



**FILED**

07-01-13

04:59 PM

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 ALPINE NATURAL GAS OPERATING COMPANY NO.1, LLC (909G)

Michael Lamond, COO  
Alpine Natural Gas Operating Company No. 1, LLC  
15 St. Andrews Rd. Suite 7  
P.O. Box 550 Valley Springs, CA 95252  
Telephone: (209) 772-3006 Facsimile: (209) 772-3008  
Email: [anginc@goldrush.com](mailto:anginc@goldrush.com)

Dated: June 28, 2013

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  
CALIFORNIA SAFETY PLAN OF ALPINE  
NATURAL GAS OPERATING COMPANY NO. 1,  
LLC (909G)

In accordance with Ordering Paragraph 5 of Decision 12-04-020 of the California Public Utilities Commission (Commission) and Section 961(b) of the California Public Utilities Code, Alpine Natural Gas Operating Company No. 1, LLC (Alpine) submits its Natural Gas System Operator Revised California Safety Plan (Safety Plan).

I. INTRODUCTION

1. Alpine Natural Gas Operating Company No.1, LLC (ANG) respectfully submits to the California Public Utilities Commission (Commission) its Revised CA Safety Plan (Safety Plan) in compliance with the Decision Amending Scope of Rulemaking 11-02-019 and Adding Respondents, dated April 20, 2012 (D.12-04-010).

2. In February 2011, the Commission opened Rulemaking 11-02-019 to coordinate pipeline safety efforts, obtain public input, and propose any necessary rule and/or policy changes.<sup>1</sup>

3. In October 2011, the California Legislature passed Senate Bill (SB) 705, which was subsequently codified as Sections 961 and 963 of the California Public Utilities Code. The regulations require, among other things, that each gas corporation operating in California develop a plan for the “safe and reliable operation of its commission-regulated gas pipeline facilities subject to approval, modification and adequate funding by the commission.”

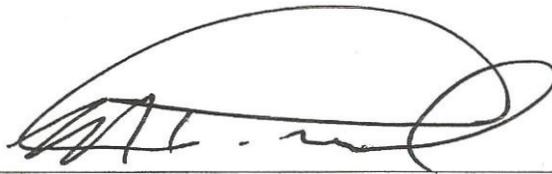
<sup>1</sup>D.12-04-010. at p.8-9.

The Commission must review and accept, modify or reject each utility's plan by December 31, 2012.<sup>3</sup>

4. In D.12-04-010, the Commission addressed the requirements of Public Utilities Code §§961 and 963 by requiring all California gas system operators to file a safety plan no later than June 29, 2012. Through the safety plans, operators must demonstrate how they address each element of Public Utilities Code §§961 and 963.<sup>4</sup>

5. Attached hereto and incorporated herein is Alpine Natural Gas Operating Company No. 1, LLC Revised CA Safety Plan. Included in the Plan document and in compliance with Ordering Paragraph 3(OP) of Commission Decision 12-12-009 is the letter confirming review by the staff of the Gas Safety and Reliability Branch (GSRB), Gas Engineering and Compliance Section (GECS) authorizing ANG to file its Revised CA Safety Plan. Also attached is a separate Table of Alpine Natural Gas' Safety Plan Changes Summary.

Respectfully submitted June 28, 2013 at Valley Springs, California.



Michael Lamond, COO  
Alpine Natural Gas Operating Company No. 1, LLC  
15 St. Andrews Rd. Suite 7  
P.O. Box 550 Valley Springs, CA 95252  
Telephone: (209) 772-3006 Facsimile: (209) 772-3008  
Email: [anginc@goldrush.com](mailto:anginc@goldrush.com)

---

<sup>2</sup> Public. Util. Code §961(b)(1); Id. at §961(b)(2).

<sup>3</sup> ANG initially submitted the required Safety Plan in June 29, 2012; CPUC staff subsequently required revisions to the original submittal and the Safety Plan attached hereto, as revised, has been deemed by Commission staff to be compliant with relevant Commission orders.

<sup>4</sup> D.12-04-010 at p. 17.



**ALPINE NATURAL GAS  
OPERATING COMPANY NO. ONE, LLC**

**NATURAL GAS SYSTEM OPERATOR  
SAFETY PLAN**

**Plan Effective Date**

**June 29, 2012**

Revision Date  
June 24, 2013

**ALPINE NATURAL GAS OPERATING COMPANY NO. 1, LLC (ANG)**

**SAFETY PLAN**

**I. PURPOSE AND SCOPE ..... 3**

**A. OUR COMMITMENT TO SAFETY**

**B. REGULATION REQUIREMENTS**

**C. OBJECTIVES**

**D. APPLICABILITY, IMPLEMENTATION AND REVISION**

**II. PLAN PROVISIONS .....12**

**III. EMPLOYEE SAFETY AND WORK PROCESS.....16**

**IV. PLAN REVIEW REQUIREMENTS.....17**

**V. ALPINE’S ANNUAL SAFETY PLAN REVIEW.....19**

**VI. GSRM SAFETY PLAN REVIEW CONFIRMATION .....20**

**VII. ALPINE NATURAL GAS SAFETY PLAN CHANGES SUMMARY.....21**

**VIII. APPENDICES OF REFERENCE PLANS (A-E).....29**

## ANG SAFETY PLAN

### I. PURPOSE

#### A. OUR COMMITMENT TO SAFETY

1. ANG management is committed to maintaining a safe and reliable natural gas distribution system for our; customers and their property, employees and the public. Michael Lamond, Chief Operating Officer (COO) has clearly stated in Alpine's Operations and Equipment Manual (OME), in the section "General" and Employee Safety Manual (ESM) along with this document that safety is the top priority of ANG.
2. We continuously strive to improve our operations by acquiring new technology and equipment and through continuous employee training.
3. In order to protect people and property, ANG is proactive in identifying and resolving potential problems before they occur. The reliability of our distribution systems is ensured through proper design, safe construction practices, integrity management programs, routine patrolling, inspection, maintenance, and through improvement projects.
4. We have developed this Safety Plan to help communicate how our various operations policies and procedures support our commitment to safety. The continued commitment to safety depends not only on knowledge, skills and work performance, but on the identification of potential issues and the swift and specific reaction to any emergency situation that may arise.
5. We are proud of our safe operating history. We continue to strive to maintain this history that does not include gas emergencies that have resulted in injuries or loss of life.



---

## **B. REGULATION REQUIREMENTS**

1. ANG's Safety Plan (Plan) was prepared in order to comply with the California Public Utility Commission (CPUC) requirements as set forth in R.11-02-019 and the mandates of Senate Bill (SB) 705 as codified in the California Public Utilities Code Sections 961 and 963:
  - a. The Company shall implement and utilize its Plan upon CPUC approval. The Plan will clearly document and define Company policies and procedures related to the Commissions five topics identified in 11-02-019 section 2.6 as:

Safety Systems {CA Public Utilities Code § 961(d)(1)(2)} are those policies and procedures that identify and minimize hazard and system risk.

Emergency Response {CA Public Utilities Code § 961(d)(5)(6)(8)} are those policies and procedures that limit the damage from accidents, provide for timely response to reports of leaks, hazardous conditions, and emergency events and prepare for and respond to earthquakes and other major events.

State and Federal Regulations {CA Public Utilities Code §961(d)(7)(9),(c)} establish a minimum baseline for pipeline safety in the United States.

Continuing Operations {CA Public Utilities Code §961(b)(3),(d)(3)(4)(10)} are those that ensure the safety of the public and Company employees, provide for transportation capacity to safely and reliably deliver gas to all customers, provide for effective patrol and inspection to detect leaks, and to ensure an adequately sized, qualified and properly trained Company workforce.

Emerging Industry Issues {CA Public Utilities Code § 961 (d)(11)} are any additional matters that the CPUC or Company determines should be included in this Plan.
  - b. The Company shall periodically review and update the Plan. Alpine will review and or revise the plan annually not to exceed 15 months.
  - c. The Plan shall be consistent with federal pipeline safety statutes as set forth in Chapter 601 of Subtitle VIII of Title 49 of the United States Code and the regulations and the best practices in the natural gas industry.

DOT CFR 49 changes PHMSA Bulletins are received and reviewed by the COO for the purpose of updating where appropriate this safety plan.

- d. The Plan shall set forth how the Company will implement the Plan.
- e. The Company shall provide opportunities for ongoing participation by the Company's workforce in the development and implementation of the Plan, with the objective of creating a culture of safety within the Company and to minimize the potential for accidents, explosions, fires, and dangerous conditions.

The safety plan was developed by the small workforce of Alpine that consists of Michael Lamond, two Qualified Pipeline Operators and two part time customer service employees. The plan was developed, discussed and implemented during periodic staff meetings. The plan development continues to be an ongoing topic until the final approval at which time the annual review will provide staff to participate in plan improvements and or revisions.

- 2. ANG's original system design was performed and installed by qualified pipeline experts in 1999-2000. Subsequent facility installation and operations are performed by Qualified Operators with industry "Best Practices" as guidance. Alpine's ongoing training and implementation of operations policies are guided by various industry organizations including; American Public Gas Association, Midwest Energy Association, Common Ground Alliance as well as guidance bulletins from DOT-PHMSA and the CPUC.

ANG's system Administrator is charged with the ongoing monitoring of regulatory changes. In addition, the Administrator's commitment to quality improvement and safety is demonstrated by continuous evaluation of company procedures and operational performance.

Periodic meetings and discussions are conducted by the Alpine workforce to continually improve operations and procedures. ANG's core belief is that regulatory compliance and operational improvements leads the company to achieve its goal to provide a safe reliable natural gas distribution system.

## **C. OBJECTIVES**

The Company will implement its Safety Plan to comply with elements of R. 11-02-019

1. **{CA Public Utilities Code § 961(d) (1)}**

Protect people and property by identifying and minimizing hazards and risks in order to minimize the likelihood of accidents, explosions, fires, and dangerous conditions.

Alpine's Distribution Integrity Management Plan (DIMP) addressed the identifying of risks and hazards. To summarize; the greatest threat or hazard to Alpines System is a Leak on the system that could lead to accidental ignition (DIMP: Chapters 5, Risk Assessment and & 6, Measures to Address Risk).

Alpine employees are trained and responsible for the safety practices outline in ANG's Employee Safety Manual. OQ employees are able to perform operational tasks by understanding the Safety Manual, the DIMP plan and the specific knowledge of Alpine's OME procedures to operate a safe reliable distribution system. Also mastery of the covered tasks in the OQ plan (see OQ plan, Attachment A-2 "Covered Tasks and Identified Abnormal Operating Conditions"(AOC's)), provides the expertise necessary to perform the tasks safely and appropriately.

The primary procedure to protect people and property is through Alpines Public Awareness Plan, OME procedure 614. The Plans four objectives are:

- a. To educate gas customers and non-gas customers living and or working near Alpine Natural Gas distribution system to recognize the odor of natural gas and how to react if they believe there is a natural gas leak.
- b. To increase the awareness of the affected public and key stakeholders in the Alpine distribution service area of the presence of buried natural gas facilities.
- c. To assist excavators in understanding the measures to be taken to avoid third party damage to buried natural gas facilities and how to respond properly if they cause damage to Alpine Natural Gas facilities.
- d. To assist Fire, Police and other emergency response agencies that may assist Alpine Natural Gas during a natural gas emergency, of the proper actions(s) to be taken in response to a release of natural gas or other natural gas emergency.

Alpine's customer service procedures provide communication regarding important natural gas and natural gas emergencies information (OME Appendix A-3, & E) to all new customers. In addition, this information is provided bi-annually to all customers and annually to non-customers within Alpine's distribution area.

Additional processes in place to minimize this hazard are described in Alpine's OME, DIMP, Damage Prevention Plan (PAP, 614 & 614-B) Appendix B-7 & C-1, Emergency Plan (EP, 615) and the Operator Qualification Plan (OQ). Specific prevention processes include; Leak Survey OME 723, Cathodic Protection (OME Sections; 465,455,481,487-B, 475 & 475B), Valve

maintenance (OME Sections; 747, 747-B, 201 & 365) and locating and marking pipeline (OME Sections; 707, 321-E & 614-C).

Additional OME procedures to protect people and property include; Customer Service procedures OME Appendix A-1, E, OME Section 605-B-11, Leak Investigation 615-A, Leak Testing at Operating Pressure 503, System Patrolling 721, Public Awareness Plan OME 616, Damage Prevention Plan 614-A & 614-B, Continuing Surveillance 613, Odorization 625 and Safety Related Conditions Reporting 605-D.

2. ***{CA Public Utilities Code § 961(d) (2)}***

Identify and implement improvements to pipeline safety systems that may be deployed to minimize hazards, including adequate documentation of gas pipeline facility history and capability.

Alpine's DIMP plan( Chapter 3) and construction records (Service Line Construction and or Main Line Construction Records or similar, OME Section 303) provide the historical as well as new installation data necessary that may be needed to implement future improvements considered as a result of periodic performance review of plans and operations (OME Sections General, General 5 & System Design 619-621 .

New technology and training are considered and added to Alpine's operation where appropriate as part of managements OME, DIMP, and OQ Plan periodic review.

3. ***{CA Public Utilities Code § 961(d) (3)}***

Provide adequate transportation and storage capacity to reliably and safely deliver gas to all customers consistent with rules authorized by the CPUC governing core and noncore reliability and curtailment, including provisions for expansion, replacement, preventative maintenance, and reactive maintenance and repair of gas piping facilities.

Alpine receives its gas supply via a gas transportation agreement with PG&E. Alpine does not store gas only provides to its customers via its distribution system. Ongoing monitoring of regulator station pressure as well as periodic measurement of pressure at the systems terminal end help insure adequate operating pressures throughout (OME Sections General, 739-A, 741,509 & 201).

It is management's responsibility to respond immediately to all scenarios either catastrophic or non-catastrophic, that would negatively impact the

integrity and reliability of the system. Management actively works with its gas suppliers and agents to restore any major disruption in gas flow. OME procedures including the Emergency Plan 615, Record Keeping 709 provide the processes that help assure system integrity and proper operating pressures.

Alpine's distribution system's Regulator Station allows for manual by-pass of the Regulator Station so as to not interrupt service to customers, "Manual Valve Operation- Regulator By-Pass OME 201. In addition the system has multiple main line valves that allow specific isolation of gas delivery to a particular location during Valve maintenance OME 747 or Emergency Plan 615.

4. ***{CA Public Utilities Code § 961(d) (4)}***

Perform effective patrols and inspections of gas pipeline facilities to detect leaks and other compromised facility conditions and make timely repairs.

Alpine's DIMP, OQ, OME including Valve Maintenance 747-B and 365, Regulator Station Inspection and Maintenance 739-A, 739- B, 739-C, 741 & 465 as well as Leak surveys 723, Inside Gas Leaks 615-A, Continuing Surveillance 613 & System Patrolling 721 all are ongoing processes that assist Alpine in identifying Abnormal Operating Conditions (AOC, see OQ Plan) and provide a road map to remedial activities.

5. ***{CA Public Utilities Code § 961(d) (5)}***

Provide appropriate and effective system controls, with respect to both equipment and personnel procedures, to limit the likelihood of damage from accidents, explosions, fires, and dangerous conditions.

System Design specifies appropriate MAOP (OME Section Design Construction MAOP 619-621) & OME Section "General" provides a system summary. Ongoing monitoring of this pressure assures effective control Form 739-A & 741. Future expansion considerations must always address the design criteria of the system and it's MAOP.

System control added after initial design and construction were the use of excess flow valves on all service lines installed after February 2010 (Excess Flow Valves OME Sections 381-383. Also, the installation of an additional Regulator Station, carbon steel ball Valve, located on the outlet side of the Regulator Station, to assist and improve our "Lock Up" Procedure. These are examples of an improvement that

would serve to limit damages from an abnormal condition such as exceeding MAOP, as a result of operations.

Leak Survey Procedure 723 utilizes the GPTC Leak Classification system as a guideline, generally though all leaks are at time of discovery repaired, however, if the Leak Classification allows for a repair to be scheduled at a later date the operator may defer the repair according to the procedure Leak Survey 723.

Alpine's Emergency Plan (OME Section 615) provides the procedures to be followed in the event of an emergency that would affect control of the system.

6. **{CA Public Utilities Code § 961(d) (6)}**

Provide timely response to customer and employee reports of leaks or abnormal operating conditions and emergency events.

Alpines OME procedures outline Alpine's quick response to all leak or odor calls immediately upon report Customer Service 605-B-11, Inside Gas Leaks 615-A, Appendix B-2, A-3 & E. Damage Prevention 614-a & 614-B, Valve Opening and Closing 747 & 365 Additionally, the quick repair of any leak or odor detected during investigation (Leak Investigation OME Section 617 and Joining of Threaded Pipe OME Section 273) we believe only enhances ANG's ability to maintain a safe reliable distribution system.

ANG's Leak reports are reviewed and had been determined to historically be minimal, however by category the primary types are excavation and threaded pipe leaks on homeowners own piping.

- a) The process of promoting our Preventative Awareness Plan (PAP) has improved Damage Prevention and subsequently we see a decrease in leaks caused by excavation activities.
- b) In an effort to assure safety and provide convenience for our customer's, leaks found on a customer's own pipe, ANG developed an alternative to red-tagging the meter and shutting off the gas until the customer makes the necessary repairs. The customer has an opportunity to request in writing that ANG make the repairs that correct the leak on a customers threaded pipe OME Section 273. ANG believes, by augmenting the repair process, their customer's communication of potential gas leaks is improved.

Annual Review of Leak Data and Reporting see Integrity Management Plan OME Section 1005 allows management to monitor trends and areas in need of improvement regarding incidence of gas leak reporting.

7. **{CA Public Utilities Code § 961(d) (7)}**

Include appropriate protocols for determining maximum allowable operating pressures for pipeline segments.

Alpine's distribution system is controlled by a single regulator station. The only steel in the system is in the Regulator Station and the two feet of steel pipe where it exits the underground vault. Under Federal Regulation 49 CFR § 192 the MAOP was designed at 60 psig. All main line pipe downstream, approximately 34 miles, is of Polyethylene Pipe (P.E.). The largest main is 6" in diameter. Alpine's normal operating pressure of the distribution system is currently 45 psig.

Alpine records and maintains all documents (Record Keeping OME Section 709). Hard copy retention of all pressure recordings and inspections provide for the continuous monitoring of the gas systems OME Section, MAOP 619-621 and ongoing Maintenance OME procedures (such as; Regulator Station Pressures and Operation 739-A, 739-B, 739-C, 741, Cathodic Protection 465, Leak Survey 723, System Patrolling 721 and Line Markers 707).

This documented history and our Operator Qualification Plan provides evidence of a safe reliable distribution system.

8. **{CA Public Utilities Code § 961(d) (8)}**

Prepare for and respond to earthquakes and other major events to minimize damage.

Alpine's various plans OME (including Leak Survey Section 723), PAP, OQ, and Emergency Plan OME Section 615 contain procedures that provide for; the ongoing monitoring, response to and subsequent remediation or repairs required for any event that impacts or potentially impacts Alpine's distribution system.

Key components of Alpine's Emergency Plan (OME 615) include:

- Receiving, Identifying and Classifying Emergency Notices
- A potential versus an Actual Emergency Notice
- Instructions to Callers
- Prompt and Effective Response by Alpine's workforce
- Notifying Fire, Law Enforcement and other Public Officials
- Reporting Requirements
- Minor Gas leak Field Response
- Major Gas Leak Field Response

Leaks Inside Buildings  
Fires/Explosions  
Media Notification/Inquiries  
Natural Disasters, Earthquake, Wildfire  
Gathering Emergency Data  
Post-Emergency Review  
Annual Plan Review & Employee Training

9. **{CA Public Utilities Code § 961(d) (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 as well as the CPUC Safety Division.

The DIMP plan addressed the design and ongoing monitoring of the distribution system the following OME Sections pertain to compliance with this regulation:

Safe Design: Design-Constr. MAOP, General

Construction: 303

Installation: Customer Meters; 355, 357, 359, P.E. Pipe 319-321, Pipe Joining 281-285, Tapping Pipelines Under Pressure 627

Operations & Maintenance: Repair of Damaged Pipeline 703, Prevention of Accidental Ignition 751, System Patrolling 721, Leak Test 503, Pipe Squeeze Off 605-B, Pipeline Repair 605-B-1, PAP 616, Leak Survey 723, Pipeline Locating 321-E & 614-C, Integrity Management Plan OME 1005 including Appendix R-4, R-5 & R-6.

This includes ANG's compliance with new and future recommendations from the CPUC via G.O. 112-E Safety Audits.

10. **{CA Public Utilities Code § 961(d) (10)}**

Ensure an adequately sized, qualified, and properly trained gas corporation workforce to carry out the Plan.

Federal Regulation 49 CFR Subpart N requires an Operator Qualification Plan. The OQ Plan requires ongoing training and periodic skills competency evaluation to provide that the requirements of a Qualified Pipeline Operator under this Sub-part N are met.

OME Review & Revision 605-A-1 and O&M Work Review 605-B-8 gives management opportunity to review size and qualifications of the workforce.

11. **{CA Public Utilities Code § 961(d) (11)}**

Include any additional matters that the CPUC determines should be included in the Plan.

New Regulatory matters and or issues are reviewed by management in a timely fashion and then communicated to staff. Any operational changes required are then developed and implemented see (OME Section “General”).

12. **{CA Public Utilities Code § 963(b) (3)} and § 961(c) & (e)**

Place safety of the public and employees as the top priority; take all reasonable and appropriate actions consistent with the principle of just and reasonable cost-based rates.

Employees are expected to work according to the guidelines for safety as put forth in all plans and manuals including the Employee Safety Manual. Employees participated in the Safety Plan development as well as all others. Periodic Staff meetings provide a forum where operations are actively discussed and revisions or changes are developed. See Integrity Management Plan OME Section 1005.

Safety concerns ( Safety Related Conditions/Reporting OME Section 605-D) that employees have for either themselves, fellow workers, customers or the public can be communicated either in the Staff meeting forum or privately without fear of reprisal from management see (DIMP Chapter “General”).

Industry Best Practices are adhered to during operations and training. PHMSA guidelines and other regulatory guidelines are reviewed and changes to operations are developed and implemented as appropriate. Employees and Administrator actively evaluate operations to strive for continuous improvement and achieve goal of running a safe reliable natural gas distribution company.

#### **D. APPLICABILITY, IMPLEMENTATION AND REVISION**

1. This Plan applies to all Company and contractor personnel who perform covered tasks. This includes, but is not limited to field employees, field supervision, and contractors.
2. ANG’s Plan will be effective upon CPUC approval. Implementation of the Plan is through application of reference documents which address all of the elements set forth in the regulation. Initial implementation will occur through specific overview training with all affected personnel identified in the Plan. Training will be documented in accordance with DOT and CPUC guidelines. Annual review of the Plan will involve Company management and affected covered employees. Each new employee will receive training on the purpose, scope and detailed policies and procedures contained in the ANG Plan.
3. The Plan references other existing Company policies, procedures, programs and

plans. These referenced documents are reviewed annually and updated as needed. The Plan will be reviewed annually in conjunction with these referenced documents. In addition, the Plan will be revised based upon changes to regulatory requirements, policies or procedural changes, editorial changes or as determined by the Company.

## II. PLAN PROVISIONS

<b>ANG Manual/Program/Plan</b>	<b>CA Public Utilities Code</b>	<b>R.11-02-019 Topic</b>
Operations Manual (OME) Employee Safety Manual(ESM)	<i>CA Public Utilities Code § 961(d)(1)-(9), § 963(b)(3)</i>	Safety Systems Emergency Response State and Federal Regulations Continuing Operations
Distribution Integrity Management Program (DIMP) & See OME 1005	<i>CA Public Utilities Code § 961(d)(1)(2)(9), § 963(b)(3)</i>	Safety Systems State and Federal Regulations Continuing Operations
Damage Prevention Program (DPP) See OME- Section 614	<i>CA Public Utilities Code § 961(c), (d)(1)(2)(9)</i>	Safety Systems State and Federal Regulations
Public Awareness Program (PAP) See OME- Section 616	<i>CA Public Utilities Code § 961(d)(1)(2)(5)(9)</i>	Safety Systems Emergency Response State and Federal Regulations
Emergency Plan (EPM) See OME- Section 615	<i>CA Public Utilities Code § 961(d)(2)(5)(6)(8)(9)</i>	Safety Systems Emergency Response State and Federal Regulations
Operator Qualification Plan (OQ)	<i>CA Public Utilities Code § 961(c),(d)(10)</i>	State and Federal Regulations Continuing Operations
Drug and Alcohol Plan (D&A)	<i>CA Public Utilities Code § 961(c),(d)(10)</i>	State and Federal Regulations Continuing

The ANG Safety Plan embodies the policies and procedures specified in ANG’s manuals, plans and programs listed above and references CA PUC code section to these plans in the Table. Additionally, the specific provisions of the Plan are cross referenced to the Alpine OME procedure number to illustrate compliance to each CA PUC Code section in the Table below:

<b><u>PUC Code Section</u></b>	<b><u>Operations, Maintenance and Emergencies (OME) Description</u></b>	<b><u>Procedure Section #</u></b>	<b><u>Additional Plans that address compliance</u></b>
<b>§ 961(b)(3)</b>	Integrity Management Plan Safety Related Conditions/Reporting	1005 General 605-D	Safety Plan, Employee Safety Manual (ESM) Operator Qualification Plan (OQ), Safety Injury Prevention Plan, Drug & Alcohol Plan
<b>§ 961(b)(4)</b>			Safety Plan ESM
<b>§ 961(c)</b>	Damage Prevention Plan	614-A&B	Safety Plan OQ Plan Drug & Alcohol Plan
<b>§ 961(d)(1)</b>	Customer Service Customer Service Odor & Leak Calls Leak Investigation	Appendices A1, A3 & E 605-B-11 615-A	DIMP QQ Plan

	Leak Test at Operating Pressure Leak Survey System Patrolling Public Awareness Plan Damage Prevention Plan Cathodic Protection Valve Maintenance Squeeze off Plastic Pipe Line Markers Continuing Surveillance Odorization Safety Related Conditions/Reporting Locating Underground Pipeline	503 723 721 616 614-A & 614-B 465, 455, 481,487-B, 475 & B 747, 747-B, 201 & 365 605-B 707 613 625 605-D 321-E & 614-C	
<b>§ 961(d)(2)</b>	System Summary Determination of Class Design-Constr. MAOP Construction, pre-tested pipe	General General 5 619-621 303	DIMP
<b>§ 961(d)(3)</b>	System Summary Regulator Station Maintenance Record Keeping	General 739A, 741, 509 & 201 709	DIMP
<b>§ 961(d)(4)</b>	Regulator Station Maintenance Valve Maintenance Leak Surveys Continuing Surveillance System Patrolling	739 A-C, 741, 465 747-B & 365 723 613 721	DIMP
<b>§ 961(d)(5)</b>	MAOP Excess Flow Valves System Summary	619-621 381-383 General	DIMP
<b>§ 961(d)(6)</b>	Damage Prevention Customer Service Joining of Threaded pipe Investigation of Failures	614-A&B 605-B-11 App. A1, A3 & E 273 617	DIMP
<b>§ 961(d)(7)</b>	Record Keeping Regulator Station Maintenance MAOP	709 739 A-C, 741, 465 619-621	DIMP
<b>§ 961(d)(8)</b>	Emergency Plan	615	DIMP
<b>§ 961(d)(9)</b>	Installation of Customer Meters Installation of P.E. Pipe Pipe Joining Procedures Tapping Pipelines under Pressure Repair of Damage Pipeline Prevention of Accidental Ignition System Patrolling Leak Test Pipe Squeeze off Pipeline Repair Public Awareness Plan Leak Survey Pipeline Locating	355, 357 & 359 319-21 281-285 627 703 751 721 503 605-B 605-B-1 616 723 321-E & 614-C	DIMP OQ Plan
<b>§ 961(d)(10)</b>	OME Review & Revision O&M Work Review General	605-A-1 605-B8	Safety Plan
<b>§ 961(d)(11)</b>	System Summary	General	DIMP
<b>§ 961(e)</b>	System Summary Integrity Management Plan Safety Related Conditions/Reporting	General 1005 General 605-D	ALL

## A. OPERATIONS MAINTENANCE AND EMERGENCIES (OME) MANUAL

1. ANG's Operations, Maintenance and Emergencies Manual (OME) contains policies and procedures for the operations and maintenance of the

Company's distribution system meeting or exceeding the minimum standards set forth in U.S. Department of Transportation regulation Title 49 CFR Part 192.

2. The Operations Manual contains procedures for leak surveys, leak detection, patrolling requirements, emergency response requirements, identification of abnormal and unusual operating conditions, corrosion control requirements, measurement and control requirements, design standards, and general operational standards for CG's distribution facilities.

### **OME 614-A, B & C DAMAGE PREVENTION PROGRAM**

"Call Before You Dig" USA North "811" call center along with a vigilant program to monitor all excavators is the key to prevent damage to underground distribution facilities. ANG has an aggressive program to monitor all excavations within its service territory and to continuously inform its customers to the dangers of excavating on their property without first utilizing USA North's one call system to request all utilities to line locate underground facilities prior to any excavation.

The Company is committed to designing, constructing, operating, and maintaining its pipelines in a manner that ensures long term safety and product reliability to the public, its customers, contractors, and employees. This includes minimizing service interruptions and negative impacts caused by excavation damage.

### **OME 616 PUBLIC AWARENESS PROGRAM**

The Company developed a Public Awareness Program to comply with the American Petroleum Institute (API) recommended practice RP1162. ANG's Public Awareness Program includes requirements from U.S. Department of Transportation regulation Title 49 CFR Parts 192.605, 192.614, 192.615, and 192.616 to enhance messages, methods, procedures, and documentation.

### **OME 615 EMERGENCY PLAN**

When any emergency arises that affects the normal, safe distribution of gas to customers, it is essential that a predetermined course of action and the means necessary to accomplish these actions be immediately taken to protect customers and their property, employees, contractors, first responders and the public in general. ANG's Emergency Response Plan describes the procedures and

policies for accomplishing these objectives. All personnel are trained, drilled, and critiqued on emergency preparedness in order to maintain effective and timely responses to natural gas related emergencies.

## **B. DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM**

The Company's Distribution Integrity Management Program (DIMP) is based on a risk based process that attempts to identify and prioritize the risks in order to insure the safety and integrity of ANG's distribution systems.

ANG acquired and uses a web based DIMP analysis program called SHRIMP. SHRIMP was developed by the American Public Gas Association predominately for small natural gas distribution entities.

## **C. OPERATOR QUALIFICATION PLAN**

The Operator Qualification (OQ) plan was developed and implemented to comply with U.S. Department of Transportation regulation Title 49 CFR Part 192, Subpart N ± Qualification of Pipeline Personnel. ANG's Operator Qualification plan identifies covered employees and defines covered tasks and the required qualifications for all work that meets the four-part test: (1) The activity is performed on a distribution facility, (2) The activity is an operations or maintenance task, (3) The activity is performed as a requirement of Title 49 CFR Part 192, and (4) The activity affects the operation or integrity of the pipeline. The Company administers the OQ plan for all approved contractors and Company employees that perform work for the Company on its distribution facilities.

