so air will not bypass the gas.

The air mover at the higher elevation will require less control pressure than the air mover located at the lower elevation.

Attend air movers constantly using personnel having radio contact with personnel working on the pipe.