## **D. EMPLOYEE SAFETY MANUAL**

The Company maintains a comprehensive employee safety program for covered employees. As part of the program, the Company has developed the Safety Policies and Procedures contained in the Employee Safety Manual (ESM), and has also developed a written Accident Prevention Program (IIPP). These publications outline the safety responsibilities of all employees, including general safety rules and specific safety requirements. All employees are encouraged to read them carefully, become familiar with them and strictly adhere to all safety rules and procedures that apply to their job.

In addition, the Company provides each employee with the proper tools and equipment to do their job safely, as well as personal protective equipment to use without hesitation. The employee safety program meets or exceeds the requirements for occupational safety regulatory compliance.

## **E. GAS PIPE FUSION MANUAL AND OTHER MATERIAL REFERENCE GUIDES**

1. Components of the Gas Pipe Fusion Manual and Reference Guide are included throughout the Operations Manual. This Manual serves as an appendix to ANG's Operations Manual.
2. The Company's Material Specifications denote the requirements that must be met for all natural gas carrying components utilized in ANG's distribution system. These specifications include the material; applicable standards (national, federal or other), terminology, materials and manufacturing standards, material performance requirements, dimensions and tolerances, inspection, certification, Material Safety Data Sheet (MSDS) information, product marking and labeling, packaging, stock classification descriptions, and approved manufacturers or product suppliers.

## **F. DRUG AND ALCOHOL PLAN**

The Company's Drug and Alcohol (D&A) Plan provides policies, procedures, and protocols for drug and alcohol testing of individuals who perform covered tasks including operations, maintenance, or emergency response functions on natural gas facilities. The Company retains an outside testing laboratory that conducts drug tests of all ANG's employees who perform covered tasks.

## **III. EMPLOYEE SAFETY AND WORK PROCESS**

Any employee or contractor who perceives a breach of safety requirements is authorized to stop work immediately and communicate the breach to their management. Additionally, employees are required to report immediately any regulatory violations, suspected regulatory violations, or potentially harmful or dangerous.

Management places Safety as top priority and will take all reasonable and appropriate actions consistent with the principle of just and reasonable cost-based rates see Safety Related Conditions/Reporting OME Section 605-D.

## **IV. PLAN REVIEW REQUIREMENTS**

This Plan will be distributed to all affected personnel via hard copy access. Personnel are encouraged to actively evaluate the effectiveness and provide feedback, where applicable, on all sections of the Plan as well as through regular manual, policy and procedure review processes. Management along

with OQ and Customer Service staff will conduct periodic plan review annually but not to exceed every 15 months.

**ALPINE'S ANNUAL SAFETY PLAN REVIEW**

Plan Year Reviewed \_\_\_\_\_

Date Reviewed \_\_\_\_\_

Were there any fires, earthquakes, explosions, floods or other natural or man-made disasters to report? Y/ N

Do the policies and procedures adequately address the elements of Alpine's Safety Plan: Y/ N

Were there any safety issues that affected the system, the public or employees that required review: Y/ N

If. Yes please describe: \_\_\_\_\_

How many safety issues or occurrences in the calendar year: \_\_\_\_\_

What was the total cost to remediate the safety issues \$ \_\_\_\_\_

Does the Administrator determine that the size of the staff is/was adequate: Y/ N

Are there training issues to address? Y/ N

Is it determined that meaningful ongoing employee participation was provided? Y/ N

Notes, comments or suggested revisions:

---

---

---

---

Reviewed by:

_____ Name	_____ Initials	_____ Name	_____ Initials
_____ Name	_____ Initials	_____ Name	_____ Initials
_____ Name	_____ Initials	_____ Name	_____ Initials
_____ Name	_____ Initials	_____ Name	_____ Initials

**PUBLIC UTILITIES COMMISSION**

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



June 27, 2013

Subject: Filing of Gas Safety Plans

Dear Mr. Lamond,

The Safety and Enforcement Division, Gas Safety and Reliability Branch (GSRB) has reviewed the revisions made to Alpine Natural Gas Operating Company's (ANG) 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 ANG may now file its revised Safety Plan. 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
-----------------	-------------	---	--	---	--

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](mailto:aimee.cauguiran@cpuc.ca.gov)).

Sincerely,

Michael Robertson, Program Manager  
Gas Safety and Reliability Branch

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
<u>Sec. 961</u> <u>Subdivision</u> <u>(b)</u>					
-3	Each gas corporation shall implement its approved plan	N	The person listed in ANG's plan did not sign.	I.B.1.a & I.A. & I.C.12	ANG's Safety Plan was prepared in order to comply with the CPUC requirements as set forth in R.11-02-09 and mandates of Senate bill (SB) 705 as codified in the CPUC Code Sections 961 and 963. a.) The company shall implement and utilize its plan upon CPUC approval. A signature line was added.
-4	The commission shall require each gas corporation to periodically review and update the plan	N	The safety plan did not specify how often it will be reviewed and updated.	I.B.1.b	The company shall periodically review and update the plan. Added Alpine will review and or revise the plan the plan annually not to exceed 15 months.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
<a href="#">Sec. 961 Subdivision (c)</a>	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.	N	Safety Plan did not provide details on the specific process(es).	I.B.1.c	The Plan shall be consistent with federal pipeline safety statutes as set forth in Chapter 601 of Subtitle VIII of Title 49 of the United States Code and the regulations and the best practices in the natural gas industry. DOT CFR 49 changes PHMSA Bulletins are received and reviewed by the COO for the purpose of updating where appropriate this safety plan.
<a href="#">Sec. 961 Subdivision (d)</a>		Y	No issue identified at this time	I.D.3	The plan will be revised based upon changes to regulatory requirements, policies or procedural changes, editorial changes or as determined by the company

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
-1	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.	<b>N</b>	The safety plan did not specify or reference the processes and procedures.	I.C.1	Specifies the specific OME section and discusses the process as to how the PU code is addressed.
-2	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.	<b>N</b>	The safety plan did not specify the processes and procedures.	I.C.2	Specifies the specific OME section and discusses the process as to how the PU code is addressed.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
-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.	N	The safety plan did not describe the process for monitoring to provide the adequate pressure and capacity.	I.C.3	Specifies the specific OME section and discusses the process as to how the PU code is addressed.
-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 specify or reference the processes and procedures.	I.C.4	Specifies the specific OME section and discusses the process as to how the PU code is addressed.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
-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 describe the process, and specific section of the referenced plans were not stated.	I.C.5 . And II	Specifies the specific OME section and discusses the process as to how the PU code is addressed.
-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 address disconnection, reconnection, and pilot-lighting procedures. Also, the plan did not describe the processes and specific sections of the referenced plans were not stated.	I.C.6	Specifies the specific OME section and discusses the process as to how the PU code is addressed.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this PU Code Section	Summary of the Revised Safety Plan that addresses this PU Code Section
-7	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.	N	The safety plan did not address all necessary documentation affecting the calculation of maximum allowable operating pressures. Also, the plan did not describe the processes for confirming and establishing the MAOP and specific sections of the referenced plans were not stated.	I.C.7	Specifies the specific OME section and discusses the process as to how the PU code is addressed. Alpine's distribution system is controlled by a single regulator station. The only steel in the system is in the Regulator Station and the two feet of steel pipe where it exits the underground vault. Under Federal Regulation 49 CFR § 192 the MAOP was designed at 60 psig. All main line pipe downstream, approximately 34 miles, is of Polyethylene Pipe (P.E.). The largest main is 6" in diameter. Alpine's normal operating pressure of the distribution system is currently 45 psig.
-8	Prepare for, or minimize damage from, and respond to, earthquakes and other major events.	N	The safety plan did not describe the process and specific section of the referenced plans were not stated.	I.C.8	Specifies the specific OME section and discusses the process as to how the PU code is addressed. Key components of the Emergency Plan are listed.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this 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 ANG safety plan did not provide a signed statement from a company officer regarding how the operator ensures it meets this requirement.	I.C.9	The DIMP plan addressed the design and ongoing monitoring of the distribution system the following OME Sections pertain to compliance with this regulation: Specifies the specific OME section and discusses the process as to how the PU code is addressed.
-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 ANG safety plan did not provide a signed statement from a company officer regarding how the operator ensures the adequacy of its workforce nor did the safety plan provide any processes or procedures for meeting this requirement.	I.C.10	Specifies the specific OME section and discusses the process as to how the PU code is addressed. OME Review & Revision 605-A-1 and O&M Work Review 605-B-8 gives management opportunity to review size and qualifications of the workforce.

PU Code Section	Requirement	GEC's Initial Review of Safety Plan if it complies with this section of the PU Code (Y or N)	GSRB Reviewer's Comments to support the "No" conclusions of his/her review	Specific area of Alpine Natural Gas' (ANG) Safety Plan that addresses this 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	I.C.11	Specifies the specific OME section and discusses the process as to how the PU code is addressed. OME Review & Revision 605-A-1 and O&M Work Review 605-B-8 gives management opportunity to review size and qualifications of the workforce. New Regulatory matters and or issues are reviewed by management in a timely fashion and then communicated to staff. Any operational changes required are then developed and implemented see (OME Section "General").
<u>Section 961</u> <u>Subdivision</u> <u>(e)</u>	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	ANG's Safety Plan did not provide any processes or procedures for complying with this requirement.	I.C.12	Employees participated in the Safety Plan development. Periodic Staff meetings provide a forum where operations are actively discussed and revisions or changes are developed. See Integrity Management Plan OME Section 1005.

# **Alpine Natural Gas**

## Appendix A

### Operations Maintenance and Emergencies Plan



**ALPINE NATURAL GAS OPERATING  
COMPANY NO. ONE, LLC**

**OPERATIONS  
MAINTENANCE AND EMERGENCIES  
MANUAL**

**Effective Date  
July 15, 2004**

**Revision Date  
April 21, 2013**



**ALPINE NATURAL GAS OPERATING  
COMPANY NO. ONE, LLC**

**OPERATIONS  
MAINTENANCE AND EMERGENCIES  
MANUAL**

**Effective Date  
July 15, 2004**

**Revision Date  
April 21, 2013**

TABLE OF CONTENTS

**GENERAL**

**System Map ..... 1**  
**General ..... 1**  
**Customer Service ..... 2**  
**Determination of Class Location ..... 3**  
**OME Manual Review/Revision ..... 4**  
**OME Work Review- Covered Task Evaluation ..... 5**  
**Safety-Related Conditions/Reporting ..... 6**  
**Customer Owned Service Line Notification ..... 8**

**DESIGN/CONSTRUCTION**

**Maximum Allowable Operating Pressure (MAOP) ..... 9**  
**Pretested Pipe ..... 10**  
**Construction ..... 11**  
**Back filling a Trench ..... 13**  
**Install a Tracer Wire ..... 15**  
**Installation of P.E. Pipe in a Trench ..... 16**  
**Installation of P.E. Pipe in a Bore ..... 17**  
**Installation and Maintenance of Casing ..... 19**

**NORMAL OPERATIONS**

**Installation of Customer Meter & Regs.-Residential & sm. Commercial .. 21**  
**Facility Leak Test Requirements ..... 24**  
**Excess Flow Valves ..... 25**  
**Locating/Marking Underground Pipeline ..... 26**  
**Avail. of Construction Records, Maps & Op. History to Personnel ..... 28**  
**Startup-Shutdown-Purging ..... 29**  
**Excavation Safety ..... 31**  
**Damage Prevention Plan ..... 32**  
**Damage Prevention Inspection during Third Party Excavation ..... 34**  
**Public Awareness ..... 36**  
**Customer Service-Odor & Leak Calls ..... 42**  
**Leak Investigation-Inside Gas Leak ..... 45**  
**Closing Valve at Service Riser ..... 48**  
**Leak Test at Operating Pressure ..... 49**

TABLE OF CONTENTS

Joining of Pipe-Threaded Joint..... 50

Manually Opening and Closing Valves ..... 51

Purging with Air or inert Gas..... 53

Squeeze off Plastic Pipe..... 57

Pressure Test-Non liquids Medium-MAOP less than 100 psig..... 59

**MAINTENANCE**

Walking Gas Leakage Survey..... 61

System Patrolling ..... 64

Leakage Surveys ..... 65

Record Keeping ..... 69

Line Markers ..... 68

General Pipeline Repair ..... 70

Plastic Pipe Fusion and Pipe Joining..... 77

Testing for Service Line Reinstatement ..... 81

Abandonment of Pipeline Facilities ..... 82

Regulator Station Op, Maintenance & Inspection ..... 83

Valve Inspection and Maintenance ..... 93

Manual Valve Operation-Regulator By-Pass or Monitor Flow, Press.....94

Valve (Main) Corrective Maintenance..... 96

Repair of Damaged Pipeline Facilities..... 98

Prevention of Accidental Ignition ..... 100

Tapping Pipelines under Pressure ..... 102

Continuing Surveillance..... 103

Odorization ..... 105

Investigation of Failures ..... 108

**CORROSION CONTROL**

External Corrosion Control – Monitoring (Pipe to Soil)..... 110

Installation of Exothermic Electrical Connections..... 112

Atmospheric Corrosion Inspection ..... 114

Remedial Action for Atmospheric Corrosion ..... 115

Remedial Action for General Corrosion ..... 116

Remedial Action for Localized Corrosion ..... 117

Visual Inspection for Internal Corrosion..... 118

Measurement for Internal Corrosion ..... 119

## TABLE OF CONTENTS

<b>EMERGENCY RESPONSE PLAN</b>	
Emergency Plan .....	121
<b>INTEGRITY MANAGEMENT PLAN</b>	
Integrity Management Plan .....	130
<b>OEM FORMS</b> .....	131

### APPENDICES

Appendix A-1	Customer Information Sheet (2pgs)
Appendix A-2	Application for Service
Appendix A-3	New Customer Packet: “If You Ever Smell Gas” (2pgs)
Appendix A-4	Work Order-New Installation Assessments for Service Line
Appendix A-5	Not forsaking safety for Profit Statement
Appendix A-6	Pre Project Meeting & Checklist
Appendix B-1	Customer Service Report
Appendix B-2	Gas Leak Report
Appendix B-3	New Meter Read Form
Appendix B-4	Final Meter Read Form
Appendix B-5	Meter Change Form
Appendix B-6	New Meter Set: Shut-In Test Form
Appendix B-7	Request to remediate pipe leak on customer owned pipe
Appendix C-1	Excavator Notification – Damage Prevention Plan
Appendix C-2	Excavator Notification List
Appendix D-1	Sample Contractor (Leak Survey):OQ Plan & Covered Tasks
Appendix D-2	ANG Business District Leak survey maps
Appendix D-3	ANG Gas Leakage Survey Record
Appendix D-4	Business (HCA) District
Appendix E	Customer Owned Service Lines Notification
Appendix F	Emergency Equipment List
Appendix G	Reference Guide for Pipe Joining of Polyethylene (PE) Pipe
Appendix H	Tinker & Razor Model CPV-4 Voltmeter Product Instructions
Appendix I	Regulator Station Test Documents October 2009.
Appendix J	Property Map– Line Installation, Construction Detail
Appendix K	Door Hanger “Red Tag” Notice for Meter Shutoff
Appendix L	Operator Qualification Plan, Table of Contents
Appendix M-1	CPUC Appendix B, Report of Gas Leak, If Required.
Appendix M-2	CPUC Quarterly Excel Spreadsheet for Gas Leak Reporting
Appendix N-1	Public Awareness Plan (PAP) semiannual customer letter
Appendix N-2	Public Awareness Plan (PAP) annual non-customers
Appendix N-3	USA-North, 5Steps to Safe Excavation

## TABLE OF CONTENTS

<b>Appendix O</b>	<b>Master Main and Service Line installation List</b>
<b>Appendix P</b>	<b>Valve Maintenance Book</b>
<b>Appendix Q</b>	<b>ANG OQ Plan, List of Covered Task (C.T. #'s)</b>
<b>Appendix R-1</b>	<b>INTEGRITY MANAGEMENT PLAN</b>
<b>Appendix R-2</b>	<b>MAIN PIPE INSTALLATION LOG</b>
<b>Appendix R-3</b>	<b>SERVICE LINE INSTALLATION LOG</b>
<b>Appendix R-4</b>	<b>MECHANICAL FITTING FAILURE LOG</b>
<b>Appendix R-5</b>	<b>ANNUAL LOG FOR PERFORMANCE MEASUREMENT DATA</b>
<b>Appendix R-6</b>	<b>IM PLAN RE-EVALUATION LOG</b>
<b>Appendix S</b>	<b>BI-MONTHLY TAILGATE SAFETY MEETING LOG</b>
<b>Appendix T-1</b>	<b>INJURY REPORT</b>
<b>Appendix T-2</b>	<b>EXTRAORDINARY EVENT FORM</b>
<b>Appendix U</b>	<b>EQUIPMENT MAINTENANCE CALIBRATION LOG</b>
<b>Appendix V</b>	<b>Cu-COPPER SULPHATE REF ELECTRODE CALIBRATION</b>
<b>Appendix W</b>	<b>MAIN LINE PIPE INSTALLATION CONSTRUCTION NOTES</b>

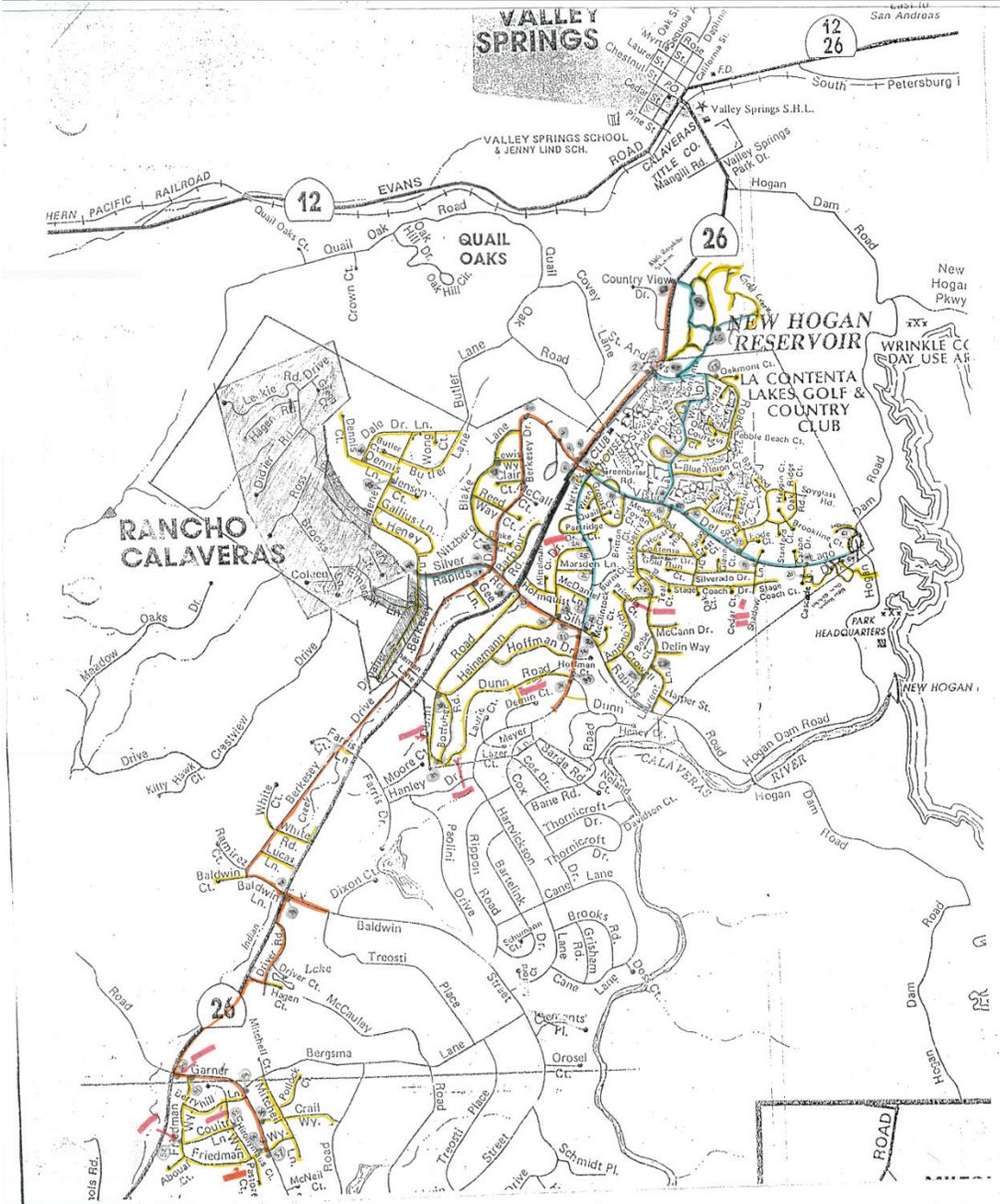


ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

General	Approval; Date: 07/15/04
Revision date: 12/28/12	12/15/10

## System Plats/Maps



### Legend

2 inch line	
Blue	4 inch line
Orange	6 inch line
Pink	Valve



# Procedural Manual for Operations, Maintenance and Emergencies

<b>General</b>	Approval; Date: 07/15/04
Revision date: 12/28/12	12/15/10

## ALPINE NATURAL GAS

### SCOPE AND PURPOSE

This Operations, Maintenance and Emergencies, (OME), Manual represents the general policy and intent of Alpine Natural Gas for compliance with the requirements of minimum Federal Pipeline Safety Regulations, 49 CFR, Parts 191 and 192.

Our #1 goal at Alpine Natural Gas is to run a safe reliable natural gas distribution system, for the public, its customers and employees. To ensure the reliable transportation of natural gas capacity and pressure within the system design specifications.

This OME in concert with Alpine's other reference manuals including but not limited to Alpines OME Appendices, Distribution Integrity Management Program, Operator Qualification Plan, Safety Plan, Injury Prevention Program, Gas Pipe Fusion Manual and Drug and Alcohol Plan constitute the requisite documentation for the company to operate within Federal and State Regulations pipeline distribution system with safety and system threat management as its number one goal.

### RESPONSIBILITY

Alpine Natural Gas COO is the System Administrator and is responsible for the ongoing monitoring of the distribution systems delivery of natural gas. The System Administrator is also charged with keeping this manual at all locations where Operations, Maintenance and Emergencies activities are conducted and the periodic review of this and all associated manuals.

### SYSTEM DESCRIPTION

The Alpine Natural Gas distribution system is composed of US Poly (formerly Upon or®) PE 2406 Medium Density polyethylene, as follows:

<u>Polyethylene Length</u>	<u>Diameter</u>	<u>SDR</u>
13 miles	3/4 inch	11.5
23 miles	2 inch	11.5
3 miles	4 inch	11.5
6 miles	6 inch	11.5

There is approximately 28 feet of 2 inch and 2 feet of 4 inch schedule 40 Grade B steel distribution piping associated with the district regulator station that is cathodically protected by a seventeen pound, (17 lb.), magnesium anode.

The polyethylene piping is installed with AWG solid copper conductor Tracer wire (gauge ranging from #10-14) with a 30-mil polyethylene coating, to facilitate locating.

All distribution piping is leak tested to a pressure of 95 psig.

There are approximately 68 polyethylene ball style distribution emergency valves, as follows:

<u>Valve Diameter</u>	<u># of Valves</u>
2 inch	42
4 inch	14
6 inch	14

These valves are boxed to ground level for ease of access and operation and are indicated on system plats/maps.

Steel ball valves inside the district regulator station can also be accessed for emergency shutdown of the entire distribution system or bypassing the district regulator station.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

General-Customer Service	Approval; Date: 07/15/04
Revision date: 12/28/12	12/15/10

## Customer Service

### SCOPE AND PURPOSE

Alpine endeavors to efficiently, accurately and conveniently provide necessary information and documents to all new customers' for service. A New Customer can be for either an existing service meter or to new construction or service line installation. Alpine welcomes all new applicants for service within Alpines distribution system.

Upon acceptance as a new customer each applicant will be assigned by Alpine's office personnel a unique customer account number, a permanent file and be entered into the electronic database and billing system.

### RESPONSIBILITY

The COO is the System Administrator and is charged with the responsibility to insure current customer service and billing administration policies are current and followed for all customer accounts.

### INSTRUCTIONS

All potential Alpine Natural Gas customers will receive a Customer Information Sheet along with an Application for Service form, prior to connection to the Alpine Natural Gas distribution system, (Appendix A-1 and A-2, respectively).

Depending on the particular situation various other customer service forms will also require distribution and or completion.

An Alpine Natural Gas (Appendix A-4), "Service Line Installation" will be completed where a new service line is requested by a customer or contractor.

Active Customers will receive periodic communications including information

mailings about Natural Gas Safety, Public Awareness and Damage Prevention.

In addition, other information Alpine deems appropriate will be communicated to customers from time to time regarding buried pipelines and meter sets.

Customer Service will also provide prompt handling of all gas leak reports to ensure the Effective response to a notice of each type of emergency as in 49 CFR § 192.615(a) (3) (i-iv) including gas detected inside or near a building, fire, explosion or a natural disaster.

<u>Form Title</u>	<u>Appendix</u>
Customer Information Sheet	A-1
Application for Service	A-2
"If You Ever Smell Gas"	A-3
Service Line Installation	A-4
Customer Service Report	B-1
Gas Leak Report	B-2
New Meter Read Form	B-3
Meter Change Form	B-4
Final Meter Read Form	B-5
Meter Shut-Off Tag	K
Work Order	A-4

### RELATED PROCEDURES

- Investigation of Gas Leaks
- 615 Emergency Plan
- 723 Leakage Survey, Leak Grading
- 605 B-1 General Pipeline Repair
- 605 D Safety Related Conditions Report
- 709 Record Keeping



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

General 5	Approval; Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

## Determination of Class Location

---

### SCOPE AND PURPOSE

The purpose of this procedure is to establish Class location according to 49 CFR § 192.5.

### RESPONSIBILITY

The System Administrator is responsible for conducting any necessary study to determine a change in class location.

### DETERMINATION

It has been determined that the distribution facility is located in a Class 3 area.

### RELATED PROCEDURES

619-621 MAOP



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

General 605-A1	Approval; Date: 07/15/04
Revision date: 07/15/04	12/15/10

## OME Manual Review/Revision

### SCOPE AND PURPOSE

This procedure is to ensure that Alpine Natural Gas has developed and maintains a manual of written procedures for conducting normal Operations, Maintenance and Emergencies activities as well as handling of emergencies as required by 49 CFR § 192.605(a).

This manual includes the following provisions:

1. Construction records, maps and operating history made available to appropriate personnel for safe operation and maintenance.
2. Provisions for gathering of data Necessary for the reporting of accidents in a timely and effective manner.
3. Provisions for operations, maintenance and pipeline repair.
4. Assessment of pipeline location areas that would require immediate operator response in case of failure/malfunction in order to protect the public.
5. Analysis of pipeline failures.
6. Minimization of potential for hazards during pipeline failure/malfunction.
7. Controlling Corrosion.
8. Pipeline startup and shut down procedures.
9. Attended monitoring during startup operations.
10. Abandonment of pipeline segments.
11. Procedures for minimization of accidental Ignition of gas.
12. Establishment and maintenance of a liaison with Police, Fire and other emergency response officials.
13. Operator personnel work review in order to assess the effectiveness of Operations, Maintenance and Emergencies procedures.
14. Adequate trench safety precautions for personnel.
15. Emergency condition procedures.
16. Safety-related condition reporting Requirements.
17. Periodic inspection and testing of pressure limiting equipment.

### RESPONSIBILITY

The System Administrator is responsible for keeping this manual at all locations where Operations, Maintenance and Emergencies activities are conducted as well as performing a review of the provisions of this manual, and making appropriate revisions as deemed necessary, at the required intervals.

### INSTRUCTIONS

#### Operator Qualification

This is not a covered task under the Operator Qualification Plan.

#### Review Frequency

This manual is to be reviewed and revised, as deemed necessary, by the System Administrator at an interval not exceeding 15 months, but at least once each calendar year. This review/revision effort will be recorded on Form 605-A1.

#### Review Steps

Any and all necessary procedural revisions will be made at the earliest opportunity.

### REPORTING/NOTIFICATION

All manual revisions that effect operations, maintenance and emergency response procedures are to be communicated to all appropriate personnel at the earliest opportunity.

### RELATED PROCEDURES

All operations, maintenance and emergency response requirements.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

General 605-B8	Approval Date: 07/15/04
Revision date 12/31/12	07/15/09

## OME Work Review –Covered Task Evaluation

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure that all pipeline Operations, Maintenance and Emergencies work performed on Alpine Natural Gas facilities is periodically reviewed for effectiveness and adequacy as required under 49 CFR § 192.605 (b) (8) and 49 CFR § 192.805.

### RESPONSIBILITY

The System Administrator is responsible for periodic review of Operations, Maintenance and Emergencies work performed by personnel on the pipeline and that Operations & Maintenance procedures are appropriately identified as Covered Tasks.

### PERSONNEL SAFETY

Personnel safety records must be used as part of the review process in order to assess the effectiveness of work performance.

### EQUIPMENT AND MATERIALS

No special equipment or materials are required.

### OPERATOR QUALIFICATION

This activity is not a covered task under the Operator Qualification Plan. See OQ Plan for specific requirements for identification and evaluation of Covered Tasks.

### INSTRUCTIONS

O & M procedures identified as Covered Tasks are evaluated.

### Inspection Frequency

All pipeline Operations, Maintenance and Emergencies work must be reviewed for effectiveness and adequacy once each calendar year, but at an interval not exceeding 15 months. This review should be coincidental with the annual review of the OME Manual.

### REPORTING/NOTIFICATION

Each OME Work Review shall be documented by the System Administrator on Form 605-B8.

Any changes or revisions to Covered Tasks will be revised in the OQ Plan.

### RELATED PROCEDURES

605-A-1 OME Manual Work Review/Revision App.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

General 605-D	Approval Date: 07/15/04
Revision date: 12//31/12	07/15/04

## Safety-Related Conditions/Reporting

### SCOPE AND PURPOSE

This procedure describes how to identify and report any known hazardous conditions that may exist, acquaint appropriate operating and maintenance employee's with the procedures, establish a continuing educational program to enable employees to recognize and report any condition that may represent a hazardous condition with particular attention given to highway and railway crossings and buildings intended for human occupancy or outdoor places of assembly that are in close proximity to gas facilities. This procedure complies with 49 CFR § 192.605(d) requirements.

### RESPONSIBILITY

All Alpine Natural Gas personnel.

### PERSONNEL SAFETY

There are no special personnel safety issues associated with this procedure.

### EQUIPMENT AND MATERIALS

No special equipment or materials are required.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan

#### Frequency

Recognizing and reporting safety-related conditions is an ongoing requirement.

#### Steps

In general, any condition that, if not corrected, might constitute an imminent hazard or may potentially cause an accident may be considered a Safety-Related Condition and shall be reported promptly to the System Administrator for investigation.

Upon verification, the following conditions would require reporting unless exempted by the regulations. Operating and maintenance personnel should continually be alert to observe any of the following Safety-Related Conditions:

1. General corrosion that has reduced the wall thickness to less than that required for the maximum allowable operating pressure, and localized corrosion pitting to a degree where leakage might result.
2. Unintended movement or abnormal loading of a pipeline by environmental causes, such as an earthquake, landslide, or flood that impairs serviceability.
3. Any material defect or physical damage that impairs the serviceability of a pipeline.
4. Any malfunction or operating error that causes the pressure of a pipeline to rise above 110 percent of its maximum allowable operating pressure (MAOP).
5. A leak in a pipeline that constitutes an emergency (Grade 1).
6. Any Safety-Related Condition that could lead to an imminent hazard and causes (either directly or indirectly by remedial action of the operator) a 20 percent, (20%), or more reduction in operating pressure or shutdown of a pipeline.

### REPORTING/NOTIFICATION

A written Safety-Related Condition report must be filed, by the System Administrator, with DOT and the CPUC unless the condition:

1. Is more than 220 yards from any building intended for human occupancy or outdoor place of assembly, except that reports are required for conditions within the right-of-way of an active railroad, paved road, street, or highway.



# Procedural Manual for Operations, Maintenance and Emergencies

General 605-D	Approval Date: 07/15/04
Revision date: 12//31/12	07/15/04

**ALPINE NATURAL GAS**

## **Safety-Related Conditions/Reporting**

---

2. Is a master meter system or customer owned service line.
3. Is corrected by repair or replacement within five, (5), working days of determination, except that, reports are required for all conditions under condition 1. Of this procedure other than localized corrosion pitting on an effectively coated and cathodically protected pipeline.

A detailed written report should be completed by the System Administrator and submitted to DOT-OPS and CPUC within 5 working days after it is determined that a safety-related condition exists, but in no case later than 10 working days after the condition is first brought to the attention of the operator. Reports should include information listed on Form 615-3 and can also be submitted using telephonic media, including the facsimile number listed on Form 615-3.

### **RELATED PROCEDURES**

615 Emergency Plan

617 Investigation of Failures



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>General 16</b>	Approval Date: 07/15/04
Revision date: 07/15/04	Supersedes: None

## Customer Owned Service Line Notification

### SCOPE AND PURPOSE

This purpose of this procedure is to establish a notification system advising Alpine Natural Gas distribution system customers of their responsibility to maintain customer owned service lines downstream of operator gas meters. This procedure complies with 49 CFR § 192.16.

### RESPONSIBILITY

The System Administrator is responsible for proper notification of customer owned service line maintenance requirements to gas customers.

### PERSONNEL SAFETY

There are no special personnel safety issues associated with this procedure.

### EQUIPMENT AND MATERIALS

Written customer notification.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan

#### Required Notification

Each gas customer shall be notified of these customer maintenance requirements upon application of service and every three, (3) years using the written notification Form. The delivery of these is noted on Form 616 PAP Record.

Alpine Natural Gas does not perform corrosion monitoring efforts under 49 CFR § 192.465 of customer owned buried piping that is metallic. If, during a Leakage survey under 49 CFR § 192.723 a leak is found then.

The gas service will be shutoff and “red tagged”, the customer will be notified of unsafe

condition and need to repair prior to gas service (Appendix K).

The written notification, (Appendix E), shall contain the following information:

1. Alpine does not maintain the customers buried piping.
2. If required maintenance is not maintained, the facility may be subject to the potential hazards of corrosion and leakage.
3. Customer owned buried piping should be periodically inspected for leakage, corrosion if metallic, and properly repaired should any unsafe condition be discovered.
4. Call 811 before you dig. All buried piping should be located 2 days prior to excavation.
5. Alpine Natural Gas upon request will provide customers with a list of plumbing and heating contractors that can properly locate, repair/replace customer owned service lines.

### RELATED PROCEDURES

- 303 Construction
- 723 Leak Surveys
- 709 Record Keeping



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Design/Constr. 619-21	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 10/15/2009

## Maximum Allowable Operating Pressure (MAOP)

### SCOPE AND PURPOSE

This procedure establishes the Maximum Allowable Operating Pressure (MAOP) is appropriate for the distribution piping system design. Procedures are in place for the safe operation at the MAOP established including protection from over pressure. This procedure complies with 49 CFR § 192.619 and 621 requirements.

### RESPONSIBILITY

The System Administrator shall maintain evidence of MAOP establishment and maintain records for periodic pressure testing to ensure safe reliable pressure regulation.

### EQUIPMENT AND MATERIALS

Leak test records.  
Pressure Recording

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan

The gas distribution system MAOP has been established at 60 psig under 49 CFR § 192.619 (a) (2) (i).

Normal operating pressure for the distribution system is currently 45 psig.

The distribution system service regulators have an emergency inlet pressure rating of 125 psig.

All repair, renewal and extension piping facilities will have a 60 psig MAOP established under 49 CFR § 192.619 (a) (2) (i) according to 503 Facility Leak Test Requirements.

### RELATED PROCEDURES

- Pretested Pipe
- 5 Determination of Class Location
- 503 Facility Leak Test Requirements
- 605-B5 Startup-Shutdown-Purging
- 709 Record Keeping
- 725 Testing for Reinstatement of Service Lines
- 739 Regulator Stations



# Procedural Manual for Operations, Maintenance and Emergencies

Design/Constr.	Approval Date: 07/15/04
Revision date: 12/29/12	Supersedes: 12/12/10

**ALPINE NATURAL GAS**

## Pretested Pipe

### SCOPE AND PURPOSE

Alpine Natural Gas will, pre-construction, leak test and store all pipe that is to be used for emergency repair purposes.

Installation on system during construction is tested at same pressure and duration as listed in table below.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all pre-construction leak tests are accomplished according to the provision contained herein.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing pre-construction leak tests.

### EQUIPMENT AND MATERIALS

- Compressed air supply
- Calibrated pressure gauge
- Leak indicating solution
- Paper Test Tag

### OPERATOR QUALIFICATION

This activity is not a covered task under the Operator Qualification Plan.

### INSTRUCTIONS

A minimum of twenty feet (20 ft.) of the following pipe types and sizes will pre-construction leak tested to be used for emergency repair of plastic (P.E.) facilities.

#### Type

Polyethylene pipe

<u>Diameter</u>	<u>Test Pressure</u>	<u>Duration</u>
¾ inch	95psig	>1 Hour
2 inch	95psig	>1 Hour
4 inch	95psig	>1 Hour
6 inch	95psig	>1 Hour

The leak test pressure for Pre Tested Pipe will not be less than 95 psig applied for a minimum of one (1) hour.

ANG will derate this leak test value by approximately 37 percent, (37%), in order to support the 60 psig system MAOP.

NOTE: ANG has 28 feet of Schedule 40 Grade B Steel pipe in its regulator station vault, in the unlikely event replacement is required the pipe used will be pretested prior to installation by certified welder performing steel pipe replacement in the manner below:

#### Schedule 40 Grade B Steel pipe

2 inch	100 psig	>1 Hour
4 inch	100 psig	>1 Hour

All pretested pipe will be tagged with the following information:

- Date of Test
- Pipe Size/Type
- Test Medium
- Test Duration
- Location of test
- Test Pressure
- Name of Employee Performing Test

### REPORTING/NOTIFICATION

A paper test tag will be used to record all required test data. This tag will remain affixed to the subject pipe until used in its entirety. All pre-construction tested pipe used in the transmission and distribution portions of the operating system will be noted on appropriate system plats/maps.

### RELATED PROCEDURES

503 Facility Leak Test Requirements



# Procedural Manual for Operations, Maintenance and Emergencies

Design/Constr. 303	Approval Date: 08/25/06
Revision date: 3/21/12	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

## Construction

### SCOPE AND PURPOSE

All new construction will be performed by individuals in a manner that adheres to the applicable sections of this Manual, Safety Plan and to the OQ Plan of Alpine Natural Gas.

This procedure is to comply with 192 subpart G

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all construction practices are accomplished according system specifications and capability, specifically to the provisions contained herein.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing construction work and at all times minimize hazards including wearing a reflective safety vest and a safety helmet when working around mechanized equipment.

### EQUIPMENT AND MATERIALS

All construction will be performed using proper equipment/tools, warning signs and barricades.

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced.

### INSTRUCTIONS

#### Steps

Each length of pipe and each pipeline component will be visually inspected at the site of installation to ensure that it has not sustained damage that could impair serviceability.

All segments of buried distribution mains will have an effective cover thirty-six inches, (36”).

All segments of buried distribution service line will have an effective cover eighteen inches, (18”).

Proper backfill, padding and compaction practices shall be adhered to at all times.

All gas facilities installed by Alpine Natural Gas shall have a minimum of twelve inches, (12”), of vertical separation when possible or proper protection from other buried structures.

Operator Qualified personnel will install appropriately sized ASTM D 2513 P.E. pipe on the pipeline system.

All plastic gas facilities shall be protected from thermal damage that may impair serviceability.

All plastic gas facilities shall be installed with a (gauge range #10-14) AWG polyethylene coated tracer wire placed above the pipe in order to facilitate locating. Contact with the pipe P.E. pipe must be minimized and never wrapped around pipe.

Anodes will be thermally welded to all buried steel facilities. Anode type will be magnesium at a size applicable to the system/segment application. Test leads will not be applied in close proximity to anode connection points.

Anode less service risers are excluded from Cathodic protection requirements.

All new pipe segments installed will be Pressure Tested according to construction procedure 503.

Casings will be used where P.E. pipe is to travel under a highway, railway or another location determined by operator.



# Procedural Manual for Operations, Maintenance and Emergencies

Design/Constr. 303	Approval Date: 08/25/06
Revision date: 3/21/12	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

**Construction**

## REPORTING/NOTIFICATION

Personnel performing construction functions on the pipeline must obtain pertinent maps and records whenever necessary to ensure safety.

All construction records will be documented and maintained at the operations headquarters. (Construction Binders for Service Line Installation or P.E. Main Line Installation (containing project; Maps, Drawings, Pressure Test and Notes).

All plats/maps will be updated regarding newly constructed facilities. Such records will be retained for the useful life of the facility.

## RELATED PROCEDURES

- 605-B1 General Pipeline Repair
- 614 Damage Prevention
- 503 Facility Leak Test Requirements
- 319-21 Installing P.E. in a Trench
- 321 Installing P.E. in a Bore
- 283-285 P.E. Fusion Pipe Joining Procedures
- 323 Casing

All other Operations, Maintenance and Emergencies Procedures performed in excavated trenches.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Construction 319-B	Approval Date: 08/25/06
Revision date: 3/21/12	Supersedes: 08/25/06

## Backfilling a Trench (Ditch)

### SCOPE AND PURPOSE

This procedure is to ensure that backfill material is selected and placed in a manner that provides firm support for the pipe and that the pipe and pipe coating is not damaged during the backfill process. It describes practices required to comply with §192.319.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that backfilling a ditch is performed as described in this procedure.

### PERSONNEL SAFETY

Ensure that the work zone/area is setup to protect the public from danger

Ensure that all applicable safety equipment is being utilized as per company policy

### EQUIPMENT AND MATERIALS

- Mechanized equipment
- Sand and or debris free dirt
- Routine tools
- Other equipment and materials as needed

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced.

### INSTRUCTIONS

#### General

- Verify that the bottom of the excavation is free of rocks or other debris that may cause damage to the pipeline. If necessary:
  - Pad the bottom of the excavation with clean debris-free soil or sand.

#### Backfilling

- Prior to backfilling, verify that the pipe is adequately supported by a bed of sand so

as to minimize stresses and to protect the pipe coating from damage.

- The backfilling operation should be accomplished by “layering” the soil in “lifts” (Adding incremental amounts of backfill material and compacting as needed) of approximately 8-10 inches.
- Using a layer of suitable backfill material (dirt or sand, that is free of rock and other debris that may damage the pipe), begin backfilling, ensuring as much backfill support as needed is placed along the sides and under the pipe to minimize shear and tensile stresses
  - The backfill should be placed in the excavation as evenly as practicable
  - Depending on conditions such as pipe size, it may be necessary to compact around the sides of the pipeline being backfilled until a suitable layer of backfill material completely covers the pipeline.
  - In the case of steel pipe, care shall be taken when compacting the backfill material to prevent damage to the pipeline or coatings.
  - In the case of plastic pipe, heavy tamping or compacting shall not be performed until the pipe has a sufficient amount of cover.
- Once a sufficient amount of clean debris-free backfill material has been placed over the pipeline and sufficiently compacted, continue with the backfilling operation:
  - Backfill material above the initial layer may contain small amounts of rock or other debris.
  - Tamp or compact each layer of backfill material, as needed, as it is placed into the excavation

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Construction 319-B</b>	Approval Date: 08/25/06
Revision date: 3/21/12	Supercedes: 08/25/06

### **Backfilling a Trench (Ditch)**

---

#### **RELATED PROCEDURES**

- 0861 – Installation of Steel Pipe in a Ditch
- 0901 – Installation of Plastic Pipe in a Ditch



# Procedural Manual for Operations, Maintenance and Emergencies

Operations 321-E	Approval Date: 08/25/06
Revision date: 3/21/12	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Install Tracer Wire

### SCOPE AND PURPOSE

This procedure is to ensure that insulated tracer wire is installed along with buried non-conductive plastic pipe to serve as a means to accurately locate and trace the pipe when utilizing pipe locators. It describes the practices required to comply with 192.321(e).

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that the installation of tracer wire is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Ensure that the work zone/area is setup to protect the public from danger  
Ensure that all applicable safety equipment is being utilized as per company policy

### EQUIPMENT AND MATERIALS

Insulated tracer wire  
Connectors  
Hand tools  
Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

1. The tracer wire shall be coated (insulated) copper wire. The insulation should cover the copper wire over its entire buried length.
2. During installation of tracer wire, visually inspect the tracer wire as it is being installed, checking for:
  - i. Damaged wire insulation
  - ii. Broken wire

Repair or replace any defects discovered during installation.

3. Lay the tracer wire longitudinally parallel to the pipe in the ditch – **DO NOT TAPE TRACER WIRE TO PIPE!!!!** For installation of tracer wire in a borehole, the tracer wire shall be installed at the same time that the plastic pipe is installed.
4. The tracer wire should be installed in a ditch or borehole ensuring that the tracer wire is not pulled taut as to put undue strain on the tracer wire.
5. Protect tracer wire from damage by taking practicable precautions when hauling, lifting, moving or handling.
6. When it is necessary to connect lengths of tracer wire, or to tie into existing tracer wire(s), strip back insulation and use one of the following connection methods:
  - i. Twist wires and wrap with electrical tape.
  - ii. Solder wires and wrap with electrical tape.
  - iii. Split bolts
  - iv. Electrical connector filled with silicon

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual

### RELATED PROCEDURES

319-21 Installation of Plastic Pipe in a Trench  
321 – Installation of Steel or Plastic Pipe in a Bore  
0921-0931 – Installation of Plastic Pipe by Plowing/Pulling-In or by Plowing/Planting



# Procedural Manual for Operations, Maintenance and Emergencies

Construction. 319-21	Approval Date: 08/25/06
3/21/12	Original

**ALPINE NATURAL GAS**

## Installation of P.E. Pipe in a Trench

### SCOPE AND PURPOSE

This procedure is to provide personnel with safe and effective activities to ensure the integrity of the piping system while installing P.E pipe in a trench in accordance with 49 CFR §192.319(b)2 and 192.321.

All new construction will be performed by individuals in a manner that adheres to the applicable sections of this Manual, Safety Plan OQ Plan of Alpine Natural Gas and to the specifications enumerated in county permit.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all construction practices are accomplished according to system specifications, capability and procedures for the installation of P.E. pipe in a trench.

### PERSONNEL SAFETY

Ensure that the work zone/area is setup to protect the public from danger

Ensure that all applicable safety equipment is being utilized as per company policy

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing construction work and at all times minimize hazards including wearing a reflective safety vest and a safety helmet when working around mechanized equipment.

### EQUIPMENT AND MATERIALS

All construction will be performed using proper equipment and tools including:

- Mechanized equipment
- Routine hand tools
- Warning signs and barricades
- Other equipment and materials as needed.

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced.

### INSTRUCTIONS

- 1) P.E. (PLASTIC) ASTM D 2513 is installed below ground level.
- 2) Trench bottom shall be relatively smooth, free of rock, sticks, and other debris that could damage the pipe. To assure this the pipe trench will be bedded with sand.
- 3) Pipe shall be supported while lowered into the trench.
- 4) Pipe will be lowered into the ditch while being careful to protect pipe from cuts, gouges, nicks, scratches and other damage during the installation process.
- 5) A sufficient clearance between plastic piping and other underground structures not associated with the piping must be maintained. If, clearance cannot be attained, the piping should be protected from damage that might result from the proximity of other structures.

### REPORTING/NOTIFICATION

Complete documentation in accordance with office procedure for customer service forms such as:

- 605 General Pipeline Repair
- 724 Leak Repair
- Appendix J Prop. Map/ Serv .Line Install.
- Appendix R-2 Main line Pipe Installation Log
- Appendix R-3 Service Line Installation Log
- Appendix W Main Line Pipe Install. Notes

### RELATED PROCEDURES

- 303 Construction



# Procedural Manual for Operations, Maintenance and Emergencies

Construction. 319-21	Approval Date: 08/25/06
3/21/12	Original

**ALPINE NATURAL GAS**

## Installation of P.E. Pipe in a Bore

### SCOPE AND PURPOSE

This procedure provides personnel activities, after boring is completed, with a method of handling and pulling in of pipe. It also includes inspection of exposed pipe and coating for the purpose of ensuring the integrity of the piping system. It describes practices required to comply with 49 CFR Part 192.321 Subpart G and other applicable code sections.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that proper activities are performed to install pipe as described in this procedure after the boring process.

### PERSONNEL SAFETY

Ensure that the work zone/area is setup to protect the public from danger

Ensure that all applicable safety equipment is being utilized as per company policy

Personnel shall comply with specific requirements of authorities having jurisdiction for railroads, major thoroughfares, rivers, waterways or other boring processes.

### EQUIPMENT AND MATERIALS

Boring Equipment  
Other equipment and materials as needed

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced.

### INSTRUCTIONS

#### General

1. The trail ditch (entry and exit trench or pit) should be relatively smooth, free of rocks

and other debris that could damage pipe during pull in or push through. The ditch trail shall be long enough so as not to place unnecessary strain on the pipe as it is being pushed or pulled through the bore hole.

2. Protect pipe from damage by taking practicable precautions when hauling, lifting, moving or handling.
3. When necessary, protect pipe from surface damage before it enters the entry trench by placing padding underneath it.

### Installation of Plastic Pipe in a Bore

- a. Inspect pipe before installing through bore hole. Repair or replace any segment of pipe that contains unacceptable surface damage or defect.
- b. Pull or push pipe through bore hole taking care not to put excessive strain on the pipe.
  - i. Tracer wire shall be installed along with pipe as the pipe is pulled or pushed through borehole. The tracer wire must be continuous ensuring electrical continuity for locating purposes. Do not wrap the tracer wire around the pipe.
  - ii. To the extent possible, prevent dirt from entering pipe by sealing the leading end.
- c. Examine pipe as it exits bore hole looking for indications of obvious damage. Repair or replace any segment of pipe that contains unacceptable surface damage or defect.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual



# Procedural Manual for Operations, Maintenance and Emergencies

Construction. 319-21	Approval Date: 08/25/06
3/21/12	Original

**ALPINE NATURAL GAS**

## Installation of P.E. Pipe in a Bore

---

### RELATED PROCEDURES

- 0641 – Visually Inspect Pipe and Components  
Prior to Installation
- 321-E– Install Tracer Wire
- 0971 – Installation and Maintenance of Casing  
Spacers, Vents and Seals



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Construction. 323	Approval Date: 08/25/06
3/21/12	Original

## Installation and Maintenance of Casing Spacers, Vents, and Seals

### SCOPE AND PURPOSE

This procedure is to ensure that casing spacers, vents and seals are installed and maintained in a safe and efficient manner so as to minimize damage to the carrier piping and associated fittings. It describes practices required to comply with §§192.323 and, 192.321 (f),.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that the installation and maintenance of casing spacers, vents and seals is performed in accordance with this procedure.

### PERSONNEL SAFETY (Where Applicable)

Ensure that the work zone/area is setup to protect the public from danger.

Ensure that all applicable safety equipment is being utilized as per company policy.

### EQUIPMENT AND MATERIALS

Steel pipe and associated fittings for vents  
Casing spacers and end seals  
Coating system materials, as required  
Proper signage, where required  
Routine hand tools  
Other equipment and materials, as needed

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced.

### INSTRUCTIONS

#### Installation –

1. Properly sized casing spacers should be selected in order to fit the outside diameter of the carrier pipe and the inside diameter of the casing. The inside casing surface should be relatively smooth to facilitate spacer insertion.
2. Casing spacers should be constructed of a resilient insulating material such as plastic.
3. Install insulating casing spacers close enough together to prevent any possibility of carrier / casing contact due to sagging.
4. Follow the spacer manufacturer recommendations for installing insulating spacers and tightening spacer bolts or clamps. During the insertion process, maintain the correct alignment between the carrier pipe and the casing to prevent damage to spacers or cause spacers to slide on the pipe due to friction or snagging.
5. Pulling the carrier pipe through the casing is preferable to pushing the carrier pipe through the casing. Use of an internal compression bullhead and pulling cable is preferred. Insulating spacers can be applied prior to pulling or as the carrier pipe is being pulled.
6. Soil stabilization at both ends of the casing is necessary to eliminate electrical shorting between the carrier pipe and the casing due to long term settling of the carrier pipe. The carrier pipe should be centered in the casing and self-supporting when soil stabilization is completed.
7. End seals are installed to prevent water, soil, and other debris from entering the casing/carrier facility. End seals should not be electrically conductive. Heat-shrink seals and tape seals are common and should be installed in select backfill to protect them from damage. These soft seals commonly do not hold gas pressure. Ensure that properly sized end seals are



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Construction. 323	Approval Date: 08/25/06
3/21/12	Original

## Installation and Maintenance of Casing Spacers, Vents, and Seals

installed in accordance with manufacturer's recommendations.

8. It is preferable to install weld-on vent pipes before carrier pipe insertion to prevent damage to pipe coating and end seals due to sparks and heat. Vent tops must be designed to prevent water, debris, and insects from entering or plugging the vents. Vents are not required on both ends, but they make good visual markers, good leakage survey points, and good cathodic protection test points.
9. If vents are installed, install signage as applicable by code requirements.

### Maintenance -

1. Casing end seals may fail over time causing infiltration of water and other debris.
2. Replacement of end seals should be performed according to installation procedures listed in item 7. above.
3. Casing spacers made of resilient insulating material such as plastic seldom fail; therefore, periodic maintenance is not required unless severe carrier or casing pipe movement or damage has occurred.
4. After installation of casing vents, periodic inspection for atmospheric corrosion must be performed according to applicable code requirements.
5. If line markers or other signage is used, maintenance of these facilities must be performed according to applicable code requirements.

### RELATED PROCEDURES

- 0641 – Visually Inspect Pipe and Components Prior to Installation
- 0981 – Backfilling
- 0991 – Coating Application and Repair – Brushed or Rolled
- 1001 – Coating Application and Repair – Sprayed
- 1011 – External Coating and Repair - Wrapped

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Operations 355, 357 & 359	Approval Date: 08/25/06
3/21/12	Original

## Installation of Customer Meters & Regulators- Residential and Commercial

### SCOPE AND PURPOSE

This procedure is to ensure that meters and regulators for residential and small commercial customers are installed so as to minimize anticipated stresses upon the connecting piping and the meter location requirements and protection from damage. It describes practices required to comply with §192.355, 357 and 359.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure when hanging a meter, regulator and associated piping, commonly called a "meter set" is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Be aware of any environment that can pose a threat to personnel safety.

### EQUIPMENT AND MATERIALS

- Meter
- Regulator
- Associated piping and fittings
- Routine tools
- Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan **C.T. 15** and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### General

The meter and regulator selected should provide the customer/premise with the proper delivery pressure and volume.

All meters and regulators shall be installed and operated in accordance with the manufacturer's installation and operating instructions.

#### Meter/Regulator Location (Outside)

- Wherever possible, the meter and regulator should be installed adjacent to the building being served.
- Verify that the location chosen is sufficient to protect from potential damage by forces such as:
  - Vehicles
  - Construction
  - Equipment
  - Falling objects
  - Snow and Ice
- Verify that the meter and/or regulator will be installed in a readily accessible location to accommodate access for:
  - Obtaining readings
  - Inspections/Testing
  - Repairs
  - Meter/regulator maintenance
  - Operation of the gas shut-off valve
- Verify that the service regulator vents and relief vents terminate outdoors, and that the outdoor terminal is:
  - Rain and insect resistant
  - Located at a place where gas from the vent can escape freely into the atmosphere and away from any opening into the building
  - Protected from damage caused by submergence in areas where flooding may occur
- Verify that the meter or regulator will **NOT** be installed:
  - In contact with the soil or other potentially corrosive materials
  - Under windows or other openings that may be used as an emergency exit



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Operations 355, 357& 359	Approval Date: 08/25/06
3/21/12	Original

## Installation of Customer Meters & Regulators- Residential and Commercial

- In front of building crawl spaces
- Near building air intakes
- In such a manner as to create stresses upon the connecting piping and the meter

the blocking of the regulator vent.

- In small commercial installations, it may be necessary to install multiple meters on a meter header – the meter header shall be installed to provide adequate support of the meters and regulators.
- Test for leaks.

### Installation

- Using associated pipe and fittings, install the meter and regulator
  - The combination of piping and fittings will vary from one meter set to another depending on a variety of factors. Some likely factors include: height of service riser, location of service riser in relation to customer piping and diameter of piping.
    - a) Verify that the insides of any piping used in the installation are clean and free of obstructions.
    - b) Use pipe joint material only on the male threads of the pipe being connected.
    - c) Tighten each fitting sufficiently to provide a gas-tight seal.
  - The meter should be installed in a manner that presents a neat appearance and is adequately supported.
  - Install the regulator ensuring that the gas flow through the regulator is in the proper direction
    - a) Most regulators have a marking to denote the inlet and outlet of the regulator
    - b) The regulator should be installed so that the regulator vent is facing downward or other configurations that will allow the regulator relief valve to function properly
      1. In areas where severe water or freezing conditions may exist, consideration should be given to the installation of additional special fittings that will prevent

### Setting Regulator Pressure (Not tied to Customer Piping)

- Once the meter(s) and regulator(s) is installed, verify the set-point of the regulator (outlet pressure setting) is correct for the application:
  - Open the outlet shut-off, if equipped, or install a fitting that will permit gas flow through the regulator.
  - Install the proper pressure gauge
  - Remove the regulator seal cap and gasket (the cap that covers the adjustment button, screw, knob)
- Turn the gas on slowly
- Verify that the reading on the pressure gauge is the correct delivery pressure – adjust as per manufacturer’s instructions.
- Turn the gas off slowly.

### Testing of Relief Devices, If Installed

- Upon completion of the installation of the meter(s) and regulator(s), test the relief device for proper operation, if applicable.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual

### RELATED PROCEDURES

- 0591 – Leak Test at Operating Pressure
- 1201 – Temporary Isolation of Service Lines and Service Discontinuance



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Normal Operations 355, 357&amp; 359</b>	Approval Date: 08/25/06
3/21/12	Original

### **Installation of Customer Meters & Regulators- Residential and Commercial**

---

1191 – Maintenance of Service Valves  
Upstream of Customer Meter



# Procedural Manual for Operations, Maintenance and Emergencies

Operations 503	Approval Date: 08/25/06
Revision date: 10/21/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Facility Leak Test Requirements

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure the safety of piping facilities, the public and gas personnel during facility leak testing according to the requirements under 49 CFR § 192.503 and 192.619.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all leak test operations are performed and records and operating history are maintained.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing leak tests.

### EQUIPMENT AND MATERIALS

Compressed air supply  
Calibrated pressure gauge  
Polyethylene Pipe  
Fusion Equipment and Tools

### OPERATOR QUALIFICATION

This is a covered tasks under the Operator Qualification Plan **C.T.# 17**

### INSTRUCTIONS

#### Test-Pressure

All Alpine Natural Gas P.E. distribution mains and service lines extended onto the existing distribution system, or replaced, will be leak tested at a pressure of not less than less 95 psig. ANG will derate this leak test value by approximately 37 percent, (37%), in order to support the 60 psig system MAOP.

Test duration will be not less than one hours, (1 hr.), for all mains and fifteen minutes (15 min.), for service lines using air and calibrated gauges.

All distribution facility fusion tie-in joints will be leak tested at the current operating pressure of the subject facility using an acceptable leak indicating solution.

All Alpine Natural Gas P.E. distribution main and service line emergency pipe repair/replacement will be performed using **Pretested Pipe procedure**. In case of repair/replacement of steel pipe in Alpine's Regulator Station Pre-Tested pipe steel pipe.

#### Gauge Inspection and Calibration

1. Check cover glass, enclosure, threads, attached valves, hoses, etc.
2. Replace all gauges with broken glass or damaged threads.
3. Repair gauges, as applicable.
4. Certified calibration shall be accomplished once each calendar. The calibration procedure shall include verification of zero percent (0%), one hundred percent (100%), and other intervals of operating scale as deemed necessary. A calibration certificate identifying each instrument by number will be maintained until the next calibration cycle.

### REPORTING/NOTIFICATION

Form 503 shall be completed by field personnel for each leak test and maintained at the operations headquarters for the useful life of the facilities.

### RELATED PROCEDURES

Pretested Pipe  
303 Construction  
619-621 MAOP  
739 Regulator Stations



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Operations 381-383	Approval Date: 08/25/06
Revision date: 4/10/13	Supercedes: 10/21/10

## ALPINE NATURAL GAS Excess Flow Valves

### SCOPE AND PURPOSE

This purpose of this procedure is to establish a policy for the installation of excess flow valve devices for the Alpine Natural Gas distribution system. This procedure complies with 49 CFR § 192.381 and 383 requirements.

### RESPONSIBILITY

The System Administrator is responsible for proper installation of excess flow valve devices for the Alpine Natural Gas distribution system.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing construction work and at all times minimize hazards including wearing a reflective safety vest and a safety helmet when working around mechanized equipment.

### EQUIPMENT AND MATERIALS

Excess Flow Valve  
P.E. Butt-Fusion equipment for 3/4" P.E.

### Operator Qualification

This activity is a covered task, **ANG C.T # 39 & 40** under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements. Appendix G for pipe joining EFV procedures.

### INSTRUCTIONS

Each new or replaced gas service line after February 12, 2010 is to have an excess flow valve device installed whenever the pressure in the main is a constant 10 psig and no contaminants in the gas system could hamper the proper operation of the device.

Each excess flow valve installed shall meet the minimum performance requirements under

49 CFR §192.381. EFV are designed to shut off gas to the meter when the service line is punctured or severed. Sensing increased flow the EFV will shut-off and will automatically reset once repair is made and the pressure has equalized. Follow all manufacturer's instructions for:

#### Installation on new service

1. Assess the EFV installed matches the series/size of the of job specification including Service length size and customers maximum load.
2. Install EFV in direction of Flow Direction Arrows on EFV.
3. Install EFV as close to the gas main as practical.
4. Butt fuse the EFV housing component to 3/4" P.E. service line.
5. Place I.D. tags provided with EFV around service line adjacent to EFV.
6. Purge the service line, if, EFV trips off when shut off valve opened, allowing flow to atmosphere at level greater than EFV device trip point, allow time for the line pressure to equalize and the device to reset.

#### Repairing EFV on existing service or installing EFV on existing service.

#### **ANG C.T # 22**

1. Excavation
1. Material Defect, requires replacement or adding an EFV to existing service.
2. Shutoff gas to meter.
3. Repair, install EFV.
4. Return service line to operation.

#### **RELATED PROCEDURES**

303	Construction
283-285	Plastic Fusion Procedures
605-B1	
605 B5	



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 614-C	Approval Date: 08/25/06
Revision date: 12/31/12	Supercedes: 10/21/10

ALPINE NATURAL GAS

## Locating/Marking Underground Pipeline

### SCOPE AND PURPOSE

This procedure is to ensure that the location of this Operator’s buried gas pipelines in the vicinity of proposed excavation activity is marked in accordance with 49 CFR §192.614(c)(5).

### RESPONSIBILITY

The System Administrator is responsible to ensure that underground pipelines are located as described in this procedure for Alpine Natural Gas distribution system.

### PERSONNEL SAFETY

Wear a reflective safety vest and use care when locating lines under or near roadways and in other areas where vehicles are present. When arriving at the location look for obstacles, surface conditions and other features that may pose a safety hazard.

### EQUIPMENT AND MATERIALS

System Maps and records  
Line Locating Instrument  
Yellow paint, flags and/or other marking types  
Other equipment and materials as needed  
Manufacturer’s instructions

### OPERATOR QUALIFICATION

This activity is a covered task, **ANG C.T # 14** under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

Check the batteries in both the transmitter and the receiver. If the batteries are low, replace them with new ones or recharge them according to the manufacturer’s recommendations

**Alpine’s current locating instrument is either the Pipehorn 100 or 800-HL. Prior to each use personnel will perform equipment check which verifies battery condition as well as the device performance.**

- a. Go to the location indicated on the locate ticket.
- b. Consult the maps and/or records to verify the approximate location of the buried piping.
- c. (Conductive method) Attach the pipe lead to the pipe, test station, tracer wire, or any appurtenance that is in good electrical contact with the structure to be located. Make sure that there is no rust or paint to interfere with the connection.  
(Inductive method) If there is no place to hook directly to the tracer wire, place the transmitter as nearly as possible directly over the tracer wire or pipeline. Follow the instructions for the locating instrument to prevent being too close to the transmitter with the receiver (typically 30 - 75 feet from the transmitter).
- d. For conductive method attach the ground wire to a suitable ground or ground stake located in the vicinity of the structure to be located. Turn the transmitter on and make any adjustments necessary to ensure proper operation. Use the lowest frequency possible at the lowest power output possible to minimize the “bleed over” of the signal to adjacent facilities. Note that not all locating devices have a frequency adjustment.
- e. Turn the receiver on and adjust the sensitivity setting on the receiver to a workable level.
- f. Follow the instructions for the line locating instrument to locate the buried piping.
- g. Mark the location of the gas lines. Markings may include one or any combination of the following: paint, chalk, flags, stakes, brushes or offsets.



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 614-C	Approval Date: 08/25/06
Revision date: 12/31/12	Supercedes: 10/21/10

**ALPINE NATURAL GAS**

## Locating/Marking Underground Pipeline

- (i) Indicate gas lines with yellow paint, or flags at the beginning and end of locates. Also, arrows should be placed at the ends of markings to indicate that the underground facility continues.
- (ii) To avoid confusion on long runs, the marks shall be frequent enough to identify the owner.
- (iii) The marks shall indicate the approximate center-line of the gas lines. For example, the middle of the pipe shall be at the center of the dashed marks.
- (iv) Location marks shall be 4 to 12 inches in length and at intervals of 5 to 10 feet.
- (v) Extend marks outside the proposed work area by 20 to 30 feet if those facilities extend outside the proposed excavation area.
- (vi) In areas such as flower beds, rock gardens, etc., flags or stakes may be an alternative to paint. The decision to use flags, paint, or stakes shall be based on the terrain and job conditions. For instance, flags or stakes in wet areas, offsets in dirt construction zones that have a high volume of traffic crossing their line location marks.
- (vii) Dead ends, stub-outs, termination points, etc., shall be marked as follows:  
    ← ABC---] [---XYZ→
- (viii) Lines that have connections (e.g., T's) or changes in directions shall be clearly indicated. Marks indicating lines or connections shall clearly show the intersection and path of the line or connection. Marks that show changes in direction shall be placed closer together for more clarity and accuracy.
- (ix) Valves shall be identified by using a circle and letters if they are not visible (dirt or pavement covering valve boxes).
- (x) Facilities that cross but do not intersect shall be marked.

- (xi) When facilities share the same trench, they shall be heavily identified and separated enough so that they can be readily identified.
- (xii) If the facility to be marked has a diameter greater than 12", the size of the facility shall be indicated if known. If the size is not known, then the mark shall indicate greater than 12 inches.
- (xiii) In areas where there is a strong likelihood that any or all marker types showing line location would be destroyed, offsets shall be placed on a permanent surface. However, offsets should be used only in conjunction with marks placed above a facility. Offset spacing should be every third or fourth mark.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

None



# Procedural Manual for Operations, Maintenance and Emergencies

General 605-B3	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

**ALPINE NATURAL GAS**

## Availability of Construction Records, Maps & Operating History

---

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure the safety of personnel during maintenance and operations according to the requirements under 49 CFR § 192.605(b)(3).

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all scheduled maintenance and operations functions are accompanied with a set of the most recent construction records and operating history such that personnel safety is maintained.

### PERSONNEL SAFETY

There are no special personnel safety issues.

### EQUIPMENT AND MATERIALS

Proper construction records and recent operating history for the segments(s) to be maintained/inspected.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan

### REPORTING/NOTIFICATION

Field personnel performing maintenance and operations functions on the pipeline must request pertinent maps and records whenever necessary to ensure safety.

### RELATED PROCEDURES

303 Construction  
605-B1 General Pipeline Repair



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 605-B5	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

## Startup-Shutdown-Purging

### SCOPE AND PURPOSE

This procedure is to ensure the safe and proper startup/shutdown and purging of any portion of the pipeline system, with the exception of gate and regulator stations, within the allowable operating limits according to 49 CFR § 192.605 (b) (5) and 629.

### RESPONSIBILITY

Field personnel are responsible for starting up/shutting down and purging of the system under this procedure.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing when performing pipeline startup/shutdown and purging procedures and at all times minimize hazards including wearing a reflective safety vest and a safety helmet when working around mechanized equipment.

### EQUIPMENT AND MATERIALS

All Alpine Natural Gas personnel are to utilize proper tools, materials and equipment required for each startup/shutdown and purging procedure including:

- Communications equipment
- Flame retardant clothing
- Grounding apparatus
- Valves
- Squeeze-off tools
- Compressed air supply
- Calibrated pressure gauges
- Combustible Gas Indicator (CGI)

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan **C.T. #18 & 23** and may only be performed or directed and observed by an individual who is currently

qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Startup/Purging Steps

1. Check all equipment for proper operation prior to commencement of any startup and purging procedures.
2. Ground all pipeline facilities prior to all startup and purging procedures.
3. Utilize a grounded steel riser whenever performing startup and purging procedures from a plastic facility. Do not purge directly from a plastic facility.
4. Introduce gas into one, (1), end of the facility at a rate sufficient to eliminate the formation of a combustible mixture.
5. Monitor all pressure gauges at each available location.
6. Utilize valves or squeeze-off tool for displacement of air from the pipeline.
7. Verify that all air has been displaced prior to closure of all valves using a CGI.
8. Lock all critical valves in the desired normal operating position to ensure continued safe pipeline operation.

#### Shutdown/Purging Steps

1. Follow step 1. listed for Startup/Purging Procedures.
2. Ground all pipeline facilities prior to all shutdown and purging procedures.
3. Utilize a grounded steel riser whenever performing startup and purging procedures from a plastic facility. Do not purge from a plastic facility.
4. Introduce air into one, (1), end of the facility at a rate sufficient to eliminate the formation of a combustible mixture.
5. Monitor all pressure gauges at each available location.
6. Utilize valves for displacement of gas from the pipeline, as necessary.



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 605-B5	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

**ALPINE NATURAL GAS**

## **Startup-Shutdown-Purging**

---

7. Continue monitoring all pressure gauges until desired shutdown pressure is achieved.
  
8. Verify that all gas has been displaced prior to closure of all valves using a CGI.
9. Lock all critical valves in the desired position to ensure continued safety.
10. Some shutdown activities will simply require that critical valves be closed in order to isolate a particular segment of the pipeline.

### **Gate/Regulator Station Startup/Shutdown**

Refer to 739 Regulator Stations for specific startup/shutdown procedures regarding these facilities.

### **REPORTING/NOTIFICATION**

Notify the System Administrator of any problems encountered during the startup/shutdown procedure.

### **RELATED PROCEDURES**

- 739 Regulator Stations
- 751 Prevention of Accidental Ignition



# Procedural Manual for Operations, Maintenance and Emergencies

Construction 605-B9	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

ALPINE NATURAL GAS

## Excavation Safety

### SCOPE AND PURPOSE

This procedure is to ensure employee safety in excavated trenches as required by 49 CFR § 192.605 (b) (9).

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all Alpine Natural Gas employees working in excavated trenches are protected according to the provisions of this procedure and personnel are provided training in Industry “Best Practices” and Safety procedures.

### PERSONNEL SAFETY

Personnel have received trenching and confined space safety training.

### EQUIPMENT AND MATERIALS

- Traffic cones and warning signs
- Traffic barricades
- Ingress/egress ladder
- Shoring equipment
- Breathing apparatus
- Rescue harness retrieval equipment

- In trenches <5 feet in depth, an ingress/egress ladder will be placed in the trench and a fire extinguisher will be readily available at the work site.
- In trenches ≥5 feet in depth, an ingress/egress ladder will be placed in the trench and a fire extinguisher will be readily available at the work site. Additionally, where trench sloping cannot be achieved a trench box or other approved shoring shall be used, and a rescue harness with lanyard shall be available for each employee in the excavated trench, including welding personnel.

Where a low oxygen atmosphere is detected, a breathing apparatus shall be used for each

employee in the excavated trench, including welding personnel.

### INSTRUCTIONS

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing pipeline Operations, Maintenance and Emergencies functions while in excavated trenches.

### OPERATOR QUALIFICATION

Construction activities are not covered tasks under the Operator Qualification Plan until new facilities are tied-in and gas is introduced. Refer to the OQ Plan for specific covered tasks and associated qualification requirements.

### REPORTING NOTIFICATION

All excavated trench work must be documented on appropriate form for activity that required trenching.

### RELATED PROCEDURES

All Operations, Maintenance and Emergencies Procedures performed in excavated trenches.

- Vault Maintenance-confined space safety
- 614- Damage Prevention Plan
- 300- Line Locating/Marking



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops. 614-A	Approval Date: 07/15/04
Revision date 12/31/12	Supercedes: 01/30/11

ALPINE NATURAL GAS

## Damage Prevention Plan

### SCOPE AND PURPOSE

The purpose of this Damage Prevention Plan is to establish procedures to assure the performance of damage prevention activities during excavation;

- 1) by Alpine's or its contractors and, or,
- 2) During excavation or encroachment by third parties, and
- 3) Establishes Alpine's participation in Underground Service Alert North (USANorth) a qualified one-call system and
- 4) Provides for the receiving and recording of planned excavation by third parties and
- 5) Provides temporary locating marking of Alpine's buried pipeline facilities, or
- 6) Provides temporary locating marking in Operators intended area of excavation and or,
- 7) Provides adequate pipeline support during excavation activities and
- 8) Provides communication periodically to excavators, customers and the public to communicate the existence of Damage Prevention Plan.

This procedure describes damage prevention practices required to comply with 49 CFR § 192.614.

### RESPONSIBILITY

The System Administrator is responsible to ensure that excavation by utility personnel or utility contractors is performed as described in this procedure.

### PERSONNEL SAFETY

Every reasonable precaution shall be taken to protect employees and the general public.

Maintain a safe distance from construction equipment and the edge of the excavation.

### EQUIPMENT AND MATERIALS

As Needed

### OPERATOR QUALIFICATION

Some procedures associated with this activity are covered tasks under the Operator Qualification Plan, **ANG C.T. #14 & 15.**

### INSTRUCTIONS

#### Frequency

Written correspondence should be sent by Alpine Natural Gas to all new customers.

Semi-Annually to existing customers basis (twice per calendar year).

Excavator Letter sent (**Appendix C-1**)  
Annually

#### Steps

1. The Alpine Natural Gas Excavator Notification List (Appendix C) shall be updated annually prior to mailing of the Excavator Notification Letter (Appendix D). The list must include names and addresses of companies normally performing excavation activities along the right of way and within the operating area of Alpine Natural Gas. Local architects and engineering companies should also be included. The written correspondence to



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops. 614-A	Approval Date: 07/15/04
Revision date 12/31/12	Supercedes: 01/30/11

**ALPINE NATURAL GAS**

## Damage Prevention Plan

excavators should include the Alpine Natural Gas emergency telephone number as well as utility location requirements through Alpine Natural Gas and Underground Service Alert (USA) One-Call System at, **(811)** or **1-800-227-2600**.

2. Supplemental forms of damage prevention advisories may be implemented as deemed necessary including, but not limited to, public service announcements, newspaper advertisements, media/press releases. These advisories will be directed to the general public and excavators within the gas service area boundaries.
3. Alpine Natural Gas will establish a damage prevention liaison through membership/participation on local advisory boards, industry organizations, and representation at engineering pre-construction meetings such as; Home and Building Associations, County Excavation and Contractor Associations, Local Locating Groups.
4. Alpine Natural Gas shall maintain a top-level membership with the Underground Service Alert (USA) One-Call System.
5. Alpine Natural Gas will provide temporary location marking of all buried gas facilities in an area where excavation intent has been received.
6. Follow-up inspection of gas facilities that may be exposed and/or damaged by excavation activities will be performed on the excavation commencement date and again within two, (2), working days after completion of the subject excavation in order to ascertain pipeline integrity. After all blasting activities, a follow-up inspection of the gas facilities in the surrounding area will be performed. A leakage survey may also be performed. This inspection will also be performed in order to determine if any corrosion is present on exposed steel piping and associated fittings. When corrosion is

present, refer to 465 External Corrosion Control – Monitoring. **C.T. # 15.**

7. All written and verbal correspondence/communications to all excavators and landowners will include information regarding how the public can learn of the location of underground pipelines both under item 5., above, and through examination of gas system maps/plats, upon request.

Alpine Natural Gas will practice additional damage prevention activities regarding facility installation, as follows:

1. Gas distribution mains will have thirty-six inches, (36”), of cover. Gas service lines will have eighteen inches, (18”), of cover.
2. Tracer wire will be installed above all plastic facilities.
3. Tracer wire will be terminated above grade and wrapped around service risers for ease of access and locating.
4. Field personnel will use hand tools only when digging within twenty-four inches, (24”), of all located buried utilities.

### REPORTING/NOTIFICATION

Alpine Natural Gas shall retain copies of any correspondence and promotional materials distributed in the Alpine Natural Gas operating area for a minimum of one year after distribution, or until the next correspondence period occurs.

USA – North “5 steps to safe excavation” Appendix N-3 is promoted in semi annual notice to customers and excavators.

### RE-LATED PROCEDURES

- 303 Construction
- 605-B1 General Pipeline Repair
- 465 External Corrosion Control – Monitoring
- All other Operations, Maintenance and Emergencies Procedures performed in excavated trenches.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

Normal Ops. 614-A	Approval Date: 07/15/04
Revision date 12/31/12	Supersedes: 01/30/11

### **Damage Prevention Plan**

---

614-C Line Locating/Marking



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops. 614-B	Approval Date: 07/15/04
Revision date: 01/30/11	Supercedes: 07/15/04

## Damage Prevention Inspection during Third Party Excavation or Encroachment Activities

### SCOPE AND PURPOSE

This procedure is to assure the performance of damage prevention activities during excavation by third parties. It describes damage prevention practices required to comply with §192.614.

### RESPONSIBILITY

The System Administrator or other designee, is responsible to determine when observation of a third party excavation is necessary and to ensure that, when necessary, it is performed as described in this procedure.

If Operator believes pipeline could be damaged by excavation activities:

- An inspection must be performed as frequently as necessary during and after the activities to verify the integrity of the pipeline; and
- In the case of blasting, any inspection must include leakage surveys.

### PERSONNEL SAFETY (Where Applicable)

Maintain a safe distance from construction equipment and the edge of the excavation.

In the event the gas line is ruptured evacuate all personnel to a location upwind of the leak and implement the Emergency Plan.

### EQUIPMENT AND MATERIALS

None

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform

this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

- h. When arriving at the excavation site, locate the person in charge and identify yourself as a representative of Alpine Natural Gas. Tell them that there are gas pipelines in the area and you are there to observe and assist them to locate and work safely around the gas piping.
- i. Check that the **USANorth** has been notified and that all underground utilities have been properly marked. For proper marking refer to the requirements of **USANorth**
- j. Re-mark following procedure # 1 if the marking for the gas pipeline is removed or no longer visible.
- k. Encourage the excavator to hand dig near the markings to locate the buried facility. If directional boring is to occur, pothole to locate the marked facilities at the point where the bore is to cross the marked facilities.
- l. Ensure the excavator provides proper support for exposed pipe, both those owned by the utility and facilities owned by other utilities. Support should be provided to avoid excessive sagging. All supports should be free from sharp edges.
- m. Ensure that care is exercised when digging or working around the utility's gas facilities. Care should be taken when equipment is working near exposed facilities.
- n. Nothing should be hung from or slung over exposed gas pipelines.
- o. If any portion of the utility's pipe is exposed, a visual inspection of the pipe condition must be performed before the gas pipe is reburied (See Procedure # 0151).



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Normal Ops. 614-B</b>	Approval Date: 07/15/04
Revision date: 01/30/11	Supercedes: 07/15/04

### **Damage Prevention Inspection during Third Party Excavation or Encroachment Activities**

- 
- p. Ensure that the backfill, even if it is the original soil, is free from old paving, rocks, debris, large clods or any other thing that might damage the pipeline or coating
  - q. If the pipeline has been supported during excavation, do not remove the supports until the soil under the piping has been compacted until it can support the pipeline adequately. Fill evenly from both sides and compact in lifts so that the compaction is even and resembles original soil. Do not compact excessively on plastic mains or on tapping tees or other facilities that can be damaged by soil movement.

#### **REPORTING/NOTIFICATION**

Complete documentation in accordance with Operation and Maintenance Manual.

#### **RELATED PROCEDURES**

- 475 - Visual Inspection of Buried Pipe and Components When Exposed
- 614-C Locate Underground Pipelines
- 614-A Damage Prevention during Excavation Activities By or On Behalf of the Operator



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 616	Approval; Date: 06/20/06
Revision date: 12/1/09	Supersedes: 04/12/08

**ALPINE NATURAL GAS**

## Public Awareness Plan

### SCOPE AND PURPOSE

The purpose of this standard is to establish procedures for communicating gas facility awareness to the public according to the requirements of 49 CFR § 192.616.

### RESPONSIBILITY

The Alpine Natural Gas, Administration/CFO is the Public Awareness Plan Administrator and is responsible for the initial implementation and continual monitoring of this plan.

### MANAGEMENT SUPPORT STATEMENT

The goal of Alpine Natural Gas is to provide reliable and safe natural gas service to our customers and ensure the safety of people residing and/or working near our natural gas facilities. Alpine Natural Gas is committed to enhanced Public Awareness as an essential component of our natural gas safety program. Therefore, each Alpine Natural Gas system employee must be dedicated to promoting the elements of this Plan. Alpine Natural Gas management is committed to providing the resources necessary to accomplish this goal.

### PERSONNEL SAFETY

There are no special personnel safety issues associated with this procedure.

### EQUIPMENT AND MATERIALS

Written and verbal correspondence/communications to the general public, schools, businesses, government agencies and excavators along and near Alpine Natural Gas facility right of way(s) and within the gas system service area including, but not limited to:

- Newspaper advertisements
- Radio announcements
- Customer Bill Stuffers

### PLAN OBJECTIVES

The objectives of this Plan are as follows:

- 1) To educate gas customers and non-gas customers living and/or working near the Alpine Natural Gas distribution system how to recognize the odor of natural gas and how to react if they believe there is a natural gas leak.
- 2) To increase the awareness of the affected public and key stakeholders in the Alpine Natural Gas system service area of the presence of buried natural gas facilities.
- 3) To assist excavators in understanding the measures to be taken to avoid third party damage to buried natural gas facilities and how to respond properly if they cause damage to Alpine Natural Gas facilities.
- 4) To assist Fire, Police and other emergency response agencies that may assist Alpine Natural Gas during a natural gas emergency, of the proper action(s) to be taken in response to a release of natural gas or other natural gas emergency.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan.

#### Frequency

Each type of listed written correspondence/communications should be sent to the general public, schools, businesses, government agencies and excavators along all Alpine Natural Gas rights of way(s) and within the gas system service area according to the following recommended frequencies:

#### AT TIME OF NEW CUSTOMER SIGN UP

#### TWICE ANNUALLY:



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 616	Approval; Date: 06/20/06
Revision date: 12/1/09	Supersedes: 04/12/08

ALPINE NATURAL GAS

## Public Awareness Plan

Gas Customers

ANNUALLY:

- Non-customer individuals living near the pipeline system
- Emergency Officials
- Excavators/Builders/Contractors
- One-Call Center
- School Administrators

3 YEARS:

- Public Officials –
  - Mayor
  - City/Town Manager
  - Planning board
  - Zoning/Licensing board
  - Permitting board
  - Building Code Enforcement

**Steps**

1. The Alpine Natural Gas Public Awareness directory shall be updated annually prior to mailing of correspondence.
2. The directory must include names and addresses of residents, business owners, schools, government agencies and excavators within the operating area of Alpine Natural Gas.
3. The written and verbal correspondence/communications should include the Alpine Natural Gas emergency telephone number as well as information regarding Alpine Natural Gas pipeline markers, natural gas characteristics, recognition of gas odor, and guidance whenever a leak is suspected.
4. Supplemental Public Awareness requirements for excavators will be communicated in person during utility locate requests include instructions for reporting a gas emergency.

5. -Alpine’s limited distribution area does not have a significant concentration of non-English speaking in the population. All Public Awareness Correspondence is distributed in the English.

**CONTENTS**

Examples of written and verbal correspondence/communications may include, but not be limited to:

**PREVENTING GAS EMERGENCIES**

1. Keep all appliances clean, properly vented and serviced regularly
2. Ensure that each person of appropriate age in your family knows how to operate gas appliances and shutoff valves
3. Don’t use or store gasoline, aerosols or other flammable products near gas appliances
4. Don’t use an open gas oven for heating your home or drying clothes
5. If you have a gas log in your fireplace, the damper must be permanently blocked in the open position
6. Whenever changing your furnace filter, be sure to replace your fan compartment door properly. Filters should be changed/cleaned monthly during the heating season.
7. Never cover fresh air vents that supply air to your gas appliances
8. Have all gas line alterations and appliance repairs performed by a licensed professional.
9. Before digging in streets, alleys, or your yard, be sure you know the location of underground utility services including gas. Alpine Natural Gas is a member of the Underground Service Alert (USA) One-Call System. Always call the Underground Service Alert (USA) One-Call System at **811** or **1-800-227-2600** for free utility locates and before starting any excavation activities.



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 616	Approval; Date: 06/20/06
Revision date: 12/1/09	Supersedes: 04/12/08

ALPINE NATURAL GAS

## Public Awareness Plan

10. Write your local Fire and Police Department(s) telephone numbers in the front of your personal phone book and/or post them in a conspicuous place

### NATURAL GAS PROPERTIES/ODOR

1. Natural gas is a non-toxic, colorless fuel, about one third, (1/3), lighter than air. Gas burns, but only when mixed with air in the right proportion and ignited by a spark or flame. In its purified state, natural gas has no smell. For your protection, Alpine Natural Gas stream contains a harmless distinctive odor so you can detect and report the slightest natural gas leak.

### HOW SAFE IS NATURAL GAS ? GAS LEAK RECOGNITION AND REACTION

1. Whenever natural gas leaks from a pipe or pipe fitting, there is a possibility of fire or explosion
2. If leaking natural gas accumulates in a confined space, it can be displaced air and cause suffocation
3. If a gas appliance is not operating properly, incomplete combustion can produce a toxic gas called carbon monoxide (CO)
4. An appliance pilot light or gas burner can ignite combustible materials and flammable vapors such as gasoline, paint thinner or aerosols.

5. **ANYTIME YOU SUSPECT A NATURAL GAS LEAK OR A POTENTIAL GAS EMERGENCY, CALL ALPINE NATURAL GAS at (209) 772-3006.**

6. **Attached and found in ANG Appendix A-3** are examples of correspondence that should be sent to target audiences.

### EMERGENCY PREPAREDNESS COMMUNICATIONS TO EMERGENCY RESPONSE AGENCIES/LOCAL OFFICIALS

1. Alpine Natural Gas will present an Emergency Response Liaison program for Fire, Police, other emergency response agencies and Local Officials according to the provisions of the Alpine Natural Gas Emergency Plan.
2. Fire, Police, other emergency response agencies, and Local Officials can obtain additional information by calling Alpine Natural Gas at **(209) 772-3006**.

### SUPPLEMENTAL ELEMENT IMPLEMENTATION

Alpine Natural Gas will determine whether supplemental elements will be implemented for any or all identified stakeholder audience after each plan effectiveness assessment.

### PLAN MANAGEMENT

The Plan Administrator will review all inquiries, input, remarks, and requests for further information based on materials sent and/or communicated to Alpine Natural Gas. Response to all incoming communication will be communicated by the Plan Administrator.

### PLAN ASSESSMENT

The Plan Administrator will annually measure the effectiveness of the Plan information communicated to all listed stakeholder audiences by:

- Ensuring the Plan adheres to API RP 1162
- Specified Plan components have been implemented by utilizing gas Operations, Maintenance and Emergencies personnel and/or outside consultants
- Maintaining records of each annual assessment

Should the Plan be audited by the California Public Utilities Commission, (CPUC), in any calendar year, a record/report of such an audit



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops.. 616	Approval; Date: 06/20/06
Revision date: 12/1/09	Supersedes: 04/12/08

**ALPINE NATURAL GAS**

## Public Awareness Plan

will be maintained by the Plan Administrator and count as the annual assessment in lieu of conducting an additional annual assessment by Alpine Natural Gas.

Natural Gas operating area, records of annual Plan assessments, and records of all Plan effectiveness evaluations for a minimum of five years after distribution.

### PLAN EFFECTIVENESS EVALUATION

The Plan Administrator will determine the effectiveness of the Plan at least once every 4 years by measuring:

Form 616 will be completed for each type of correspondence delivered/received.

Appendix A-3 is provided to all new customers in new-customer packet and annually. This notice also appears below.

Appendix N-1 semi-annual Customer Letter.  
Appendix N-2 Annual Non-Customer Letter.

- Whether the Plan information is reaching the intended stakeholder audiences
- Estimating the percentage of target audience(s) reached
- Estimating the level of target audience comprehension of materials/messages
- Verification of target audience willingness to act on materials/message content
- Determining the impact of Plan information for facility damage reduction
- The frequency of material/message communication from target audiences
- Review of all third party damages
  
- Confirmation of target audience receipt of Plan materials/messages
- Comparison of ONE-CALL evaluations for Plan effectiveness (as available)

Whenever the results of the Plan effectiveness evaluation indicate that one or more stakeholder audience is not receiving and comprehending one or more of the stakeholder messages, the Plan Administrator will review the stakeholder message type, content, and delivery method(s) to determine if more effective means of communication are available

### REPORTING/NOTIFICATION

Alpine Natural Gas shall retain copies of any and all Public Awareness correspondence and promotional materials distributed in the Alpine

**IF YOU EVER SMELL GAS,  
CALL ALPINE NATURAL GAS PROMPTLY!**

**WHAT IS NATURAL GAS?**

Natural gas is a non-toxic, color-less fuel, about one-third lighter than air. Gas burns, but only when mixed with air in the right proportion and ignited by a spark or flame. In its purified state, gas has no smell. For your protection an odorant is added to natural gas that is harmless and distinctive so you can detect and report the slightest gas leak. Gas Leakage may occur from faulty appliances, loose connections, and service lines inside or outside your home, or from gas mains. Leaks can be dangerous and should be dealt with promptly by experts.

**HOW SAFE IS NATURAL GAS?**

Alpine provides natural gas for residential fuel through a gas distribution system of underground pipes. Natural gas pipelines are one of the safest forms of energy transportation in the United States. Alpine Natural Gas has an ongoing safety program that meets or exceeds all federal and state requirements for safe pipeline operation and maintenance, however, natural gas pipeline leaks can occur due to natural disasters, damage by digging, or corrosion. Alpine's safety activities include system patrolling, cathodic protection against corrosion, periodic and spot leak surveys and testing, as well as promoting and following safe excavation practices. We also believe it is important for customers and those in and around our pipeline system to learn how to spot and react to a pipeline leak.

**THINGS TO KNOW:**

- Whenever gas leaks from a pipe or pipe fitting, there is a possibility of fire or explosion.
- If leaking gas accumulates in a confined place, it can displace air and cause suffocation.
- If a gas appliance is not working properly, incomplete combustion can produce carbon monoxide and other toxic gases.
- A pilot light or gas burner can ignite combustible materials and flammable vapors such as gasoline, paint thinner, or aerosols.
- 

**For more information call Alpine at 209-772-3006.**

**A leak may be present if you:**

**SMELL** - An unusual odor, like that of rotten eggs. Because natural gas is lighter than air, colorless, and odorless, an odorant is added to help customers smell gas if a leak occurs.

**HEAR** - An unusual noise coming from the ground or an above-ground pipeline. A hissing or roaring sound may indicate escaping natural gas.

**SEE** - Discolored vegetation surrounding a pipeline, or water or dirt blowing into the air.

**IF YOU SUSPECT A LEAK:**

- **Leave the vicinity immediately.**
- **Warn others.**
- **Do not light a match, start or stop an engine, use a phone, switch on or off lights, or do anything that might create a spark.**
- **From a safe place, call Alpine Natural Gas immediately, day or night; or Call 911.**

**IN CASE OF AN EMERGENCY, OR IF YOU SMELL NATURAL GAS,  
CALL ALPINE NATURAL GAS: 209-772-3006 OR 911**

**IN CASE OF A GAS EMERGENCY OR GAS LINE BREAK  
DIAL 911**

**However slim the chances of danger, it doesn't pay to take needless risks. At the first sniff of gas, Play it safe. CALL Alpine Natural Gas!**

- From a safe place call ANG **209-772-3006**.
- If odor is very strong and you are indoors, go outside.
- Do not turn any electrical switches on or off.
- Do not light matches, smoke or create any other source of combustion.

**IN CASE OF A GAS EMERGENCY OR GAS LINE BREAK  
DIAL 911**

**OTHER WAYS TO PREVENT GAS EMERGENCIES:**

- ✓ *Call before you **dig** '811', UNDERGROUND SERVICE ALERT, it is a free call.*
- ✓ *Keep all appliances cleaned, properly vented and serviced regularly.*
- ✓ *Make sure everyone in your family knows how to operate gas appliances & shut-off valves.*
- ✓ *Don't use an open gas oven for heating your home or drying clothes.*
- ✓ *Don't use or store gasoline, aerosols or other products with flammable vapors near gas appliances.*
- ✓ *Whenever changing your furnace filter be sure to replace the compartment door.*
- ✓ *Never cover fresh air vents that supply air to your gas appliances.*
- ✓ *Have all gas line alterations and appliance repairs performed by a professional.*
- ✓ *Write your fire and police department phone numbers and our emergency service number in the front of your phone book.*

---

**FOR MORE INFORMATION, OR IF YOU SMELL NATURAL GAS, CALL  
ALPINE NATURAL GAS:  
IN CASE OF AN EMERGENCY CALL  
209-772-3006 or 911**

For more information, visit the [National Pipeline Mapping System](#) or [Office of Pipeline Safety](#) website.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 605-B 11	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

## Customer Service-Odor & Leak Calls

### SCOPE AND PURPOSE

The purpose of this procedure is to comply with 49 CFR § 192.605 (11). And § 192.615 (a) 1-2, where this report is identified as an actual emergency that requires the Emergency Plan to be deemed necessary and OEM 615 is initiated.

Responding promptly to all reports of gas odor complaints and gas leak calls received from customers or reported by the public. Calls may be initially recorded on Alpine Natural Gas customer service forms B-1 or B-2. If, after hours answering service call record is faxed to office.

Odor reports will receive top priority by Alpine Natural Gas. Leaks will be investigated promptly and classified according to provisions in procedure 723, Leakage Surveys.

Suspected Carbon Monoxide (CO) exposure calls will be treated in the same fashion as odor/leak calls. All CO test results equal to or in excess of the OSHA TWA of 35 ppm will prompt immediate evacuation of all structure residents/inhabitants. All CO evacuations will require Fire Department medical response assistance.

### EQUIPMENT AND MATERIALS

Leak indicating solution  
Combustible Gas Indicator (CGI) or DPIR  
Meter Shut-Off Tag  
CO Monitor  
Emergency Leak Response Equipment

### OPERATOR QUALIFICATION

Leak investigation activity is a covered task under the Operator Qualification Plan, **ANG C.T. #13**.

### INSTRUCTIONS

1. After responding, employee first makes determination that the report is not an actual emergency before proceeding then: Gather additional information about leak report then begin investigation.
  - a. While approaching the area of a suspected outside gas leak, observe the area for obvious signs of a gas leak in the area (use sight, smell, and hearing), including, but not limited to:
    - Dead or dying grass, shrubs, or trees
    - Absence of growth in paving cracks
    - Cracked or crusted soil, or mildewed soil
    - Absence of grass overhang on curbing or walkways
    - Odor of gas or sound of escaping gas
  - b. Interview the individual(s) that reported the odor, if they are available. Begin the leak investigation in the area where the individual(s) reported the leak, if given.
  - c. Check any aboveground facilities for leaks, such as, but not limited to, meter sets and regulator stations.
  - d. Check around the perimeter of any structure in which gas could likely migrate along the edge of the foundation for the presence of a gas leak, if applicable.
  - e. Perform underground leak investigations of any underground mains and services in the area.
  - f. If using an instrument capable of alerting the user of the presence of a gas leak and this instrument indicates the presence of a gas leak, verify that gas is not migrating close to any buildings or other structures where gas could likely accumulate.
  - g. Begin probing (“bar-holing”) around the perimeter of any structure in which the gas could likely migrate along the edge of the



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 605-B 11	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

ALPINE NATURAL GAS

## Customer Service-Odor & Leak Calls

foundation and obtain readings using a CGI (Refer to your company’s leak grading standards for the grading of leaks).

- **Note: Only those instruments designed to register the % of gas-in-air may be used for grading leaks. Instruments that give audible or visual alarms for gas leaks but do not provide % of gas-in-air may not be used for grading leaks.**

- h. If a check of the outside of a building or other structure indicates the presence of gas near or under a building or other structure or along the edge of the foundation:
  - i. Notify in accordance with Operations, Maintenance and Emergencies Manual or Emergency Plan; and
  - ii. Begin taking action as described in **B31Q Task # 1231 – Inside Leak Investigation.**
  - iii. If possible, expose the area around the service riser, open water meter boxes and other available openings to allow the gas to escape to the atmosphere. Care must be taken to make these openings safe for the public and to AVOID IGNITION.
- i. Consideration should also be given to probing (“bar-holing”) along nearby neighboring structures especially if the leak investigation is revealing no presence of a gas leak at the present location.

### Precautions

- When placing bar or test holes for testing, consideration shall be given to bar or test-hole placement and depth to minimize the potential for damage to gas pipeline facilities and possible injury to personnel conducting the investigation.
- Caution should also be exercised to prevent damage to other underground structures when barholing or excavating.

- Unusual situations may complicate investigation techniques on some occasions such as, but not limited to:
    - Multiple leaks
    - Foreign gases
    - Gas detected in storm-drain or sewer systems
    - Gas detected in telephone or other duct runs
      - These indications should be considered migrating gas leakage until proven otherwise by test or analysis.
2. If, no one is at the home , for example a neighbor called in, and the home cannot be accessed all appliances are deemed to be faulty and Operator will proceed as below,
  3. All leaks at meter/regulator, service or main lines are considered to require remedial action and will be repaired immediately or service will be disconnected until repairs by Alpine are completed.
  4. All appliances that are deemed to be faulty will be eliminated from gas supply by shutting off the gas meter using a locking mechanism. A **Meter Shut-Off Tag** will be placed on the meter. Such appliances will only be reconnected when evidence of proper repair or replacement is provided to Alpine Natural Gas officials by the customer.
  5. Gas leaks at customer appliance connections, observed by an Alpine OQ Employee, are to be turned off at affected appliance and brought to the customer’s immediate attention.



# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 605-B 11	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

**ALPINE NATURAL GAS**

## Customer Service-Odor & Leak Calls

If, the employee deems minor tightening or adjustment to connection will correct the leak then at the customer's request, by way of a signed consent on Form **B-7** the Alpine OQ employee can:

723  
605  
709  
1005  
281-285

Leakage Survey, Leak Grading  
B-1 General Pipeline Repair  
Record Keeping  
Integrity Management  
Maintenance, Pipe Joining

- a. Perform this minor correction so that the condition is made safe.
- b. Re-start gas to the appliance.
- c. Retest the connection for the leak with the CGI and Leak indicating solution.

6. Report incident in detail on Form B-1, including Leak Grade Rating.

If, written request for this leak correction is not completed then the gas meter will be shut off and red tagged as in 3, above.

All odor and leak calls will be recorded on a Gas Leak Report, Appendix B-2 and investigated to assure both safety and convenience to the customer.

All Leak repairs on pipeline will be recorded in Leak Repair Log 724.

In addition, all Alpine Natural Gas customer calls related to gas meter work may be recorded on one or more of the appropriate forms listed:

<u>Form Title</u>	<u>Appendix</u>
Customer Service Report	B-1
Gas Leak Report	B-2
New Meter Read Form	B-3
Meter Change Form	B-4
Final Meter Read Form	B-5
Request to Remediate...	B-7
Meter Shut-Off Tag	K
Work Order	A-4
Leak Repair Log	724

### RELATED PROCEDURES

615 Emergency Plan



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

General Meter Shut off	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Closing Valve at Service Riser

### SCOPE AND PURPOSE

This procedure is to provide personnel performing inside leak investigations with the necessary procedures for prompt and effective response and to protect life and property as required by §192.615.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that inside leak investigations are performed as described in this procedure.

**PERSONNEL SAFETY** The first person to respond to a report of gas detected inside a building shall take every necessary action to **protect life and property**.

- No open flames.
- No smoking
- Ensure that cell phones, pagers, and radios are either intrinsically safe or left outside.
- Turn on all necessary equipment before entering premise (Flashlights, Combustible Gas Indicators (CGI), etc.) – “Zero” CGI in clean air before taking readings.
- **Knock** on the door – **DO NOT** ring the doorbell.
- DO NOT use the telephone in the area of a suspected gas leak.
- Establish a safety perimeter to prevent bystanders and unauthorized personnel from entering the area as appropriate.
- Use the required safety equipment.

### EQUIPMENT AND MATERIALS

Gas Detector Equipment  
 Combustible Gas Indicator (CGI) and or DPIR  
 Communication method (Radio, Cell Phone, etc)  
 Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan **C.T # 13** and may only be performed by or directed and observed by an individual who is currently qualified to perform inside leak investigations. Refer to the OQ Plan for specific qualification requirements.

### MAINTENANCE & OPERATION OF INSTRUMENTS

Each instrument used for leak detection and evaluation shall be operated in accordance with the manufacturer’s recommended operating instructions.

### CALIBRATION OF INSTRUMENTS

Each instrument used for leak detection and evaluation shall be calibrated in accordance with the manufacturer’s recommend calibration instructions.

### INSTRUCTIONS

1. **Customer Not at Home**
  - a. **Attempt to determine the condition inside the building.**
    - i. While approaching the building, observe the area for obvious signs of a gas leak in the area (use sight, smell, and hearing), including, but not limited to:
      - Dead or dying grass, shrubs, or trees
      - Absence of growth in paving cracks
      - Cracked or crusted soil, or mildewed soil
      - Absence of grass overhang on curbing or walkways
      - Odor of gas or sound of escaping gas



# Procedural Manual for Operations, Maintenance and Emergencies

General Meter Shut off	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

ALPINE NATURAL GAS

## Closing Valve at Service Riser

*ii.* Using an instrument capable of alerting the user to the presence of a gas leak, check around the entrance door and any other available openings such as, but not limited to, crawl space vents, windows, etc. for an indication of a gas leak.

*iii.* Probe around the outside perimeter of the building next to the building foundation and obtain CGI readings checking for the presence of gas in the ground outside the building.

- If the presence of gas is detected in the ground and there is no indication of gas inside the building, see **B31Q Task # 1241 – Outside Leak Investigation.**

*b. If there is an indication of gas inside the building:*

*i.* Shut off the gas to the building, if one exists.

*ii.* If, in the judgment of the personnel at the scene, the indication of gas presents a hazard to life or property, immediately notify:

- System Management
- Fire Department
- Police Department

*iii.* Establish a safety perimeter and prevent unauthorized personnel from entering the building – DO NOT allow entry into the building until it has been checked and deemed safe for entry.

*iv.* Conduct a check of adjacent structures for the presence of a gas leak.

*v.* If necessary, implement Emergency Plan.

### 2. Customer at Home

*a. Assess the condition inside the building.*

*i.* While approaching the building, observe the area for obvious signs of a gas leak in the area (use sight, smell, and hearing).

*ii.* Ensure that all equipment is turned on prior to entering the building (Flashlight, CGI, Gas Detector, etc.) and ensure that all cell phones, pagers, and radios are intrinsically safe or left outside.

*iii.* Using an instrument capable of alerting the user to the presence of a gas leak, check around the entrance door for the presence of a gas leak.

*iv.* Question occupants regarding the location of the gas odor.

*v.* As you enter the premise, sample the air in rooms, concentrating on the location(s) where the occupants believe they detected the odor, if given, for the presence of a gas leak.

*vi.* Sample air in basements or crawl space for the presence of a gas leak.

*b. If there is an indication of gas inside the building:*

*i.* Obtain a reading with a CGI. If the reading indicates the presence of a dangerous concentration of gas (20% of the Lower Explosive Limit (L.E.L.) or 1% on the percent gas (%) scale, or greater, or in the judgment of the personnel at the scene the indication of gas presents a hazard to life or property:

- Evacuate the building immediately;
- **DO NOT** operate/use any electrical switches;
- Leave the door open as you exit;
- Shut off and lock gas meter, if one exists;
- Notify immediate Supervisor
- Establish a safety perimeter and prevent unauthorized personnel from entering the building – DO NOT allow entry into the building until it has been checked and deemed safe for entry.



# Procedural Manual for Operations, Maintenance and Emergencies

General Meter Shut off	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

ALPINE NATURAL GAS

## Closing Valve at Service Riser

- Probe around the outside perimeter of the building next to the building foundation and obtain CGI readings checking for the presence of gas in the ground outside the building.
  - Check water meter boxes and other available openings. Check other structures in close proximity.
  - If the presence of gas is detected in the ground, see—**Outside Leak Investigation.**
- ii. If necessary, implement Emergency Plan.
- iii. Once the building is safe for re-entry:
  - Search for and locate leak.
  - Repair leak or inform the customer to correct the situation – if the repair is the customer’s responsibility, ensure meter is off and locked – advise the customer to call back to have the gas turned back on once the repair is made.
- c. If there is an indication of gas inside the building and it DOES NOT present a hazard to life or property (see 2.b.i. above), and a shut-off valve is located before the leak:
  - i. Shut off the valve at the appliance/leak to isolate the leak and tag the appliance; or,
  - ii. Repair leak; or
  - iii. Turn off service valve at the meter, install lock in the service valve, and advise the customer to repair.

If, the employee deems minor tightening or adjustment to connection will correct the leak then at the customer’s request, by way of a signed consent on Form **B-7** the Alpine OQ employee can:

- d. Perform this minor correction so that the condition is made safe.
- e. Re-start gas to the appliance.
- f. Retest the connection for the leak with the CGI and Leak indicating solution.

Report incident in detail on Form B-1, including Leak Grade Rating.

**If, written request for this leak correction is not completed then the gas meter will be shut off and red tagged as in 3, above.**

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operations, Maintenance and Emergencies Manual.

### RELATED PROCEDURES

- 605-B11 Customer Service-Odor&Leak Calls
- 723 – Walking Gas Leakage Survey
- 615 Emergency Plan
- 723 Leakage Survey, Leak Grading
- 605 B-1 General Pipeline Repair
- 709 Record Keeping
- 1005 Integrity Management
- 281-285 Maintenance, Pipe Joining
- 273- Pipe Joining Threaded Pipe

### Gas leaks at customer appliance

Connections, observed by an Alpine OQ Employee, to be leaking are to be turned off at affected appliance and brought to the customer’s immediate attention.



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

General Meter Shut off	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Closing Valve at Service Riser

### SCOPE AND PURPOSE

This procedure is to ensure the proper manual closing of valve at a service riser. This procedure is a customer service procedure to stop flow at the meter

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that valves are operated as described in this procedure.

### PERSONNEL SAFETY

Do not operate valve if lightning is present.

### EQUIPMENT AND MATERIALS

Valve key wrench  
Door Hanger

### OPERATOR QUALIFICATION

This activity is not a covered task under the Operator Qualification Plan.

### INSTRUCTIONS

#### *Prior to Closing a Valve*

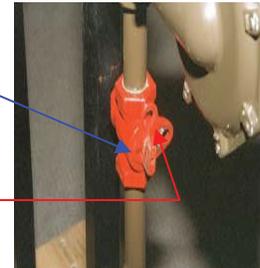
1. Attempt to notify customer of intention
2. Identify the meter to shut off
3. Confirm that the valve chosen to operate is the correct valve to control the desired meter.
4. Observe that the valve is Open

#### *Closing of Valves*

- a. Verify the original position of the Valve before operating.
- b. Small valves at service risers may or may not be equipped with "valve-stops", but the position of the valve can be determined by observing the

position of the wrench-tab in relation to the service riser.

Wrench-tab parallel with service riser = "On or Open".  
To "Close", turn the wrench-tab so that the lock-tabs are aligned and the wrench-tab is cross-ways to the service riser.



Image

- c. **Ensure** that the valve(s) is free of visible debris, corrosion, or damage that may hamper the operation of the valve(s).
- d. Using the appropriate tool, close the valve(s). this valve is operated by turning 1/4 turn,
- e. Perform "lock-out" "tag-out", as required by Operation and Maintenance Manual.
- f. Place door hanger notifying meter is off.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

None



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 503	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Leak Test at Operating Pressure

### SCOPE AND PURPOSE

This procedure is to ensure adequate leak testing at operating pressure and to ensure discovery of all potentially hazardous leaks in the segment being tested as required under §192.503. Other related code sections include §§192.511, 192.513, & 192.725.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that pressure testing is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

Leak Detection Equipment (Soap solution, CGI, etc)  
Other Equipment as Needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan **C.T. 25** and may only be performed by or directed and observed by an individual who is currently qualified to perform leak testing at operating pressure. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Pressure Testing Steps

- g. Typically, the final joint/fitting that is used to tie in a segment of pipeline is not subjected to a pressure test. Therefore, each joint that is used to tie in a segment of pipeline shall be leak tested at not less than its operating pressure.
- h. Once the operating pressure has been introduced to the pipeline segment and the

pressure has stabilized, leak test the final joint/fitting using either:

- a. A soap solution – The soap solution is typically brushed or sprayed on the joint/fitting; visually inspect the joint/fitting to check for signs of leakage (bubbling of the soap solution on the joint/fitting indicates leakage).
- b. CGI or other gas detector capable of detecting leakage – Using the instrument, obtain samples of the air around the joint/fitting to check for signs of leakage (a reading on the instrument indicates leakage).
- i. Repair any leaks discovered in accordance with company policy.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

0381-0391-0411-0421 – Spring-Loaded and Pilot-Operated Pressure Regulating, Limiting, and Relief Devices: Inspection, Testing, Preventative and Corrective Maintenance  
0561 – Pressure Test – Non-Liquid Medium – Test Pressure below 100 psig



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 273	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Joining of Pipe- Threaded Joints

### SCOPE AND PURPOSE

This procedure includes the joining and inspection of threaded pipe with threaded fittings, and the inspection of completed joints. It describes the practices required by §192.273.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that the joining of pipe using threaded fittings is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

Threaded fittings  
Wrenches  
Pipe/thread sealant  
Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### General

Verify that the fitting selected is the correct fitting for the application (correct size, type, etc.).

#### Installation

- a. Inspect pipe, fitting, and pipe/fitting threads for
  - Damage
  - Deformities

- Defects
  - Any other condition that may impair a gas tight connection
- b. Remove/replace any fitting or section of pipe found to have any condition mentioned above.
  - c. Clean the threaded surfaces to remove any surface rust, dirt, etc.
  - d. Apply pipe thread sealant in accordance with the pipe thread sealant manufacturer's instructions.
  - e. Assemble the joint and tighten using the appropriate wrenches
    - Note: Unless the pipe/fitting is being installed with the use of a pipe vise or other acceptable method, it is recommended that two wrenches be used to tighten the fitting to the pipe
      - One wrench is used to hold the pipe to help prevent other fittings from being loosened while the other wrench is used to tighten the fitting to the pipe
  - f. Inspect the completed joint for
    - Damage
    - Deformities
    - Defects
    - Any other condition that may impair a gas tight connection

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

- 0561 – Pressure Test – Non-liquid Medium – MAOP less than 100 psi
- 0571 – Pressure Test – Non-liquid Medium – MAOP greater than or equal to 100 psi
- 0591 – Leak Test at Operating Pressure
- 0641 – Visually Inspect Pipe and Components Prior to Installation



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 365	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

### Manually Opening and Closing Valves

#### SCOPE AND PURPOSE

This procedure is to ensure the proper manual operation of valves (opening and closing). This is not applicable to throttling valves for flow control on regulating station or closing valve service riser cocks at meters.

#### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that valves are operated as described in this procedure.

#### PERSONNEL SAFETY

Do not operate valve if lightning is present.

#### EQUIPMENT AND MATERIALS

Valve key wrench  
Other equipment and materials as needed

#### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform manual operation of valves. Refer to the OQ Plan for specific qualification requirements.

#### INSTRUCTIONS

- j. **Prior to Opening or Closing a Valve**
  - a. Identify the valve(s) to be operated.
  - b. Identify the valve type (plug, ball, and gate), as the valve type will have a bearing on "how" this valve is operated (1/4 turn, multiple turn, etc).
  - c. Confirm that the valve(s) chosen is the correct valve(s) to control the desired segment of pipeline.
    - i. If the valve(s) is an emergency valve, verify that it is clearly identified and documented as an emergency valve.
  - d. Determine whether the valve(s) is:

- i. Normally Open, or
      - ii. Normally Closed
    - e. If possible, notify the following personnel that may be affected by this operation:
      - i. Operating Personnel
      - ii. Customers
  - k. **Opening of Valves**
    - a. Verify the original position of the valve(s) before operating.
    - b. Ensure that the valve is free of visible debris, corrosion, or damage that may hamper the operation of the valve.
    - c. Verify that:
      - i. All work has been completed and the valve(s) is ready to be opened;
      - ii. That any and all meter sets affected by this operation have been turned off at the service riser; and,
      - iii. Appropriate personnel are notified.
    - d. Using the appropriate tool, slowly open the valve(s).
    - e. Verify the segment involved is operating at its correct pressure.
    - f. Perform "lock-out" "tag-out", as required by Operation and Maintenance Manual.
  - l. **Closing of Valves**
    - a. Verify the original position of the valve(s) before operating.
      - i. "Valve-stops", common in larger valves, enable the user to determine the position of the valve(s) – Turn clockwise to "Close" and counter-clockwise to "Open".
      - ii. Small valves at service risers may or may not be equipped with "valve-stops", but the position of the valve can be determined by observing the position of the wrench-tab in relation to the service riser.

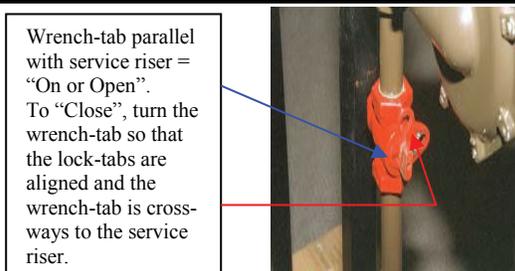


ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 365	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

### Manually Opening and Closing Valves



- b.** Ensure that the valve(s) is free of visible debris, corrosion, or damage that may hamper the operation of the valve(s).
- c.** Using the appropriate tool, close the valve(s).
- d.** Perform "lock-out" "tag-out", as required by Operation and Maintenance Manual.

#### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

#### RELATED PROCEDURES

0331 – Valve – Visual Inspection and Partial Operation

0341 – Valve – Preventive Maintenance



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 727	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Purging with Air or inert Gas

### SCOPE AND PURPOSE

This procedure is to provide personnel with the necessary procedures for performing purging with gas, air, or inert gas as required by §192.629

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that purging with gas, air, or inert gas is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

- Personnel shall not perform purging operations until ignition and potential ignition sources are eliminated.
- Prior to the beginning of a purging operation, appropriate notifications shall be given to local public officials and the public in the vicinity of the purging operation if:
  - It is anticipated the release of gas/air may disturb normal traffic flow; and/or
  - It is anticipated that there may be calls from the public regarding the purging operation; and/or
  - It is anticipated that the public may be affected by the purging process by things such as:
    - High Noise Level
    - Strong Odor
    - Possibility of Accidental Ignition
- Whenever purging operations are in progress, a fire extinguisher must be present at the purging site at a suitable location.
- The discharge mechanism (purge stack) that is used to purge the gas/air must be metal (steel, copper, stainless steel, etc.) and an electrical ground applied so that the potential for static electricity is minimized – static electricity can be created by the

friction of the gas/air molecules on the pipe walls. Plastic pipe is susceptible to static electricity buildup, especially at the ends of pipe.

- When purging larger diameter pipe, such as 2-inch diameter and larger where a large volume of gas/air is to be purged, the discharge mechanism should be smaller in diameter than the pipeline being purged.
- As a general rule, the discharge mechanism should not be larger than one-half the diameter of the pipeline being purged. This smaller diameter should help increase velocity of the gas passing through the discharge apparatus and may prevent flashback should the venting gas ignite.
- The discharge mechanism should extend high enough to expel the vented gas/air away from personnel and potential ignition sources.
- Prior to beginning a purging operation, a suitable location shall be chosen to reduce the risk to life, property, and the environment.
  - Particular consideration should be taken to avoid purging directly under or into power lines.
- Ensure that a means of adequate communication is available and established for purging operations where the purge stack location and the means for controlling the release of the air, gas, or inert gas is not in the same vicinity so that the flow may be halted in the event of an emergency.
- Suitable personal protective equipment shall be used by personnel commensurate with the purging operation. Example(s):
  - Flame Retardant Clothing
  - Eye Protection
  - Hearing Protection



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 727	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

## Purging with Air or inert Gas

- Hand Protection
- Other as Needed

### EQUIPMENT AND MATERIALS

- Combustible Gas Indicator (CGI)
- Bonding Cable
- Discharge Mechanism (Riser)
- Adapter Fitting(s)
- Inert Gas (As Needed)
- Air Compressor (As Needed)
- Other Equipment and Materials as Needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform purging of a pipeline of air, gas, or inert gas. Refer to the OQ Plan for specific qualification requirements.

### GENERAL

- Purging is the process of displacing gas/air within a pipeline or pipeline section with natural gas, air, or an inert gas.
  - *Purging a pipeline of air with gas is required:*
    - Whenever a pipeline or pipeline section is newly installed
    - Whenever a pipeline or pipeline section has been removed from service and is being re-activated
  - *Purging a pipeline of gas with air is required:*
    - Whenever a pipeline or pipeline section is to be abandoned or the pressure is removed for maintenance, etc.
    - However, the pipeline need not be purged when the volume of gas is so

small that there is no potential hazard.

- *Purging a pipeline with an inert gas is required:*
  - If gas cannot be supplied in a sufficient quantity to prevent the formation of a hazardous mixture of gas in air, a slug of inert gas should be released into the line before the gas.
  - If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas should be released into the line before the air.
- A combustible gas indicator (CGI) is the preferred method of verifying that the pipeline or pipeline section has been completely purged.

### INSTRUCTIONS

#### Purging of Gas with Air or Inert Gas (Blow-down)

- r. Determine the location for the purging operation.
- s. Ensure that all potential ignition sources are removed and secure the area where the purging operation will take place.
- t. Determine if notification(s) to public officials and/or the public is needed.
- u. Ensure that fire extinguisher(s) and other appropriate personal protective equipment is available and in use, as needed.
- v. Determine if a purge stack will needed to be installed or if service risers or other already installed piping may be used as a purge stack for the purging operation.
- w. Isolate the pipeline section to be purged (Ex: Squeeze-Offs, Valves, Control Fittings, etc.). **Note:** *If squeezing plastic*



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 727	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

### Purging with Air or inert Gas

*pipe, ensure that the squeeze-off tool is grounded.*

- x. Install purge stack, if needed (see “e”).
- y. Ensure that all purge stacks are grounded by attaching a grounding cable to the stack on one end and attaching the other end to a ground rod driven into the ground.
  - i. To help reduce the risk of a static electricity discharge if purging plastic pipelines, consideration should also be given to applying soapy-water soaked burlap strips/rags or other suitable conductive material around the area of the end of the plastic pipeline and grounded by the use of a ground cable and ground rods.
- z. Verify that the purge stack is of sufficient height to expel the vented gas/air away from personnel and potential ignition sources.
- aa. Open the valve or other mechanism that will release the gas through the purge stack in a moderately rapid continuous flow.
- bb. Once the gas has finished relieving, test the opening of the purge stack with a CGI to confirm that the atmosphere is well below the lower explosive limit L.E.L. of the gas being purged – *squeeze-off tools may not provide a 100% squeeze-off – care should be exercised in this situation.*
- cc. Disconnect the pipeline section that has been recently purged from the source of gas.
  - i. **Note:** *when disconnecting steel pipelines, consideration shall be given to the use of bonding cables to bond across the area of separation to help prevent arcing.*

dd. Prepare the disconnected end of the pipeline segment to accept air from a compressor or other suitable means.

- i. **Note:** *for small purging operations such as, but not limited to, blow-down of small sections of service line or main, further purging with air may not be necessary if the volume of gas is so small that it poses not potential hazard to life or property – if in doubt, purge with additional air.*
- ee. Using an air compressor or other suitable means, introduce air into the previously purged pipeline segment in a moderately rapid continuous flow – ***if air cannot be introduced in a moderately rapid continuous flow, a slug of inert gas shall be introduced into the pipeline before the air.***
- ff. Obtain readings with a CGI to verify that the atmosphere is well below the L.E.L. of the gas being purged – continue purging until this is achieved.
- gg. At the conclusion of the purging operation, remove the purge stack and related equipment, if any (see “e”).

#### **Purging of Air with Gas or Inert Gas (Start-Up or Re-Commissioning)**

- a. Determine the location for the purging operation.
- b. Ensure that all potential ignition sources are removed and secure the area where the purging operation will take place.
- c. Determine if notification(s) to public officials and/or the public is needed.
- d. Ensure that fire extinguisher(s) and other appropriate personal protective equipment is available and in use, as needed.
- e. Determine if a purge stack will need to be installed or if service risers or other already installed piping may be used as a purge stack for the purging operation.



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 727	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Purging with Air or inert Gas

- f. Install purge stack, if needed (see “e”).
- g. Ensure that all purge stacks are grounded by attaching a grounding cable to the stack on one end and attaching the other end to a ground rod driven into the ground.
- i. To help reduce the risk of a static electricity discharge if purging plastic pipelines, consideration should also be given to applying soapy-water soaked burlap strips/rags or other suitable conductive material around the area of the end of the plastic pipeline and grounded by the use of a ground cable and ground rods.
- h. Verify that the purge stack is of sufficient height to expel the vented gas/air away from personnel and potential ignition sources.
- i. Open the valve or other mechanism that will release the gas into the pipeline and force the air in the pipeline out through the purge stack in a moderately rapid continuous flow – ***if the gas cannot be introduced in a moderately rapid continuous flow, a slug of inert gas shall be introduced into the pipeline before the gas.***
- j. Periodically obtain CGI readings at the end of the purge stack – continue purging until 100% gas reading is obtain on the CGI.
- **Note:** *when purging large sections of newly installed pipelines, the odorant in the gas may be absorbed in the pipe walls – this may result in the gas being purged to exhibit an un-odorized or a lack of odorant condition – DO NOT RELY ON YOUR SENSE OF SMELL TO DETERMINE IF ALL OF THE AIR IS PURGED FROM THE PIPELINE.*
  - **Note:** *for small sections of service line or main that would not introduce a significant amount of air into the gas stream and therefore would not pose a hazard, purging may not be necessary – if in doubt, purge the air out of the pipeline.*
- k. Once a 100% gas reading is obtained, close the valve or other mechanism at the purge stack.
- l. At the conclusion of the purging operation, remove the purge stack and related equipment, if any (see “e”).

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

None



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 605-B	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## Squeeze off Plastic Pipe

### SCOPE AND PURPOSE

This procedure is to provide personnel performing squeeze off operations on plastic pipe with a safe and effective procedures to ensure the integrity of the piping system during operations, maintenance and emergencies.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that squeeze off operations are performed as described in this procedure.

### PERSONNEL SAFETY

- Personnel should be aware of the possibility of electro-static build up in PE pipelines.
- As a general safety precaution, squeeze offs should be performed in a separate bell-hole/location from blowing/escaping gas.
- As a general safety precaution, squeeze-offs should be performed in a separate bell-hole/location from blowing/escaping gas. Consideration should also be given to applying a wet rag/tape to the pipe surface and spraying the area to be squeezed with a fine water or soapy water mist to aid in the dissipation of any possible static buildup.
- Pipe and squeeze off tools should be properly grounded.

### EQUIPMENT AND MATERIALS

Squeeze off tool equipped with over-squeeze protection stops

Static Electricity Elimination Tools

System maps and drawings as needed

Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task **C.T. # 17** under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to

perform squeeze off on plastic pipe to control gas flow. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Squeeze Off

- Verify the correct pipeline segment and proper location for the squeeze off.
- Squeeze-off tools shall be selected and operated in accordance with the manufacturer's instructions.
- Tools must be electrically grounded before they are brought near or attached to the pipe. Tool should be equipped with ground cables and ground rods. If they are not so equipped, these can be installed by using a set of jumper cables with a ground rod. Static electricity ignition prevention steps and pipe and tool grounding measures must be in place and monitored throughout the squeeze off and associated operations.
- Inspect the outside pipe wall for surface damage and remove any dirt or debris in the area to be squeezed (make sure tracer wire will not interfere with the squeeze-off).
- Place the tool on the pipeline to be shut down, avoiding existing fittings and joints that could be affected by the pipe deformation.
- Using the proper squeeze tool, and with proper gap stops, perform the squeeze. Operate the tool slowly, allowing the plastic to conform to the compressed shape slowly to prevent damage to the pipeline.
- If the squeeze-off tool is equipped with a locking device to prevent the separation of the squeeze-off tools bars/ jaws, lock the bars/jaws of the squeeze-off tool.
- DO NOT OVER-SQUEEZE THE PIPE!!!!**

#### Tool Removal



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Normal Ops 605-B</b>	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

### **Squeeze off Plastic Pipe**

---

- i. When the project is complete slowly remove the squeezer allowing the pressure to equalize in the system and allow the pipe to return to its original shape to prevent damage to the pipe wall.
- j. Before removing the tool, examine the squeeze location on the pipe. If the pipe has not returned to a round shape, rotate the squeeze tool 90 degrees and slowly squeeze the pipe back towards a round shape.
- k. Inspect the squeezed-off section of the pipe for damage. Permanently mark the squeeze location and note the squeeze location on the appropriate forms or drawings and proceed with backfilling.

#### **REPORTING/NOTIFICATION**

Complete documentation in accordance with Operation and Maintenance Manual.

#### **RELATED PROCEDURES**

None



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>Normal Ops 509</b>	Approval; Date: 07/15/04
Revision date: 12/28/12	Supersedes: None

## Pressure Test-Non liquid Medium- MAOP less than 100psig

### SCOPE AND PURPOSE

This procedure is to ensure adequate pressure testing of pipeline systems operating below 100 psig and to ensure discovery of all potentially hazardous leaks in the segment being tested as required under §192.509. Other related Code sections include §§192.511, 192.513, & 192.725.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure that pressure testing is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

- Test Device/Gauges/Recording Instruments
- Test Medium (Nitrogen, Air, etc)
- Leak Detection Equipment (Soap, CGI etc)
- Fittings
- Other Equipment as Needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform pressure testing for pipelines operating below 100 psig. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Pressure Testing Steps

a. Verify the following information prior to beginning the pressure test:

- i. Maximum Allowable Operating Pressure (MAOP) of the segment to be pressure tested.
- ii. Maximum Operating Pressure (MOP) of the segment to be pressure tested.
- iii. The minimum and maximum test pressure for the segment to be pressure tested (see section f., items i-iv.).
- iv. The test duration of the segment to be pressure tested (See OME Manual).
- v. The test medium to be used for the pressure test.
- b. Ensure that pressure gauges/recording instruments have been calibrated in accordance with company procedures and manufacturers' specifications.
- c. Ensure that segment to be pressure tested is:
  - i. Isolated from any customer piping to prevent the pressure test from being introduced into customer piping.
  - ii. Isolated from the source of gas (to prevent the pressure test from being introduced into the gas stream).
- d. Ensure that the pipe end receiving the test gauge is cleaned prior to the installation of the test gauge.
- e. Install test gauge on the isolated segment to be pressure tested.
- f. Using the test medium (Air, Nitrogen), pressurize the isolated segment according to the following:
  - i. For steel mains operating at a pressure greater than 1 psig:  
.1.5 times the MAOP, or 90 psig minimum.
  - ii. For steel service lines operating at a pressure between 1 psig and 40 psig:  
.A minimum of 50 psig.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>Normal Ops 509</b>	Approval; Date: 07/15/04
Revision date: 12/28/12	Supercedes: None

## **Pressure Test-Non liquid Medium- MAOP less than 100psig**

*iii. For steel service lines operating at a pressure greater than 40 psig:*

.1.5 times the MAOP or 90 psig minimum.

*iv. For plastic pipelines:*

.1.5 times the (MAOP) or 50 psig, whichever is greater; however,

i. The maximum test pressure may not be more than three times the design pressure at a temperature not less than the pipe temperature during the test.

ii. During the test, the temperature of the plastic pipe may not be more than 100°F.

- g. Record the initial time of the pressure test.
- h. Soap-test the test-gauge and related fittings.
- i. Maintain and observe the test pressure for the required test duration (see OME Manual).
  - i. Investigate and repair all leaks discovered during the pressure test.
  - ii. Apply a new pressure test once leaks have been repaired.
- j. If the pressure test reveals that the isolated segment being pressure tested is free of leakage, slowly relieve the pressure from the isolated segment.
- k. Remove testing device, gauges, and other related fittings.
- l. Connect the isolated section to the source of gas.
- m. Test the final connection(s) for leaks using a soap-test or other leak detection equipment.
- n. Purge the air from the previously isolated segment.
- o. Document the work performed as outlined in Reporting/Notification below.

### **REPORTING/NOTIFICATION**

The following minimum information shall be recorded and kept of each test required by §192.517:

- The operator's name, the name of the employee responsible for making the test, and/or the name of any test company used.
- The test medium used (i.e. Air, Nitrogen).
- The test pressure.
- The test duration.
- The test date.
- Pressure recording charts or other record of pressure readings.
- Elevation variations, whenever significant for the particular test.
- Leaks and failures noted and their disposition.

### **RELATED PROCEDURES**

- 0591 – Leak Test at Operating Pressure
- 0641 – Visually Inspect Pipe and Components Prior to Installation



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 801	Approval; Date: 07/15/04
Revision date: 3/28/13	Supercedes: None

## Observation of cut weld on Steel Piping

### SCOPE AND PURPOSE

This procedure is to ensure when personnel install a steel weld type repair sleeve, it is performed according to accepted industry practices. It describes practices required to comply with §192 Subpart E – Welding of Steel in Pipelines.

### RESPONSIBILITY

The Alpine Qualified Operator other designee, is responsible to ensure when installing a steel weld type repair sleeve, that it is performed as described in this procedure.

### PERSONNEL SAFETY

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

- System maps and records
- Steel weld type repair sleeve
- 4” Carbon Steel ball valve
- Routine hand tools
- Blower unit
- Other equipment and materials, as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

The Operator will qualify this procedure by observing certified welder perform welding according to this procedure.

The Operator is responsible for the safe and proper shutting down and restarting of the

Regulator station with careful attention to possible AOC's.

### INSTRUCTIONS

1. All pipe and associated fittings must be thoroughly cleaned prior to procedure.
2. Shutdown regulator station as in 739.
3. Ventilate vault
4. Test for presence of gas with CGI
5. All rust must be removed using hand or power brushing. Sandblasting, power sanding, and power grinding should be avoided.
6. Care must be taken not to remove metal.
7. All existing coating material on the pipe must be removed beyond the area to be welded..
8. If severe corrosion is present, complete cylindrical pipe segment replacement should be considered.
9. After segment is cut removed
10. Visually inspect for internal corrosion
11. Fit the cut in weld ball valve segment to the pipe. With any longitudinal bevel surfaces in a horizontal position.
12. Ensure that the weld type repair segment makes complete contact with the pipe surface along each longitudinal bevel surfaces and the circumferential bevel surfaces.
13. External weld clamps may be used to ensure a tight fit to the pipe.
14. Clean all surfaces. Inspect weld bead.
15. Return pressure regulating station back to operations.
16. Check for leaks with.
17. Test with CGI.
18. Perform “Lock Up” procedure.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Normal Ops 801	Approval; Date: 07/15/04
Revision date: 3/28/13	Supercedes: None

## Observation of cut weld on Steel Piping

---

### RELATED PROCEDURES

- 605-B1 General Pipeline Repair
- 475 – Visually Inspect Pipe and Components Prior to Installation
- 481 Inspecting for Atmospheric Corrosion
- 481-A Remedial Action for Atmospheric Corrosion
- 487-C Remedial Action for Localized Corrosion
- 739 Operation, maintenance and inspection of pressure regulating station



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 721	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 7/15/04

ALPINE NATURAL GAS

## System Patrolling

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of the Alpine Natural Gas pipeline system by periodically performing patrolling as required by 49 CFR § 192.721.

### RESPONSIBILITY

The System Administrator is responsible to ensure that all pipeline system patrolling is performed according to the provisions of this procedure and that proper records are maintained.

### PERSONNEL SAFETY

Vehicle and traffic safety  
No Special personnel safety issues

### EQUIPMENT AND MATERIALS

Personnel may elect to utilize leak detection instrumentation and photographic equipment during patrolling efforts.  
Safety vests and vehicle warning flashers

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan includes **ANG C.T # 18, 36 & 37** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Patrolling Frequency- In a Calendar Year Business and or Public Gathering Places

*-4 times/year not to exceed 4.5 months*

(Alpine Natural Gas has identified 4 Business Districts See **Appendix R** for list).

#### All Other areas of "Distribution System"

*-2 times/year not to exceed 7.5 months*

Patrolling of distribution facilities may be achieved by walking or driving in order to observe surface conditions and exposed pipe locations for evidence of the following:

- Leakage
- Construction activity
- Encroachments
- Washouts/erosion/subsidence
- Damaged or missing pipeline markers
- Evidence of natural disaster damage
- Damaged piping at bridge crossings
- Vehicular damage to piping
- Vandalism to facilities

As soon as possible after heavy rainstorms, the following facility locations are to be patrolled regardless of normally required patrolling frequency:

- Cosgrove Creek (both crossings)

### REPORTING/NOTIFICATION

Form 721 will be completed each time the pipeline is patrolled. The System Administrator must be notified immediately if any evidence of leaks or other damage is discovered. All non-leaking damages will be scheduled for repair at the earliest opportunity. All damages associated with leakage will be scheduled for repair according to leak classification.

### RELATED PROCEDURES

- 605-B1 General Pipeline Repair
- 707 Line Markers
- 709 Record Keeping
- 723 Leakage Surveys



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 723	Approval Date: 07/15/04
Revision date: 12/29/12	Supersedes: 07/30/11

ALPINE NATURAL GAS

## Leakage Surveys-Walking

### SCOPE AND PURPOSE

This procedure is to provide personnel performing leakage surveys on Alpine’s gas distribution system with the necessary procedures to inspect any portion of a natural gas system to detect, classify, and report leakage locations that are venting to the atmosphere as required by §192.723.

A leakage survey shall provide coverage of mains and services underground and aboveground; in all areas where an operator can reasonably be expected to carry the equipment.

### RESPONSIBILITY

The System Administrator is responsible to ensure that all pipeline system leakage surveys are performed according to the provisions of this procedure and that proper records are made.

### PERSONNEL SAFETY

Vehicle and traffic safety  
No Special personnel safety issues

### EQUIPMENT AND MATERIALS

Facility Maps- ANG System Maps **Appendix O**  
Business District Maps-**Appendix D-4**  
Gas Leak Report  
General Pipeline Repair Form  
Combustible Gas Indicator (CGI)  
Detecto-Pac Infrared (DP-IR) Methane Detector  
Bar Hole Equipment  
Leak Contractors accepted OQ plan  
Safety vests and vehicle warning flashers

#### \*Special Note:

Flame Ionization Detector (FID) may be used (and has in the past) for this procedure by an outside contractor, but currently Alpine OQ personnel do not perform this task with FID.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under Alpine’s OQ Plan; **C.T. # 36** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

Qualified Alpine employees may perform leak survey **ANG C.T. 36**, by walking or in some cases accompanied by a vehicle following behind for added safety especially in heavily travelled roadways.

If an outside contractor is employed, e.g. Heath Consultants, to perform a Leak survey, documents of Operator Qualification are requested at time of scheduling and reviewed prior to survey and the Contractors OQ Plan must be accepted as compliant with 49 CFR § 192.723 by Alpine’ System Administrator The contractor may perform a mobile survey if the survey equipment used is appropriately applied to vehicle and approved.

#### Inspection Frequency

Alpine Natural Gas will perform instrumented leakage survey activities for mains and service lines in order to comply with 49 CFR § 192.723. Generally a DP-IR methane detector will be used.

A Heath Combustible Gas Indicator, (CGI), Model 500 or similar will also be used for pinpointing any leaks detected.

#### Maps are made available to the Surveyor for all locations to be surveyed.

*The distribution facilities areas must be surveyed for leakage, as follows:*



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 723	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 07/30/11

ALPINE NATURAL GAS

## Leakage Surveys-Walking

*Inside Business Districts* - must be instrument (FID/CGI or DP-IR) surveyed once each calendar year, but at an interval not exceeding 15 months. *Business Districts* are defined as areas where gas facilities are under continuous paving extending from the center line to the building wall; and the majority of the buildings on either side of the street are utilized for legitimate business activities; and the buildings are high occupancy multi-story or buildings with multiple businesses that share common walls.

*Outside Business Districts* - must be instrument (FID/CGI or DP-IR) surveyed at an interval not exceeding 5 years.

*Public Gathering Places* - must be instrument (FID/CGI) surveyed once each calendar year, but at an interval not exceeding 15 months.

Public Places are defined as buildings where large numbers of people are likely to gather or be present, such as:

- Public or private schools including day care nurseries, colleges and universities
- Public or private hospitals, sanitariums, nursing homes and assisted living/handicapped facilities
- Churches
- Theaters
- Auditoriums
- Factories

**Appendix D-3** contains county parcel maps to illustrate location of Business Districts and Public Gathering Places defined by Alpine.

Special leakage surveys will be performed, as follows:

- During formal uprating procedures (49 CFR Subpart K)
- Prior to and after completion of major underground construction projects
- Prior to and after street improvement projects

- After all underground blasting activities

### Leak Grading

Leaks are assigned priority grading according to location, extent of migration, gas concentration, potential for concentration, ignition sources and potential hazard to the public and property. These priority grades are intended only as guidelines. Individuals evaluating leaks are required to use sound judgment after giving consideration to all associated factors for each leak.

Leaks are typically classified, as follows:

**Grade 1 - Hazardous** – Leaks that pose an immediate hazard to persons or property.

These leaks require continual monitoring until repair is achieved. Prompt remedial action must be undertaken for leaks classified as hazardous.

*Grade 1* leaks may include, but are not limited to:

- All leaks under buildings or foundations
- All blowing or ignited gas scenarios
- All leaks inside buildings at or above 1.5% gas-in-air concentration
- All leaks inside enclosures containing electrical equipment.

**Grade 2 - Intermediate** – Leaks that are not hazardous at the time of discovery, but may become hazardous to persons and property at some future date.

These leaks will be scheduled for permanent repair within two workweeks from the date of discovery, except that all Grade 2 inside leaks will require prompt repair by the fuel gas piping/appliance owner and these facilities may be subject to shut-off and **RED TAGGED** until repair is confirmed.

*Grade 2* leaks may include, but are not limited to:



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 723	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 07/30/11

ALPINE NATURAL GAS

## Leakage Surveys-Walking

- All outside leaks within ten feet, (10 ft.), of buildings where pavement surrounds the structure and within five feet, (5 ft.), where no pavement exists.
- All leaks inside buildings below 0.5% gas-in-air concentration
- All leaks which may migrate to, under or inside buildings
- All above ground piping leaks
- Leaks where man made venting is created to reduce migration and accumulation

**Grade 3 – Non-Hazardous** – Leaks that are not hazardous at the time of discovery and are not expected to become hazardous within the scheduled repair period. These leaks will be scheduled for permanent repair within one year, (1 yr.), of discovery.

During the scheduled repair period, these leaks will be re-evaluated on a six-month, (6 mo.), interval or by the end of the calendar year of discovery, whichever occurs first. These leaks will be re-classified as necessary.

All leak re-classification shall be performed using a CGI and/or bar hole equipment.

All leaks requiring re-classification to *Grade 1* will be immediately reported to the System Administrator

*Grade 3* leaks may include, but are not limited to:

- A leak that naturally vents to the atmosphere
- A leak that does not endanger persons or property including sewers manholes
- A leak with minimal migration

### MAINTENANCE & OPERATION OF INSTRUMENTS

Each instrument used for leak detection and evaluation shall be operated in accordance with

the manufacturer’s recommended operating instructions.

### CALIBRATION OF INSTRUMENTS

Each instrument used for leak detection and evaluation shall be calibrated in accordance with the manufacturer’s recommended calibration instructions.

### INSTRUCTIONS

The walking survey shall be conducted at speeds slow enough to allow an adequate sample to be continuously obtained by placement of equipment intakes over the most logical venting locations (See 1, 2, 3 below), giving consideration to the location of gas facilities.

#### For Aboveground Piping:

- Sampling of the atmosphere should, where practical, take place adjacent to the piping as close as permitted by gas detector design, due to the potential for rapid diffusion of leaking gas to the atmosphere.

#### For Underground Piping:

- Sampling of the atmosphere should, where practical, take place along the route of the pipeline to be inspected as close to the ground surface as permitted by gas detector design, due to the potential for rapid diffusion of leaking gas to the atmosphere.

#### Areas Where Piping is Under Pavement

- Samplings should be taken at, but not limited to, the following locations:
  - Curb Line(s)
  - Available ground surface openings, such as but not limited to:
    - Manholes
    - Catch Basins
    - Sewer, Power, & Telephone Duct Openings
    - Fire & Traffic Signal Boxes



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 723	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 07/30/11

ALPINE NATURAL GAS

## Leakage Surveys-Walking

- Cracks in Pavement of Sidewalks
- Any Point where Venting is Likely to Occur
- Foundation Walls

### Limitations

- Gas detector design or adverse conditions may **limit** the use of this survey method. Examples of adverse conditions that may affect the venting of subsurface gas leaks include, but are not limited to:
  - Moisture
  - Frost
  - Ice & Snow Cover
  - High or Gusting Wind

### **Leak Classification, & Action Criteria**

When evaluating any gas leak indication, the initial step is to determine the grade/severity and perimeter of the leak area and take appropriate action in accordance with Operations, Maintenance and Emergencies Manual or Emergency Plan. If this perimeter extends to a building wall, the investigation(s) should continue into the building, if possible.

Before a leak can be classified, a determination shall be made as to the severity of the leak.

- The migration of gas shall be determined by establishing the outer boundaries of the indications. These tests shall be made with a CGI.
- If possible, locate all gas lines in the vicinity of the leak indication. Particular attention should be paid to the location of valves, fittings, tees, stubs, and connections.
- If possible, all foreign facilities in the area of the search should be identified.
- Personnel should look for evidence of recent construction activities that may have contributed to the leakage.
- Gas may also migrate and vent along a trench or bore-hole provided for other

facilities. Leaks could occur at the intersection of the foreign facility and the gas pipeline; particular attention should be given to those intersections.

- Evenly spaced bar or test holes should be used over the gas line(s) suspected to be leaking.
- If possible, all bar or test holes should be of equal depth and diameter (and down to the pipe where necessary).
- All CGI readings should be taken at an equal depth and the readings recorded.

Based on the evaluation of the location or magnitude of a leak, or both, leaks shall then be graded in accordance with the [ANG](#) leak classification criteria. The judgment of the personnel at the scene is of the primary importance in determining the grade assigned to the leak.

- **Note: Underground leaks must be graded using a Combustible Gas Indicator (CGI). A CGI is a device capable of detecting and measuring gas concentrations, of the gas being transported, in the atmosphere.**

All leaks shall be repaired / monitored according to the [ANG](#) leak classification and action criteria.

When a leak is to be re-evaluated, it shall be re-evaluated and classified using the same procedure that was used in the initial classification of the leak.

### **Precautions**

- When placing bar or test holes for testing, consideration shall be given to bar or test-hole placement and depth to minimize the potential for damage to gas pipeline facilities and possible injury to personnel conducting the investigation.
- Caution should also be exercised to prevent damage to other underground



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 723	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 07/30/11

**ALPINE NATURAL GAS**

## Leakage Surveys-Walking

---

- structures when bar holing or excavating.
- Unusual situations may complicate investigation techniques on some occasions such as, but not limited to:
    - Multiple leaks
    - Foreign gases
    - Gas detected in storm-drain or sewer systems
    - Gas detected in telephone or other duct runs
      - These indications should be considered migrating gas leakage until proven otherwise by test or analysis.

### REPORTING/NOTIFICATION

Form 723 will be completed for each leakage survey. This record will be maintained for the useful lifetime of the facility. A Gas Leak Report, Appendix B - 1, will be initiated for each leak detected and will be completed upon repair of the subject leak. Form 605 B-8 will also be completed for each facility repair.

### RELATED PROCEDURES

605-B1 General Pipeline Repair  
707 Line Markers-  
709 Record Keeping  
D-3 Leak Survey Summary Form  
System Maps



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 707	Approval Date: 07/15/04
Revision date: 12/29/12	Supercedes: 07/15/04

ALPINE NATURAL GAS

## Line Markers

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of the pipeline system by installing and maintaining line markers as required by 49 CFR § 192.707.

### RESPONSIBILITY

The System Administrator is responsible to ensure that all pipeline markers are properly installed and maintained.

### PERSONNEL SAFETY

Vehicle and traffic safety  
No Special personnel safety issues

### EQUIPMENT AND MATERIALS

Approved line markers  
Line Marker "Digger"  
Line Marker "Puller"  
Safety vests and vehicle warning flashers

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 34** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Inspection Frequency

Line markers must be inspected, and replaced as necessary, during regularly scheduled pipeline system patrolling.

Line markers will bear the terminology "**WARNING**", "**CAUTION**" or "**DANGER**" followed by "**GAS PIPELINE**". This required line marker terminology will have letters of one

inch, (1"), in height and a one-quarter inch, (1/4"), stroke. Additionally, The operator name and telephone number (including area code) where the operator can be reached at all times must also be adhered to the line markers.

#### Line Marker Placement

Line markers will be placed and maintained where pipeline facilities are present along highways and associated crossings as well as in areas where future construction of buildings is anticipated.

Line markers will be placed and maintained where pipeline facilities are located above ground in Class 3 areas where these locations are accessible to the public.

### REPORTING/NOTIFICATION

Form 721 will be completed during Patrolling efforts and maintained for the appropriate period. Damaged line markers must be scheduled for replacement at the earliest opportunity.

### RELATED PROCEDURES

721 System Patrolling  
709 Record Keeping

### Line Marker Terminology



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 709	Approval Date: 07/15/04
Revision date: 07/15/04	Supersedes: None

**ALPINE NATURAL GAS**

## Record Keeping

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of the pipeline system by recording and maintaining records of all repairs, patrols, surveys, inspections and tests required by 49 CFR Subparts L and M.

### RESPONSIBILITY

The System Administrator is responsible to ensure that all pipeline records are properly obtained and maintained according to the provisions of this procedure.

### PERSONNEL SAFETY

There are no special personnel safety issues.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan

### REPORTING/NOT-IFICATION

The following records must be periodically obtained and maintained and recorded on appropriate forms.

<u>Record Type</u>	<u>Interval</u>
Public Education	1 year
Damage Prevention	1 year
Patrolling	5 years
Emergency Valves	5 years
Regulator Stations	5 years
Leakage Surveys	Lifetime
General Repair	Lifetime
Cathodic Protection	Lifetime
Abandoned Facilities	Lifetime
MAOP Establishment	Lifetime
Customer Owned Piping	3 years

### RELATED PROCEDURES

- 503 Facility Leak Test Requirements
- 605-B1 General Pipeline Repair
- 614 Damage Prevention
- 616 Public Education
- 619 Maximum Allowable Operating Pressure Cathodic Protection (various standards)
- 721 System Patrolling
- 723 Leakage Surveys
- 727 Abandonment of Pipeline Facilities
- 739 Regulator Stations
- 747 Valve Inspection and Maintenance



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 605-B1	Approval Date: 07/15/04
Revision date: 06/15/11	Supersedes: 07/15/04

ALPINE NATURAL GAS

## General Pipeline Repair

### SCOPE AND PURPOSE

This procedure is to ensure when personnel measure and characterize mechanical damage or a segment of the pipeline is observed to be un-safe repair is then performed according to accepted gas industry standards.

It describes practices required to comply with 49 CFR § 192.605 (b) (1)

- 192.307
- 192.309
- 192.614 (c) (6)
- 192.703

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all pipeline system repairs are performed according to the provisions of this procedure.

Each defect or damaged pipeline segment that impairs serviceability or becomes unsafe may will be repaired, replaced or taken out of service promptly.

Hazardous leaks must be repaired promptly

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing pipeline system repairs.

### EQUIPMENT AND MATERIALS

All personnel are to utilize proper repair tools, materials and safety equipment required for each type of system repair.

- Leak Detection Equipment
- Defelsko Posi-Tector, UTG-ME
- Caliper style Depth gauge.
- Other equipment and materials as needed.

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan, **ANG C.T # 20 & 30** and may only be performed or directed and

observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Observance of an AOC on portion of pipeline.

Operator may observe an abnormal operating condition on a portion of the pipeline including: routine maintenance, leak investigation, excavation, construction, leak survey patrolling, or another activity that requires assessment (see Table 1) and remedial repair.

#### Steps:

#### Characterize Damage (see tables below for guidance)

**Cracks**

**Dents**

**Gouges**

#### Measure-Wall Thickness Loss

Measurement using either a pit depth gauge or a sonograph instrument is acceptable,

Alpine measures steel line wall thickness loss with an ultrasonic thickness instrument; Manufactured by Defelsko Corporation, Model, Posi-Tector UTG-ME. Using manufacturers specified directions to determine extent of metal loss.

For P.E. pipe and fittings that exhibit loss of wall thickness greater than or equal to 10%, the subject pipe segment shall be determined to be unserviceable facility and scheduled for replacement at the earliest opportunity.

#### Repair by Welding (Steel)

A contract individual that is qualified under API 1104 shall perform repair of steel gas



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 605-B1	Approval Date: 07/15/04
Revision date: 06/15/11	Supercedes: 07/15/04

**ALPINE NATURAL GAS**

## General Pipeline Repair

---

facilities that require steel grinding and or welding.

### Repair of Plastic (P.E.)

Repair of plastic gas facilities shall be performed according to 283-285 Plastic Fusion Procedure, which may include segment replacement.

### REPORTING/NOTIFICATION

Complete Form 605 for each facility repair. Specific repair type and components used must be specified on the Form. Location of repairs shall also be documented.

### RELATED PROCEDURES

283-285 Plastic Fusion Procedure  
303 Construction  
727 Abandonment of Pipeline Facilities  
751 Prevention of Accidental Ignition



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 605-B1	Approval Date: 07/15/04
Revision date: 06/15/11	Supercedes: 07/15/04

ALPINE NATURAL GAS

## General Pipeline Repair

TABLE 1 FACILITY REPAIR			
DEFECT	EXTENT OF DEFECT	REPAIR METHOD(S)	REPAIR RESTRICTION(S)
Dent(s)	Causing little or no gas flow restriction and <10% loss of wall thickness.	No required repair.	
	Causing gas flow restriction and/or $\geq 10\%$ loss of wall thickness.	Weld Sleeving or Weld Clamping.  Replacement of affected segment.	Proper selection of repair parts.  Supervisor discretion.
Bends, Crimps	Distortion restricts gas flow and/or bend is extreme. (Typically caused by excavation equipment).	Replacement of affected segment.	Leak search affected segment and associated piping in each direction for a reasonable length to detect leakage and/or pullouts.
	Distortion does not restrict gas flow and/or is not extreme.	Weld Sleeving or Weld Clamping.	Proper selection of repair parts.



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 605-B1	Approval Date: 07/15/04
Revision date: 06/15/11	Supercedes: 07/15/04

ALPINE NATURAL GAS

## General Pipeline Repair

DEFECT	EXTENT OF DEFECT	REPAIR METHOD(S)	REPAIR RESTRICTION(S)
Scratches, gouges, notches, grooves, and similar defects.	10% or more loss of wall thickness.	Weld Sleeving or Weld Clamping. Replacement of affected segment.	Proper selection of repair parts. Supervisor discretion.
	Less than 10% loss of wall thickness.	Cleaning/Wrapping	Acceptable methods.
Corrosion Pitting (Localized only)	10% or more loss of wall thickness.	Replace affected segment.	Supervisor discretion.
	Less than 10% loss of wall thickness.	Cleaning/Wrapping Replace affected segment.	Supervisor discretion.
Corrosion Pitting (Generalized)		Replace affected segment.	
Arc burns		Replace affected segment.	

DEFECT	EXTENT OF DEFECT	REPAIR METHOD(S)	REPAIR RESTRICTION
--------	------------------	------------------	--------------------



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 605-B1	Approval Date: 07/15/04
Revision date: 06/15/11	Supercedes: 07/15/04

**ALPINE NATURAL GAS**

## General Pipeline Repair

Elongations		Replace affected segment.	
Cracked Welds		Re-weld affected area. Weld Sleeving or Weld Clamping.	Cracks $\geq 2$ " in length, or if crack penetrates the root or second bead, weld shall be replaced.
Fitting Leaks		Replace Fitting, or Weld Sleeving.	Supervisor discretion.



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 7/15/09

**ALPINE NATURAL GAS**

## Plastic Fusion Procedure

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure safe and proper installation and repair of P.E. pipeline segments through application of accepted fusion (pipe joining) techniques. This procedure complies with 49 CFR § 192.281,283,285 & 287.

The procedures presented here are intended as a general description. The complete training guide and procedures for full compliance are presented in Appendix G Alpine's Gas Pipe Fusion Manual and Reference Guide (Alpine has approved and accepted these pipeline and equipment Manufacturer's Installation instructions, tests and recommendations as compliance to 49 CFR § 192.281,283,285 & 287).

### RESPONSIBILITY

The System Administrator and the Qualified Operators are responsible for ensuring that all plastic fusion installations and repairs are performed according to the provisions of this procedure and that the appropriate re-training and certification is received.

In addition, it is the System Administrator who selects and approves the certifying third party.

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing pipeline fusion procedures, during pipe joining under normal or emergency operating conditions.

### EQUIPMENT AND MATERIALS

All personnel are to utilize proper fusion tools, materials and equipment required for each type of system fusion.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. 39 & 40** whenever plastic fusion is performed on a live gas facility. Accordingly, this activity may only be performed or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

Only P.E. "conforming", pipe stamped with ASTM 2513 is allowed for installation. Identify ASTM 2513 or the \*\*\*\*\* continuation indicator before installation within Alpines distribution system.

#### Fusion Procedure Qualification

Alpine Natural Gas will internally re-train field personnel under the polyethylene pipe and fitting manufacturer joining procedure once each calendar year. Appendix G is Alpine's Training Manual and Reference guide that all Qualified employees have utilized to gain expertise in this area. Each OQ will observe the P.E. fusions of all commonly used sizes and methods, including; Butt, Saddle, Electro fusion and mechanical coupling and test appropriately and record in Forms 281-285.

Alpine may either provide annual re-qualifying to its field personnel utilizing a third party qualified observer at System Administrator's discretion or ,when it is required where the OQ operators have had fusion failures in a calendar year or has not made the type of fusion in the past 12 months. .

Alpine's Operator Qualified personnel were last recertified by a third party expert in this task (currently Sunrise Engineering) that has provided evidence of expertise and educational qualifications to perform P.E. pipe joining recertification.



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 7/15/09

ALPINE NATURAL GAS

## Plastic Fusion Procedure

---

### General Preparation-Butt Fusion

1. Clean and dry pipe ends using a clean cloth removing all dirt and other contaminants.
2. Place pipe ends in fusion machine and face down to stops.
3. Check Hi/Low alignment, adjust and re-face as necessary.
4. Check heater plate for proper temperature (**TABLE 1**).
5. Insert heating iron between aligned pipe ends bringing pipe ends firmly in contact with heating iron. Heat pipe ends using contact pressure only, do not force bead formation. Look for uniformly sized bead around entire pipe circumference, (both ends). Pipe is properly heated when melt swell bead width matches values in **TABLE 2** below.
6. Remove heating iron and fuse pipe ends using enough p-pressure to roll melt swell bead over both pipe surfaces (double bead). DO NOT SLAM PIPE ENDS TOGETHER. Apply proper fusion hold pressure, (**TABLE 1**). Hold fusion pressure for required cooling time of thirty, (30), seconds per inch of pipe diameter, (**TABLE 3**).
6. Fusion may be removed from machine at end of cooling time under pressure. Allow an additional twenty, (20), to sixty, (60), minutes cooling time prior to rough handling and/or application of leak test pressure. (Allow longer time for larger diameters). Inspect fusion for continuous uniform bead over entire pipe circumference, (**TABLE 4**).



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 7/15/09

**ALPINE NATURAL GAS**

## Plastic Fusion Procedure

**TABLE 5: Manual Butt Fusion Parameters**

(Us Poly UAC 2000 PE 2406 Technical and Installation Guide)

Pipe Size	Melt Bead Size	Heating Time at 440° (seconds)	Heating Time at 500° (seconds)	Hold Time (seconds)	Cooling Time (minutes)
3/4" IPS	1/16"	16-19	10-12	40	10
1" IPS	1/16"	18-22	12-14	40	10
2" IPS	1/16"-1/8"	40-48	16-19	60	20
3" IPS	1/8"	50-60	20-24	75	20
4" IPS	1/8"	55-66	24-29	90	20
6" IPS	3/16"	90-108	40-48	180	30

con

### Butt Fusion Tips

1. Keep heating iron surfaces clean using wooden sticks or lint free non-synthetic cloth. Do not lay iron on grass or dirt. Always use proper iron holder.
2. Shield fusion machine from inclement weather and wind.
3. Avoid using fusion machine in a combustible gas atmosphere.

### General Preparation-Saddle Fusion

1. Clean and dry pipe using a clean cloth removing all dirt and other contaminants.
2. Clean heating iron surfaces clean lint free non-synthetic cloth.



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 7/15/09

ALPINE NATURAL GAS

## Plastic Fusion Procedure

3. Roughen main surface to be fused using 60 grit emery cloth about one inch, (1"), beyond fusion area. Brush away residue.
4. Roughen fitting fusion surface using 60 grit emery cloth. Brush away residue.
5. Install fusion machine onto main using a bolster plate on 3 IPS and smaller sizes.
6. Insert fitting chimney into application tool holder and seat base on main and secure fitting into holder.
7. Place heater on main centered beneath fitting. Place fitting against heater face. Apply and maintain pressure during heating. Heater time starts after heater face is firmly seated on main. During heating, the heater face may be rocked about 2° to assure full contact with main surface.
8. Remove fitting from heater and heater from main with quick snapping actions and quickly inspect melt surfaces for full release from iron and complete if melting surfaces are unacceptable, continue to step 11. If surfaces are unacceptable preheating melt bead should be in close agreement with **TABLE 5**.
9. Within three seconds, (3 sec.), from heater removal, press fitting onto pipe with firm pressure until melt bead size is formed around the base of the fitting. Hold for required pressure and time, (**TABLE 6**). **DO NOT SLAM TOGETHER.**
10. After three additional minutes, (3 min.), cooling time, remove application tool.
11. Inspect fusion for full melt bead around fitting base, **TABLE 7**. If bead appearance is unacceptable, cut off top of fitting to prevent use and apply new fitting on a new section of main.
12. Allow an additional ten minutes, (10 min.), before tapping or applying leak test pressure to standard tapping tees or service saddles. Allow an additional thirty minutes, (30 min.), before tapping or applying leak test pressure to High Volume (HVTT) tapping tees or branch saddles.

### Saddle Fusion Tips

1. Keep heating iron surfaces clean using wooden sticks or lint free non-synthetic cloth. Do not lay iron on grass or dirt. Always use proper iron holder.
2. Shield fusion machine from inclement weather and wind.
3. Avoid using fusion machine in a combustible gas atmosphere.



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285	Approval Date: 07/15/04
Revision date: 12/31/12	Supercedes: 7/15/09

**ALPINE NATURAL GAS**

## Plastic Fusion Procedure

**TABLE 7**  
**Saddle Fusion Time Cycle Guidelines**  
 (Us Poly UAC 2000 PE 2406 Technical and Installation Guide)

Fitting	Size Pipe	Time Cycle (sec.) Heating	Heating Force (lbf)		Cooling Force (lbf) Fusion/	Time Cycle (sec.) Holding
Tapping Tees and Service Saddles	1-1/4"	40 (ftg.)	60-80		40-90	60
		25 (pipe) <sup>2</sup>				
	2" - 8"	40	60-80		40-90	60
	12"	40 (ftg.)	60-80		40-90	60
		55 (pipe) <sup>3</sup>				
High	2"	40-50	120-140		60-80	120
Volume	3"	70-80	120-140		80-100	120
Service	4"	70-80	120-140		90-120	180
Punch	6"	80-90	120-140		90-120	180
Tees	8"	80-100	120-140		120-140	180
Branch	2" x 2"	45-50	120-140		60-80	120
Saddles	3" x 2"	70-80	120-140		80-100	120
Rectangular Base	4" x 2"	70-80	120-140		90-120	180
	6" x 2"	80-90	120-140		90-120	180
	8" x 2"	80-100	120-140		120-140	180
	3" x 3"	60-70	180-190		80-100	120
	4" x 3"	60-70	180-190		80-100	120
	4" x 4"	110-120 <sup>4</sup>	295-305		120-140	210
	6" x 4"	180-190 <sup>4</sup>	180-190		120-140	210



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 281-285

Approval Date: 07/15/04

Revision date: 12/31/12

Supercedes: 7/15/09

**ALPINE NATURAL GAS**

## Plastic Fusion Procedure

---

### **Electro fusion**

An Alpine Natural Gas employee that has been qualified in this plastic piping fusion type within the calendar year will perform all electro fusions.

### **Mechanical Couplings**

Mechanical and stab (Permasert type) couplings may be used for joining plastic pipe as deemed necessary. These joining methods are not considered “heat-fusion”, however, may be done in conjunction to heat fusion activity. ANG personnel shall follow mechanical or stab fitting manufacturer instructions, included with each such fitting, during installation of these fittings.

This method will generally be used either to repair pipe segment of ¾” and 2” IPS that have been severed (or punctured) by dig in or other outside force or during construction of new pipe line facilities such as a service line installation.

### **REPORTING/NOTIFICATION**

Complete appropriate Form for pipe joining activity; Leak Repair, General Pipeline Repair, Service Line Installation log, Main line Installation log or other ANG form to document and activity that included pipe joining. List size(s) and type(s) of fusion/joining performed.

Complete Form 605 or 724 for each facility repair or Log R-3 or R4 for new installation. Specify repair type and components on the Form. The System map location of repairs shall also be documented.

### **RELATED PROCEDURES**

303 Construction  
605-B1 General Pipeline Repair  
Appendix G  
Tapping Pipe line under Pressure



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 725	Approval Date: 07/15/04
Revision date: 07/15/04	Supersedes: None

ALPINE NATURAL GAS

## Testing for Service Line Reinstatement

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure safe and proper testing of service lines that have been disconnected and are being reinstated. This procedure complies with 49 CFR § 192.725, and is Leak Tested under 49 CFR 192.511 and 192.513.

Complete procedure is found in Appendix G, Gas Pipe Fusion Manual and Reference Guide.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all service line reinstatement tests are performed according to the provisions of this procedure.

### PERSONNEL SAFETY

All personnel are to use proper protective clothing/equipment when performing service line reinstatement testing.

### EQUIPMENT AND MATERIALS

All personnel are to utilize proper testing tools, materials and equipment required for service line reinstatement tests including a compressed air supply and calibrated pressure gauge/chart.

### INSTRUCTIONS

#### Operator Qualification

This Leak Testing activity is a covered task under the Operator Qualification Plan, **C.T. # 29 which combines C.T. #'s; 25, 26 & 27** and may be only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

Each disconnected service line to be reinstated must undergo a leak test as if the service line was a new facility in the same location. This test is to be made prior to installation according

to the provisions of 503 Facility Leak Test Requirements.

All tests shall be recorded including test medium, name of employee(s) performing test, test duration, date of test, test pressure and leak(s)/failure(s) disposition.

### REPORTING/NOTIFICATION

Form 503 shall be completed by field personnel for each leak test and maintained at the operations headquarters for the useful life of the facilities.

### RELATED PROCEDURES

- Pretested Pipe
- 303 Construction
- 503 Facility Leak Test Requirements
- Appendix G



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 727	Approval Date: 07/15/04
Revision date:12/10/10	Supercedes: 07/15/04

ALPINE NATURAL GAS

## Abandonment of Pipeline Facilities

### SCOPE AND PURPOSE

This procedure is to ensure the safe and proper abandonment of pipeline facilities as required by 49 CFR § 192.727.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all pipeline facility abandonment is performed according to the provisions of this procedure.

Defective or damaged pipeline segments that impair serviceability or may pose a hazard to the public or the environment must be abandoned whenever the subject facility is not to be scheduled for permanent repair.

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing facility abandonment activities.

### EQUIPMENT AND MATERIALS

All Alpine Natural Gas personnel are to utilize proper tools, materials and equipment required for each facility abandonment activity.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **C.T. # 34** and may only be performed or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

### Procedures

1. All buried mains that are to be abandoned shall be disconnected from all sources of product supply, purged of gas and sealed at both ends.
2. End sealing of mains may be achieved using mechanical end seal devices or poly foam kits.
3. All plastic facility abandonment shall be accomplished using soap solution saturated cloth and a grounding rod in order to avoid static arcing.
4. All gas service lines that are to be disconnected at the meter for an extended period shall be shut-off at the service riser valve and either locked or sealed.

### REPORTING/NOTIFICATION

All pipeline facility abandonment projects shall be recorded on appropriate system maps.

### RELATED PROCEDURES

- 605-B5-7 Startup-Shutdown-Purging
- 751 Prevention of Accidental Ignition



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 739	Approval Date: 08/25/06
Revision date:10/15/10	Supercedes: 09/05/09

## Regulator Station Operation, Maintenance and Inspection

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure safe operation of Alpine's Pressure Regulating Station. Including; proper inspection, testing and maintenance as required to comply with 49 CFR § 192.197(c) 2 and CFR § 192.739,743a &192.747.

Alpine has a redundant system of two pressure regulators each located in adjacent, North and South Vaults: a *Working* Regulator and a *Monitor* Regulator to assure the station functions to maintain a 60 MAOP to its P.E. natural gas distribution system. Including a total of 5 Block Valves( BV 1-5) and 3 Gate Valves (GV 1-3)

Alpine has three inspection protocols for the purpose of adhering to the above regulation and 49 CFR § 192.741. These inspections are performed at the intervals listed and at any time deemed necessary.

### Inspection A: Regulator Station (“Monthly”) Visual and Pressure Recording Inspection

### Inspection B: Regulator Station (“Annual”) Pressure Test Inspection

### Inspection C: Regulator Station (“Five Year”). Operational Inspection

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all regulator station inspection, testing and maintenance is performed according to the provisions of this procedure.

### PERSONNEL SAFETY

All personnel are to use proper protective clothing/equipment to protect employees and the general public when performing regulator station Operations, Maintenance and Emergencies.

### EQUIPMENT AND MATERIALS

All personnel are to utilize proper testing tools, materials and equipment required for regulator station Operations, Maintenance and Emergencies.

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan, **ANG's C.T.#: 10, 28, 30 & 31** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### **Maintenance and Operation of Equipment**

All equipment shall be operated and maintained in accordance with the manufacturers recommended instructions.

#### **Calibration of Instruments**

Each instrument used in this procedure shall be calibrated maintained in accordance with the manufacturers recommended calibration instructions.

### **INSPECTION A (Form 739-A & 741)**

Regulator vault and **Pressure Gauges to be** inspected and maintained at monthly intervals.

- Assess vault surroundings for signs of damage or environmental changes.
- Open Vault- check for AOC (Abnormal Operating Conditions)
- Calibrated gauges are visualized
- The inlet, intermediate position, bypass run, and the outlet of each regulator station are observed.
- Pressures displayed on these gauges shall be observed and recorded on a monthly basis.
- Recorded on **Form 739 –A and Form 741**

### **INSPECTION B**



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 739	Approval Date: 08/25/06
Revision date:10/15/10	Supercedes: 09/05/09

ALPINE NATURAL GAS

## Regulator Station Operation, Maintenance and Inspection

(Form 739- B and Form 475-B)

### Regulator Station Pressure Test Inspection

The pressure regulating station shall be inspected and maintained at intervals not exceeding fifteen (15) months, but at least once each calendar year. Refer to **Figure 1.** for normal operating conditions.

This annual Pressure Test procedure will, allow the Operator to, **PLACE REGULATING STATION ON BY- PASS AND PERFORM LOCK UP PROCEDURE.** In addition to Visual Inspection, including but not be limited to, the following:

1. Corrosion - including evidence of rust, pitting and any need of painting/coating.
2. Damage – physical damage to facility including enclosure and surroundings.
3. Leakage – including all piping and components.
4. Dirt/Debris – accumulation on or around facility.
5. Valve Locks – In place, locked and operational.
6. Valves – lubricate and operate.
7. Control Lines – secure and leak tight connections.
8. Replace all Pressure Gauges with new calibrated-certified gauges..
9. **Perform Lock-Up Procedure: See Step1.**
10. **Return to Normal Operations.**
11. **Perform By-pass: See Step 4 below.**
12. **Return to Normal Operations**
13. **Perform Wall Thickness Loss Measurement and Record on 475-B**
14. Facility Warning Signage – correctly placed and legible.
15. Enclosure and Grounds – condition of paint, appearance of property, vault and vault cover condition.

### INSPECTION C

### Regulator Station Operational Inspection

(Form 739- C)

At intervals not exceeding sixty three (63) months, but at least every five calendar years or as deemed necessary. To maintain the two Regulators in the system, various other components and identifies any leaks in the system.

### STEP 1. Bypass the Regulators:

(Refer to **Figure 2**)

- Record the station inlet and outlet Pressures, **Pressure Gauges; 2,4,5,13 & 8**
- Ensure that Block **Valve 3** is fully closed.
- Fully open Block **Valve 2.**
- Gradually close Block **Valve 4** while simultaneously monitoring the downstream station pressure at **Gauge 8** and throttling
- (Gradually open and close) **Valve 3.**
- Fully close Block **Valve 1.**
- Continuously monitor the downstream station pressure and throttle (Gradually open and close) Block **Valve 2** to manually control and maintain an adequate pressure level at **Gauge 8.**

### **REGULATORS ARE NOW BY-PASSED**

**NOTE:** *The by-pass procedure can also be performed to manually flow gas around station to customers in case of Regulator Station failure.*

While on By-Pass monitor downstream pressure, Increase/decrease pressure as needed to maintain the desired pressure **-Extreme care shall be taken not to exceed the MAOP of the system.**

### STEP 2. Inspect Regulator Internal Parts (as deemed necessary or Every five calendar years not to exceed 63 months)

- Perform the following for each regulator with the station on bypass.
- **Close** the appropriate “sense” lines at (**Gate Valves 10 & 12** for the North Vault Regulators and Gate **Valve 11** for the South Vault regulator).
- **Open Gate Valve # 9** to release the trapped pressure in the regulator run from the valve.
- Disassemble the regulator according to the manufacturer's instructions.



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 739	Approval Date: 08/25/06
Revision date:10/15/10	Supercedes: 09/05/09

### Regulator Station Operation, Maintenance and Inspection

- Removal of the regulator body from the set is not required unless damage to the body is detected or five years in operation.
- Inspect the open pipe for evidence of internal corrosion.
- Inspect the internal mechanisms and replace in accordance with the manufacturer's recommendations.
- If, **Inspection C** is being performed at five year interval install Mooney Flow-grid Pilot Assembly Replacement Kit, Series 20 as per manufacturer's instructions.
- Check appropriate filters, clean and or change as appropriate.
- Reassemble the regulator according to the manufacturer's instructions.
- **Close** the **Valve # 9** after both regulators have been completely reassembled.

#### STEP 3. Place Pressure Regulating Station into Normal Service:

(Refer to **Figure 1**)

- Fully open all "**Sense**" **Lines and Gate Valves (1-3)**.
- Gradually open **Valve 1**.
- Gradually **Open Valve 4**.
- Gradually **Close Valve 3** while Simultaneously, starting the North Vault and South Vault regulators in accordance with the manufacturer's recommendations.
- Ensure that a safe downstream operating pressure is maintained during start up at **Gauge 8 and or Gauge 13**.
- After the regulators have been started and are functioning, fine tune the regulator set pressures as appropriate under moderate flow conditions.
- Fully **Close Valve 3**.
- Record the initial inlet and outlet pressures, final set pressures, and final inlet and outlet pressures on **Form 739-C**.

#### STEP 4. Perform Lock-Up Procedure:

(Refer to **Figure 3 & 4**, respectively)

This will check both Working & Monitor Regulator operation by testing that "Lock Up" pressures of each Regulator can be achieved at 60 psig. This Procedure must be performed for each Regulator (North & South).

**NOTE:** This "Lock Up" Procedure can also be performed, by a Qualified Operator, if a leak in the Regulator Station is suspected.

Refer to **Figure 3**.

#### I) Lock Up Procedure- South Vault Reg.

- Close** inlet (South Vault) Block **Valve #4**
- Close** system **Block Valve # 5**, located in south vault, downstream of station.
- Release Pressure from the outlet main until 30 psig on Gauge 8 is observed.
- Turn the North Regulator Pilot Screw **in** to allow pressure to rise to  $\geq 60$  psig on **Gauge 5**, or free flow on this regulator, while in this state, North Vault Reg. not regulating the gas flow pressure.
- Turn the South Regulator Pilot Screw in, until pressure rises to 60 psig on **Gauge 8**, this regulator is now set to **Lock Up" at 60 psig**.
- Open** (South vault) Block **Valve # 4**, gas will flow and as it does the pressure will rise to 60 psig when it does Screw South Reg. Pilot out until gas stops Flowing. You have now "Locked Up" the Regulator Station pressure with the set points of the South Reg. at 60 psig.

Monitor the pressure on **Gauge 8** for several hours. If, the pressure is maintained at 60 psig and no pressure "creeping" is noted then the operation of this regulator is verified and no system leaks IN THIS SECTION are present.

Refer to **Figure 4**

#### II) Lock Up Procedure- North Vault Reg.

- Close** inlet (North Vault) Block **Valve # 1**



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 739	Approval Date: 08/25/06
Revision date:10/15/10	Supercedes: 09/05/09

ALPINE NATURAL GAS

## Regulator Station Operation, Maintenance and Inspection

- B. **Close system Block Valve # 5**, or, verify they remain closed from **procedure I) B. South Vault “Lock-Up”**
- C. Release Pressure from the outlet main until 30 psig on **Gauge 13** is observed.
- D. Turn the **South** Regulator Pilot Screw **in** to allow pressure to rise to  $\geq 60$  psig or free flow on **Gauge 8**, the regulator in this state is not regulating the gas flow pressure.
- E. Turn the **North** Regulator Pilot Screw in, opening flow until pressure rises to 60 psig on **Gauge 13**, this regulator is now set to **Lock Up” at 60 psig.**
- F. Slowly **Open North** Vault Block Valve #1

Monitor the pressure on **Gauge 8 or Gauge 13** for several hours. If, the pressure is maintained at **60 psig** and no “creeping” of the pressure reading is noted then the operation of this regulator is verified and no leaks IN THIS SECTION are present.

**Result:** Verified over several hours that both the *Working* Regulator and the *Monitor* Regulator **POSITIVELY** Lock-Up, and do not leak through to pressure up the system above the **MAOP of 60 psig.**

### **STEP 5. Return Pressures Regulator to normal operating conditions.**

The following procedure will determine which Regulator is the *Working* Reg. and which is the *Monitor* Reg.

- A. Lock Up the Monitor Regulator** (by §192.201 *Monitor Reg.* is set not to exceed 10% (66psig) of 60 MAOP *Working* Regulator).

Repeat procedure **STEP 4. I) A.,B., & C.**

**I) D. Variation:** Adjust **North** Regulator Pilot Screw **in** to **44 psig** on **Pressure Gauge 13** and Lock Up the *Monitor* Reg. (gas stops flowing beyond that pressure).

Complete Procedure **STEP 4. I) E. & F.**

- B. Lock Up and Reset Working Regulator**  
Repeat procedure **STEP 4. I) A.,B., & C.**
- C. Lock Up and Reset Working Regulator**  
Repeat procedure **STEP 4. II) A.,B., & C.**

**II) D. Variation:** Adjust **North** Regulator Pilot Screw **in** to **42 psig** on **Pressure Gauge 8** and Lock Up the *Monitor* Reg. (gas stops flowing beyond that pressure).

Complete Procedure **STEP 4. II) E. & F.**

- D. Slowly, Open system Block Valve #5. downstream.
- E. Recheck and observe pressure readings on all pressure gauges.

**Note: Pressure Gauges 8 and 13 are monitoring outlet pressure to ANG system under normal moderate conditions approximately 42 psig.**

**Verify that all leaks are repaired**  
**Re-Install valve locking devices.**  
**Close and secure regulator vault**  
**TEST is COMPLETE. Record on Form 739 B**

### REPORTING/NOTIFICATION

- o Monthly regulator station **Inspection A.** complete Form **739-A** and gauge pressure observations recorded on **Form 741.**
- o Annual Regulator Station Visual Inspection, **Inspection B.** complete Form **739-B.**
- o Five Year Regulator Station Operational **Inspection C,** or any other Regulator tear down and or component repair performed, Record on Form **739-C.**

### RELATED PROCEDURES

- 485-A Remedial Action for General Corrosion
- 485-B Remedial Action for Localized Corrosion
- 605-B1 General Pipeline Repair
- 605-B5 Startup-Shutdown-Purging
- 709 Record Keeping



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 739	Approval Date: 08/25/06
Revision date:10/15/10	Supercedes: 09/05/09

### Regulator Station Operation, Maintenance and Inspection

---

751 Prevention of Accidental Ignition

#### **SPECIFIC ABNORMAL OPERATING CONDITONS (AOC'S)**

AOC's requiring shutdown or MAOP reduction.

- **Pressure leak, under-pressure condition**
- **Fire**
- **Over-pressure condition**
- **Physical damage to the pipeline**
- **Internal moisture or severe corrosion in the pipe.**

## Alpine Natural Gas Regulator Station Legend

### Diagram North Vault

[1]	▶◀	<b>BLOCK VALVE # 1-</b> North Vault, Controls Flow into Station from PG&E -
[2]	(P)	PRESSURE GAUGE- PG&E <u>Inlet</u> North Vault generally ranges from 0-160 psig
[3]	▶◀	<b>BLOCK VALVE #2-</b> On “By Pass Line”
[4]	(P)	PRESSURE GAUGE-“By Pass Line”
[5]	(P)	PRESSURE GAUGE- <u>Inlet</u> pressure downstream of <b>Block Valve # 1</b> 0-160 psig
[13]	(P)	PRESSURE GAUGE- <u>Outlet</u> pressure from South Vault to ANG system. <b>Same as Gauge 8.</b>

### South Vault

[6]	▶◀	<b>BLOCK VALVE # 3-</b> On “By Pass Line” South Vault
[7]	▶◀	<b>BLOCK VALVE # 4-</b> On <u>Outlet</u> side of South Vault
[8]	(P)	PRESSURE GAUGE- South Vault, <u>Outlet</u> pressure to ANG system. <b>Same as Gauge 13.</b>
[9]	▼ ▲	RELIF VALVE-Port to Attach Recorder
[10]	▶◀	“SENSING LINE” GATE VALVE, TO LINE FOR NORTH VAULT PILOT REGULATOR
[11]	▶◀	“SENSING LINE” GATE VALVE, LINE TO SOUTH VAULT PILOT REGULATOR
[12]	▶◀	“SENSING LINE” GATE VALVE, LINE TO NORTH VAULT PILOT REGULATOR
[14]	▶◀	<b>BLOCK VALVE # 5</b> South Vault, Controls Flow out of Regulator Station
[15]	(W)	<b>ANODE WIRE ATTACHMENT-</b> Pipe Soil Cathodic Protection

# Alpine Natural Gas

## PRESSURE REGULATING STATION

FIGURE 1

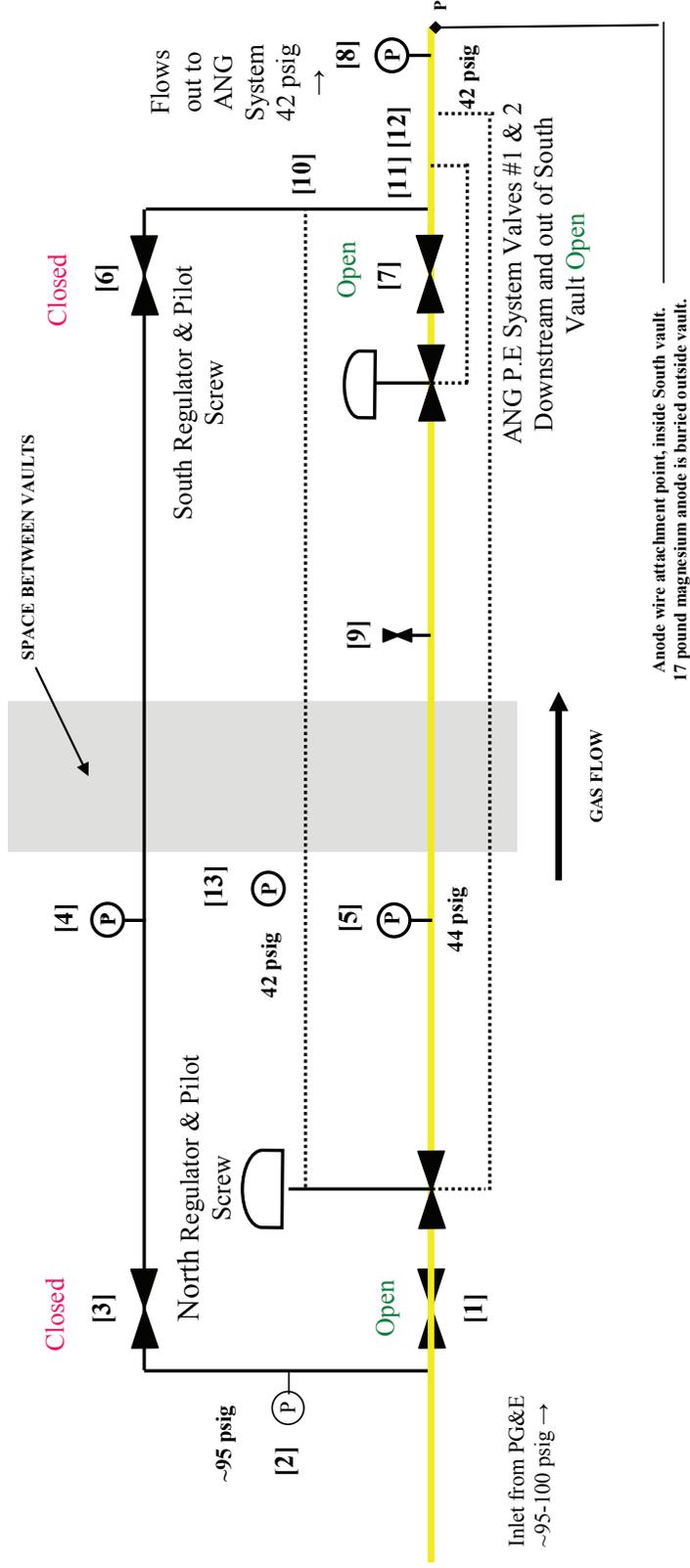
### Valve Position and Pressure Readings During

Normal Operating Conditions

System Pressure at ~42 psig

**SOUTH VAULT**

**NORTH VAULT**



# Alpine Natural Gas

## PRESSURE REGULATING STATION

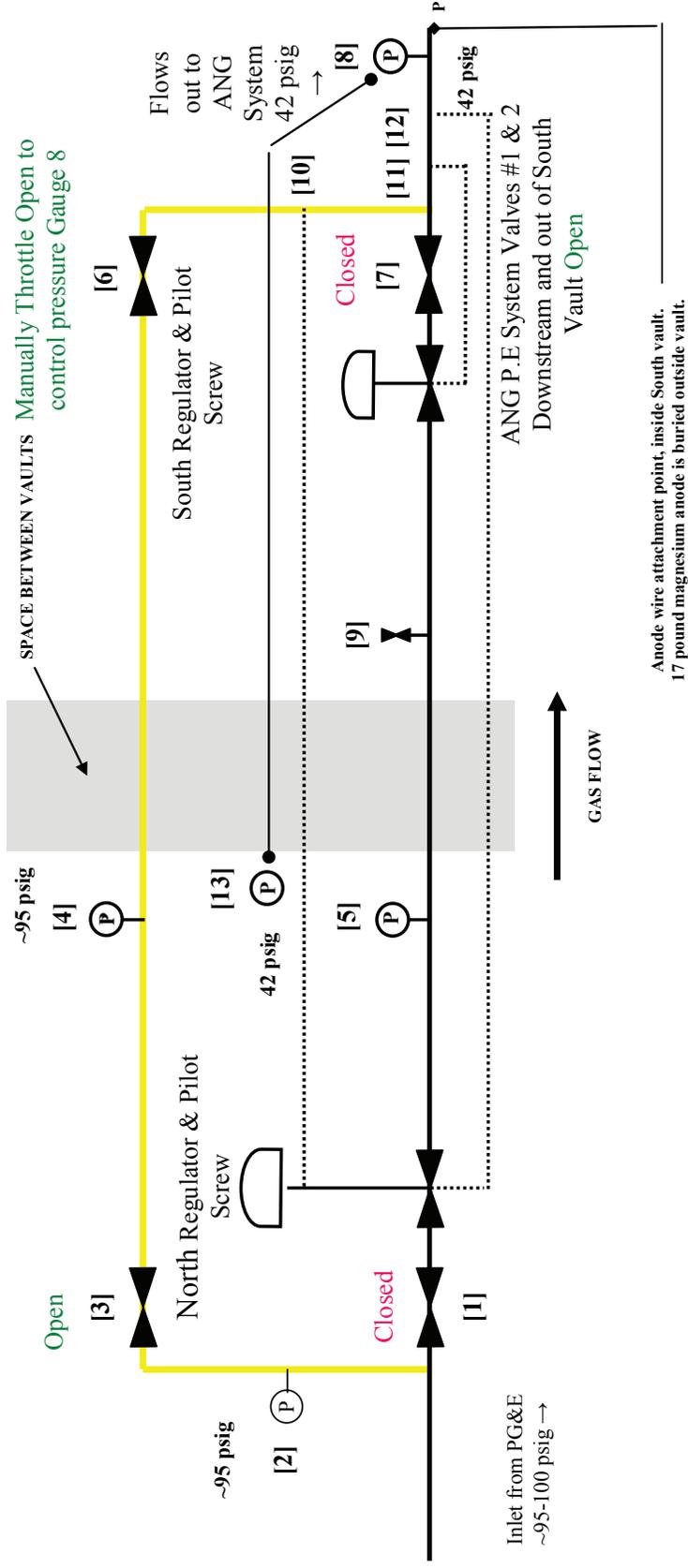
FIGURE 2

### Valve Position and Pressure Readings During

### By-Pass Procedure

**NORTH VAULT**

**SOUTH VAULT**



# Alpine Natural Gas

## PRESSURE REGULATING STATION

FIGURE 3

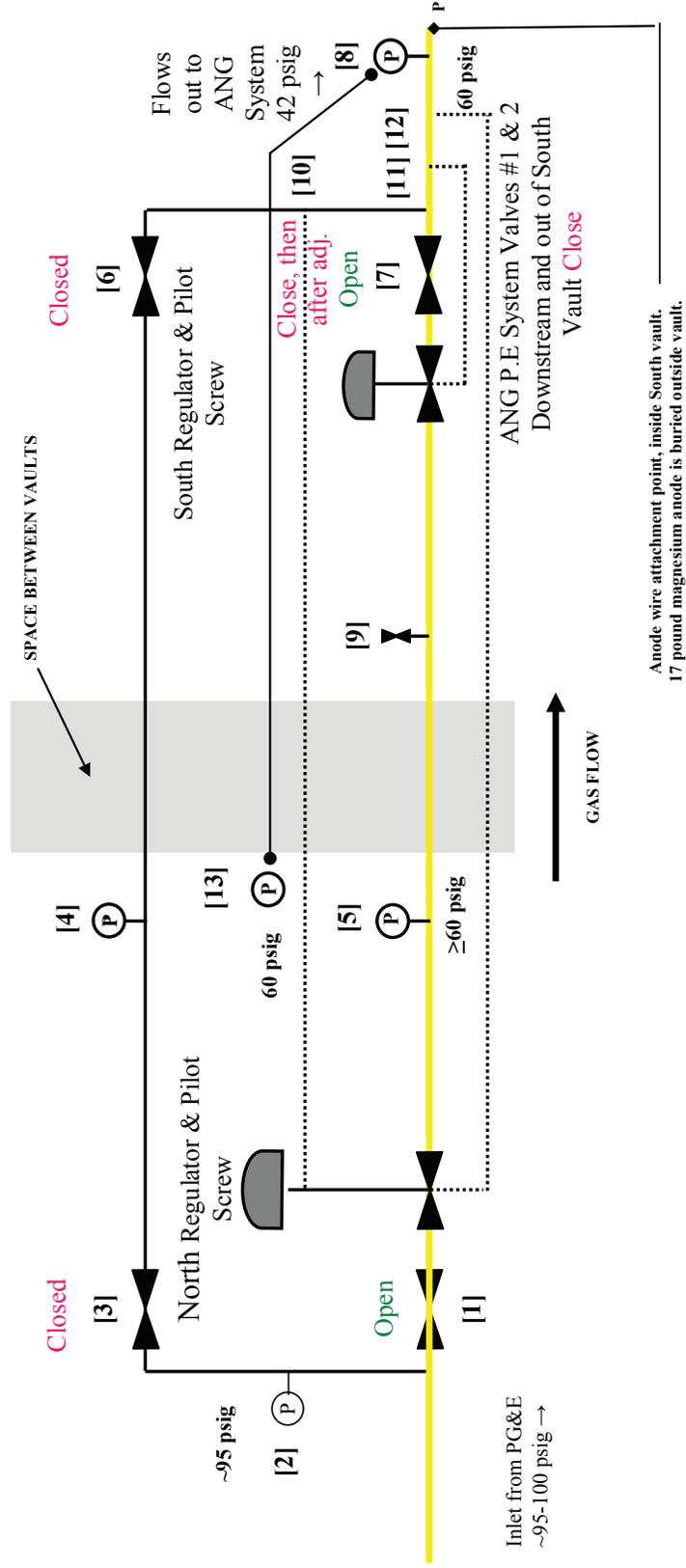
### Valve Position and Pressure Readings During

#### South Vault Regulator

“Lock Up” at 60 psig

**SOUTH VAULT**

**NORTH VAULT**



# Alpine Natural Gas

## PRESSURE REGULATING STATION

FIGURE 4

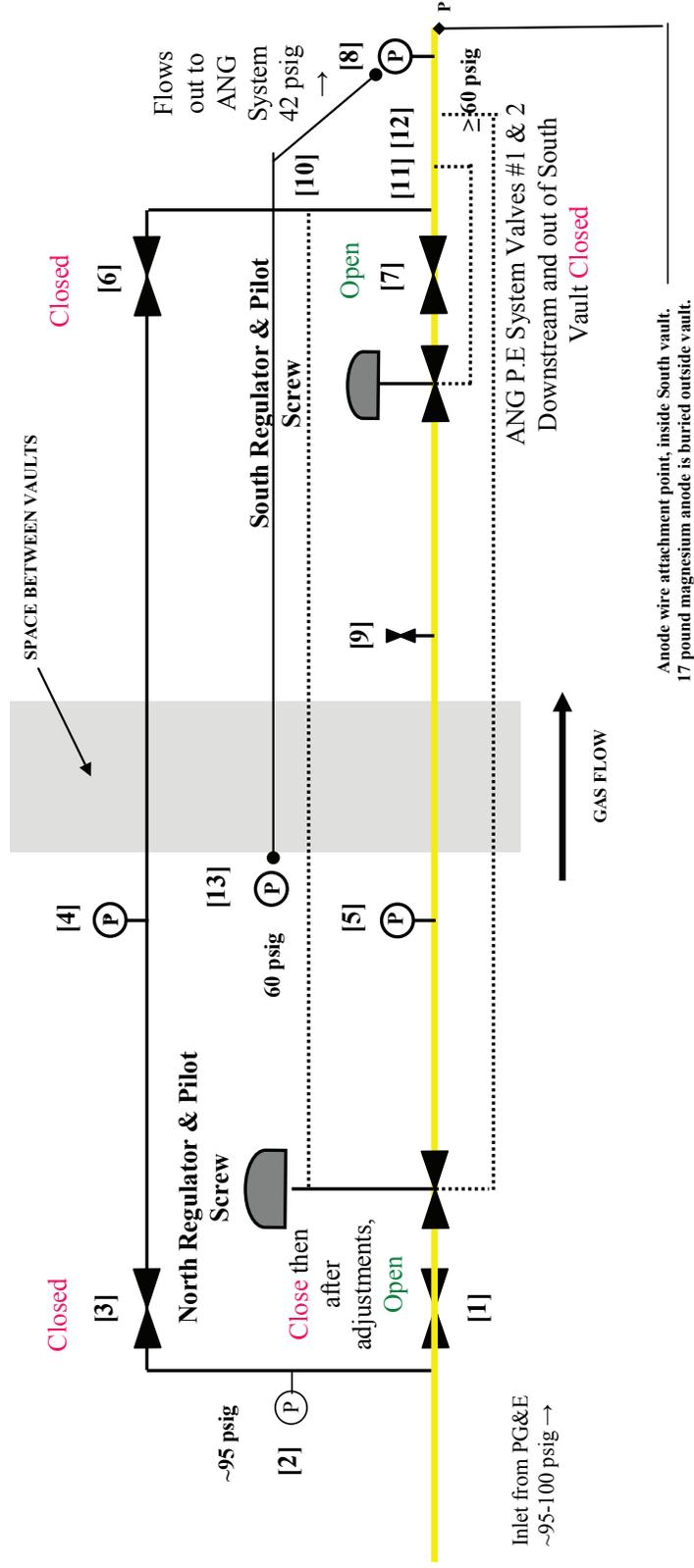
### Valve Position and Pressure Readings During

#### North Vault Regulator

“Lock Up” at 60 psig

#### NORTH VAULT

#### SOUTH VAULT





# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 747	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

ALPINE NATURAL GAS

## Valve (Mains) Inspection and Maintenance

### SCOPE AND PURPOSE

This procedure is to ensure the safe and proper operation of valves, which may be required during an emergency as well as during normal operations on Distribution System under 49 CFR § 192.747.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all valves intended for emergency and normal operations of the transmission and distribution systems are inspected according to the provisions of this procedure.

### PERSONNEL SAFETY

All personnel are to use proper protective clothing/equipment when valve inspection and maintenance.  
Do not perform valve maintenance if lightning is present.

### EQUIPMENT AND MATERIALS

Refer to the valve manufacturer's literature for required equipment and materials.  
Valve key wrench  
Leak Detector Equipment  
Other equipment and materials as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 38** and may only be performed by or directed and observed by an individual who is currently qualified to perform valve maintenance. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

### Inspection Frequency

Each valve indicated on system plats/maps shall be inspected at least once each calendar year at intervals not to exceed 15 months.

### Inspection Steps

1. Check that the valve is in the proper operating condition, Note valve position.
2. Remove any excess dirt, rust or material.
3. Visually inspect, proper alignment, signs of tampering or damage.
4. Check valve locks, if normally used. Replace as necessary.
5. Check for leaks.
6. Partially operate distribution valves to ensure proper operation during emergencies and normal operations.  
CAUTION: Care should be taken when partially operating valves that require less than one, (1), full turn to open or close. Do not allow these types of valves to be fully opened or closed during valve inspection and maintenance.
7. SERVICE RISER VALVES ARE NOT INCLUDED UNDER THIS PROCEDURE.
8. All internal valve maintenance is to be performed when valve is out of service either by complete removal or bypassing.
9. Refer to the valve manufacturer literature for proper repair of valve components.
10. Replace valve(s), as necessary.

### REPORTING/NOTIFICATION

Complete Form 747 for each valve inspection. Notify the System Administrator of any AOC's not repaired during the inspection.

### RELATED PROCEDURES

- 481 Inspecting for Atmospheric Corrosion
- 605-B1 General Pipeline Repair
- 613 Continuing Surveillance
- 709 Record Keeping
- 0301 – Manually Opening and Closing Valves



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 201	Approval Date: 07/15/04
Revision date: 12//15/10	Original

## Manual Valve Operation-Regulator By-Pass To Adjust or Monitor Flow or Pressure

### SCOPE AND PURPOSE

This procedure is to ensure when personnel adjust and monitor gas flow or pressure by manually operating valves that this operation is performed in a manner that ensures protection of downstream gas facilities from overpressure conditions.

It describes practices required to comply with §192.201.

### RESPONSIBILITY

The System Administrator is responsible to ensure when adjusting and monitoring gas flow or pressure by manually operating valves, that it is performed as described in this procedure.

### PERSONNEL SAFETY

Ensure that the work zone/area is setup to protect the public from danger.  
Ensure that all applicable safety equipment is being utilized as per company policy.

### EQUIPMENT AND MATERIALS

System maps and records  
Bypass valve keys and/or wrenches  
Pressure gauges  
Other equipment and materials, as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

1. Ensure by using company maps and records that the proper valve to be used for adjustment and monitoring of gas flow or pressure is identified correctly.
2. Install a pressure gauge of the proper pressure span just downstream of the identified valve to be operated.
3. Ensure that the Maximum Allowable Operating Pressure (MAOP) of the downstream piping facilities is known before operating the identified valve.
4. Prior to operating the identified valve, ensure that notification to management and/or operations personnel of the intent to adjust and monitor flow or pressure using a valve has been communicated.
5. Manually operate the identified valve in order to control downstream pressure at or below the normal system operating pressure by throttling the identified valve open when normal system pressure falls, and throttling the identified valve closed when normal system pressure increases, as identified on the gauge.
6. Continue performing the throttling effort until manual valve operation to adjust and monitor gas flow or pressure is no longer necessary. At this point, fully close the identified valve, lock the valve into the closed position if required, and carefully remove the gauge.
7. Properly seal, cap, or plug the gauge tap fitting to a gas tight condition.
8. Manual valve throttling must be consistently attended during the entire process in order to ensure protection from over pressuring of downstream gas facilities. NEVER LEAVE AN IDENTIFIED BYPASS VALVE UNATTENDED DURING MANUAL OPERATION TO ADJUST AND MONITOR FLOW AND PRESSURE.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Maintenance 201</b>	Approval Date: 07/15/04
Revision date: 12//15/10	Original

### **Manual Valve Operation-Regulator By-Pass To Adjust or Monitor Flow or Pressure**

---

#### **REPORTING/NOTIFICATION**

Complete documentation in accordance with  
Operation and Maintenance Manual.

#### **RELATED PROCEDURES**

0301 – Manually Opening and Closing Valves



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 747-B	Approval Date: 07/15/04
Revision date: 12//15/10	Original

## Valve (Main) Corrective Maintenance

### SCOPE AND PURPOSE

This procedure is to provide personnel with safe and effective activities to ensure the integrity of the piping system when repairing or replacing service riser valves. It includes the performance of maintenance, if applicable.

It describes practices required to comply with §192.365.

### RESPONSIBILITY

The System Administrator is responsible to ensure that maintenance of service valves is performed as described in this procedure.

### PERSONNEL SAFETY

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

- Routine Work Tools
- Leak Detect Equipment
- Grease Gun and Lubricant (If Needed)
- Valve Changer (If Utilized)
- Hand Tools
- Other Equipment and Materials as Needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### Maintenance and Operation of Equipment

All equipment shall be operated and maintained in accordance with the manufacturers' instructions.

### General

- While approaching the service valve, visually examine the area for signs of conditions that may interfere with proper access.
- Perform a visual check ensuring service valve is installed upstream of the customer meter, conveniently accessible and sufficient space exists to accommodate valve operation without interference.
- Inspect service valve to determine if it is leaking.
  - If found to be leaking at threads, securely tighten service valve to associated piping and re-check for leaks.
  - If found to be leaking at body of valve, and valve is equipped with grease plug, apply lubricant and re-check for leaks. Care should be taken to not introduce excessive amounts of lubricant.
  - If found to be leaking at body of valve, and valve is not equipped with grease plug, remove and replace valve.

### Shut Off Method

- a. Before removing and replacing service valves, shutting off gas can be made at the service tap or farm tap regulator.

### Squeeze Off Method

- b. Plastic pipe can be squeezed, shutting off gas flow. Verify correct pipeline segment and proper location for the squeeze. Select and utilize proper squeeze tool operating in accordance with the manufacturer's instructions.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Maintenance 747-B</b>	Approval Date: 07/15/04
Revision date: 12//15/10	Original

### **Valve (Main) Corrective Maintenance**

---

#### **RELATED PROCEDURES**

- 0301 – Manually Opening and Closing Valves
- 0331 – Valve-Visual Inspection & Partial Operation
- 0341 – Valve Preventative Maintenance
- 500- Squeeze off Plastic Pipe.
- 727- Purging with Gas



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 703	Approval Date: 07/15/04
Revision date: 12//15/10	Original

ALPINE NATURAL GAS

## Repair of Damaged Pipeline Facilities

---

### SCOPE AND PURPOSE

This procedure is to ensure when personnel measure and characterize mechanical damage to installed pipe and components that this effort is performed according to accepted gas industry standards.

It describes practices required to comply with §§192.614 (c) (6) and 192.703.

### RESPONSIBILITY

The System Administrator, or other designee, is responsible to ensure when measuring and characterizing mechanical damage on installed pipe and components, that it is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Every reasonable precaution shall be taken to protect employees and the general public.

### EQUIPMENT AND MATERIALS

System maps and records  
Hand Tools  
Other Equipment and Materials as Needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

#### General

- m. Prepare Surface
  - a. Remove dirt, debris, and loose coating.
  - b. Clean pipe surface.

### Steps

- n. Characterize
  - a. Cracks
    - i. Cracks of any type in gas piping and components are unacceptable since future leakage is typically eminent. Gas piping and components that are affected by cracking may be considered unserviceable.
  - b. Dents
    - i. This type of mechanical damage is commonly caused by motorized machinery and the extent of damage should be measured in order to determine the exact cause of damage.
    - ii. Dents in steel exhibit no loss of metal and the material surface is left smooth. Characterization of dents is typically confined to whether the inside flow diameter has been reduced beyond serviceability and whether the facility has been stressed to a point that could cause future failure.
    - iii. Dents in polyethylene pipe are typically treated the same as gouges.
  - c. Gouges
    - i. This type of mechanical damage is commonly caused by motorized machinery and the extent of damage should be measured in order to determine the extent of damage.
    - ii. Gouges in steel exhibit loss of metal and the material surface is often left rough and or sharp with grooves in the direction of the moving machinery causing the



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 703	Approval Date: 07/15/04
Revision date: 12//15/10	Original

**ALPINE NATURAL GAS**

## Repair of Damaged Pipeline Facilities

damage. Gouges may, but do not always, reduce the internal flow diameter.

- 0631 – Ultrasonic Testing
- 0801-0811 – Welding & Visual Inspection of Welding and Welds
- 1071 – Repair of Steel Pipe by Grinding

**o. Measure**

**a. Cracks**

- i. Some cracks in steel are readily visible but most must be detected using radiographic, ultrasonic, dye penetrant, or magnetic particle methods of non-destructive testing in order to measure and characterize the anomaly.

**b. Dents**

- i. Dents should be tested using radiographic, ultrasonic, dye penetrant, or magnetic particle methods of non-destructive testing in order to be properly characterized.

**c. Gouges**

- i. Measurement of steel gouge depth can be performed using a depth gauge or by use of a sonogram instrument in order to determine the extent of metal loss.
- ii. Gouges in polyethylene pipe and fittings that exhibit loss of wall thickness greater than or equal to 10 percent, ( $\geq 10\%$ ), may be characterized as an unserviceable facility that must be replaced.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual

### RELATED PROCEDURES

- 0151 – Visual Inspection of Buried Pipe and Components When Exposed
- 0201 – Visual Inspection of Installed Pipe and Components for Mechanical Damage
- 0601 – Radiographic Testing
- 0611 – Liquid Penetrant Testing
- 0621 – Magnetic Particle Testing



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 751	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

ALPINE NATURAL GAS

## Prevention of Accidental Ignition

### SCOPE AND PURPOSE

This procedure is to ensure the prevention of accidental ignition of gas as required by 49 CFR § 192.751.

### RESPONSIBILITY

All Alpine Natural Gas employees are responsible for ensuring the prevention of accidental ignition of gas according to the provisions of this procedure.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing pipeline system Operations, Maintenance and Emergencies functions in the presence of a gaseous atmosphere.

### EQUIPMENT AND MATERIALS

All Alpine Natural Gas personnel are to utilize proper repair tools, materials and equipment required for all pipeline system Operations, Maintenance and Emergencies functions, inclusive of grounding straps and fire extinguishers in order to prevent accidental ignition of natural gas. Additional equipment may include, but not be limited to:

- Combustible Gas Indicator (CGI)
- Intrinsically Safe Electrical Tools
- Flame Retardant Clothing
- Warning Signs
- Fire Extinguisher
- Air Tools

In all cases, each readily accessible ignition source will be eliminated at the earliest opportunity. However, it should be understood that, in order to assess the magnitude of any gas leakage scenario an initial determination must be made as to gas levels prior to ignition source elimination.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan.

#### Additional Requirements

1. Smoking and open flames are prohibited in and around areas and structures containing gas facilities where the potential for gas release, or hazard of fire or explosion exists.
2. Proper warning signs shall be posted defining the locations of these areas and structures.
3. Such signage shall serve to alert individuals of all "No Smoking/Open Flame" areas prior to entry or approach.
4. All electrically powered tools and equipment shall be intrinsically safe for operation in a combustible/explosive atmosphere. Explosion proof plugs and receptacles shall also be used, (NFPA 70/ANSI C1, Class I, Group D).
5. Air powered tools are preferred when working in potentially combustible/explosive atmospheres.
6. All torch cutting and arc welding procedures where facilities are to be separated, including mechanical separations, shall be accomplished using proper metallic grounding cables and screw-clamps in order to avoid static arcing.
7. A combustible gas indicator, (CGI), shall be used before and during all welding, cutting and mechanical separation work.
8. No gas facilities will be intentionally exposed to the possibility of any ignition source when a combustible gas-to-air mixture is known to exist, including welding and/or cutting.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Maintenance 751</b>	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

### **Prevention of Accidental Ignition**

---

#### **RELATED PROCEDURES**

605-B1 General Pipeline Repair

727 Abandonment of Pipeline Facilities



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 627	Approval Date: 04/24/09
Revision date: 7/15/04	Supersedes: None

ALPINE NATURAL GAS

## Tapping Pipelines Under Pressure

### SCOPE AND PURPOSE

The purpose of this procedure is to ensure safe tapping of gas mains under gas pressure using polyethylene tapping tees. This procedure addresses the requirements under 49 CFR § 192.627.

### RESPONSIBILITY

The System Administrator is responsible for ensuring that all tapping of mains under gas pressure are performed according to the provisions of this procedure and only by individuals qualified to perform this procedure.

### PERSONNEL SAFETY

All Alpine Natural Gas OME personnel and contractors are to utilize proper protective clothing/equipment when performing tapping and stopping of gas pipelines under gas pressure.

### EQUIPMENT AND MATERIALS

Polyethylene tapping tees and associated hand tools intended for tapping gas mains under gas pressure.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Alpine Natural Gas Operator Qualification Plan, **ANG C.T. #35** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the Alpine Natural Gas OQ Plan for specific qualification requirements.

### Requirements

After all polyethylene tapping tees have been properly installed onto mains, the leak test of the facility is completed, and the facility has been purged into service using gas, the following steps shall be employed to properly tap the associated tapping tees:

1. Select the properly sized hex wrench to be used for completing the tap.
2. Unscrew the tapping tee cap.
3. Insert the hex wrench into the cutter head inside the tapping tee.
4. Slowly but firmly rotate the cutter head in a clockwise direction
5. Ensure that the cutter head does not perforate the bottom of the main by using a depth limiting marker on the hex tool.
6. Reverse the cutter head rotation in a counter clockwise direction until the cutter head is flush with the top of the tapping tee body.
7. Tighten the tapping tee cap onto the tapping tee using gloves until snug.
8. Leak test the tapping tee just under the cap using an approved leak detection solution.
9. Only use large pliers to slightly retighten the cap, when necessary. **DO NOT USE EXCESSIVE FORCE.**

### RELATED PROCEDURES

- 605-B3 Availability of Construction Records & Operating History to Personnel
- 605-B9 Excavation Safety
- 751 Prevention of Accidental Ignition



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 613	Approval Date: 07/15/04
Revision date: 04/04/09	Supersedes: 07/15/04

ALPINE NATURAL GAS

## Continuing Surveillance

### SCOPE AND PURPOSE

The procedure describes the minimum requirements for taking appropriate action on or adjacent to the pipelines in areas where changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements and other unusual operating and maintenance conditions occur, as required by 49 CFR § 192.613.

### RESPONSIBILITY

The System Administrator is responsible for continual observation along rights-of-way and distribution locations and to take any necessary remedial action deemed necessary according to this procedure.

Each Alpine Natural Gas employee will be trained to properly observe, in the course of routine duties, the surface conditions on and adjacent to company pipeline facilities for any indications of leaks, exposures, construction activity, and other factors that could affect company facilities, and if necessary make a report of these observations for remedial action.

### EQUIPMENT AND MATERIALS

A vehicle may be required to inspect facility locations and the right-of-way.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 41** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

### Survey Steps

All facilities accessible by roadway will be inspected by driving. All remaining pipeline sections will be inspected by walking.

#### Conditions to be observed

1. Class location changes.
2. Facility/material failure.
3. Unauthorized activities (e.g. excavation).
4. Encroachment on right-of-way.
5. Erosion, subsidence, washout, etc.
6. Indications of leaks.
7. Exposed pipe.
8. Condition of above grade facilities.
9. Off-road vehicle tracks or other surface damage causing loss of pipe cover or loss of surface vegetation.

#### Additional Information to be considered

1. Leakage history (excessive leakage).
2. Corrosion/cathodic protection records (Substantial changes in cathodic protection requirements).
3. Other unusual operating/maintenance conditions.

The System Administrator shall examine all completed records of Continuing Surveillance (Form 613) on a quarterly interval in order to determine if any trends in operating conditions exist that require remedial action.

Any pipeline segment found to be in unsatisfactory condition, but where no immediate hazard exists, shall be analyzed for phasing out of service, reconditioning or a reduction in MAOP in accordance with 49 CFR §192.619 ( a ) and ( b ).



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 613	Approval Date: 07/15/04
Revision date: 04/04/09	Supersedes: 07/15/04

**ALPINE NATURAL GAS**

## **Continuing Surveillance**

---

### **REPORTING/NOTIFICATION**

Form 613 shall be completed for each inspection. The System Administrator should be notified of conditions requiring remedial action.

### **RELATED PROCEDURES**

- 617 Investigation of Failures
- 721 System Patrolling
- 707 Line Markers
- 723 Leakage Surveys
- 727 Abandonment of Pipeline Facilities



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 625	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

## Odorization

### SCOPE AND PURPOSE

This procedure is to ensure proper odorization of all portions of the pipeline system that are subject to the requirements of 49 CFR § 192.625.

### RESPONSIBILITY

The System Administrator is responsible for odorant verification of pertinent segments of the system.

### PERSONNEL SAFETY

All Alpine Natural Gas personnel are to utilize proper protective clothing/equipment when performing pipeline odorant testing procedures.

### EQUIPMENT AND MATERIALS

All Alpine Natural Gas personnel are to utilize proper tools, materials and equipment required for odorant testing procedures including transport, transfer, injection and level/rate measurement and adjustment.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 32** and may only be performed or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Sampling Requirements

1. Odorant level must be maintained to ensure that all segments of pipeline facility will contain odorant that is readily detectable at a minimum concentration of one fifth of the lower flammability limit of the gas stream.

2. Periodic odorant sampling shall be performed using an odorant detection instrument HeathTech Odorator™ model number 5637 in order to verify appropriate odorant concentrations.
3. Odorant level verification shall be monitored and recorded at customer sales points at an interval of once per calendar month.
4. Odorant sampling instrument calibration shall be conducted at an interval not exceeding once per calendar year.

#### Sampling Procedure

1. Connect the instrument sampling hose to the gas supply outlet valve and to the Odorator™ inlet port.
2. Gently close the "FLOW VALVE" clockwise to the "CLOSED" position.
3. Turn the "POWER SWITCH" to the "ON" position.
4. Open to the gas supply outlet valve.
5. Turn the flow valve counter clockwise to the "FULL OPEN" position. This will condition the Odorator™.
6. Wait for approximately thirty seconds, (30 sec.), or until odorant can be smelled at the "BLOWER EXHAUST PORT". At this time, close the flow valve clockwise to the "CLOSED" position.
7. Push and hold down the "READ BUTTON", adjust the "ZERO KNOB" until the LCD reads ".00", then release the "READ" button.
8. Sniff the unodorized air stream at the "BLOWER EXHAUST PORT".
9. Slowly open the "FLOW VALVE" counter clockwise while sniffing directly over the "BLOWER EXHAUST PORT" at a distance of about  $\frac{3}{4}$ ".

The operator's top lip should just touch the edge of the "SNIFF CHAMBER".



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 625

Approval Date: 07/15/04

Revision date: 04/04/09

Supercedes: 07/15/04

ALPINE NATURAL GAS

## Odorization

10. When the operator notices the first indication of odorant (gas), stop turning the "FLOW VALVE" and push the "READ BUTTON". Obtain the LCD reading. Use the instrument chart to convert the LCD reading to a gas-in air value. (Use the closest LCD reading on the chart.) Record this gas-in-air value on Form 625 in the column labeled, "THRESHOLD GAS-IN-AIR VALUE". This is the threshold limit value of odorant in the gas stream for the instrument operator. This value should be somewhat below 1.0, but never over.
11. Continue opening the "FLOW VALVE" until a readily detectable odor is sensed. Stop opening the "FLOW VALVE" and push the "READ BUTTON". Obtain the LCD reading. Use the instrument chart to convert the LCD reading to a gas-in air value. (Use the closest LCD reading on the chart.) Record this gas-in-air value on Form 625 in the column labeled, "READILY DETECTABLE GAS-IN-AIR VALUE". When this value is below 1.0, the odorant level in the gas stream is acceptable. Sign Form 625 in the column labeled "EMPLOYEE SIGNATURE".
12. Close the gas supply outlet valve.
13. Disconnect the sample hose from the gas supply outlet valve.
14. Fully open the "FLOW VALVE" counter clockwise and leave the Odorator™ on for approximately one minute, (1 min.), after the test in order to purge the instrument.

### Sampling Tip

The operator should frequently clear the olfactory system during the periodic sampling procedure breathing ample amounts of fresh air between sniff point locations.

This is necessary since the sense of smell becomes fatigued easily with continuous odorant exposure. Changing operators during the day may also help eliminate this problem.

### Periodic Instrument Check

1. The Odorator™ should be operated with the "POWER SWITCH" in the "ON" position, the "FLOW VALVE" in the full open position without connecting to a gas supply.
2. The operator must sniff at the "BLOWER EXHAUST PORT".
3. If no odor is detectable, turn the Odorator™ "POWER SWITCH" to the "OFF" position, close the "FLOW VALVE" and continue testing. The Odorator™ has not been properly conditioned.

### Periodic Customer Sniff Tests

1. Periodic customer sniff tests for the presence of odorant in the gas stream can be good measures of comparison to periodic odorant sampling with the Odorator™.
2. These sniff tests can be performed during gas range pilot lighting procedures. Simply request the customer to sniff the gas flow stream over an extinguished pilot light on a gas range, when present.
3. Ask the customer to respond to the odor strength as "STRONG", "MODERATE" or "WEAK".
4. Record the customer response on Form 625 in the column labeled "CUSTOMER SNIFF TEST RESPONSE".
5. Record the customer address on Form 625 in the column labeled "SNIFF POINT LOCATION/DESIGNATION OR CUSTOMER ADDRESS".
15. Sign Form 625 in the column labeled "EMPLOYEE SIGNATURE".

16. Do not attempt to force or coerce customers to participate in sniff tests. However, many customers are happy to participate when they are informed why the operator is requesting the test and why odorant must be present and detectable.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Maintenance 625</b>	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

### **Odorization**

---

17. It should be noted that adult female customers tend to have a better sense of smell than that of adult male customers.

#### **REPORTING/NOTIFICATION**

Notify the System Administrator of any problems encountered during odorant sampling procedures including low or unusually high measured odorant levels or sampling instrument failure. The System Administrator will initiate an immediate investigation that will include; contact of the odorant supplier, field determination of odorant problem service areas, isolation and/or discontinuance of gas service in areas determined to pose a hazard due to lack of odorant or, odorant levels that are excessive. System(s) pressures should also be determined in order to ascertain whether a system(s) design limit has been jeopardized. Leakage surveys may be necessary to locate areas where odorant levels are deemed to be unacceptable, (high or low).

All odorization sampling data shall be recorded by field personnel on Form 625 and retained at the Headquarters.

#### **RELATED PROCEDURES**

723 Leakage Surveys



# Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 617	Approval Date: 07/15/04
Revision date: 07/15/04	Supersedes: None

ALPINE NATURAL GAS

## Investigation of Failures

---

### SCOPE AND PURPOSE

This purpose of this procedure is to establish the requirements for analyzing pipeline failures and to mitigate recurrence as required under 49 CFR § 192.617.

### RESPONSIBILITY

The System Administrator is responsible to ensure that initial assessment of failures is performed using appropriate judgment and that all fittings and materials involved in the subject failure are submitted to the proper agency for analysis.

The System Administrator is also responsible for initiating a detailed analysis of failures that may require submittal of a written report to regulatory and/or code enforcement agencies.

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing pipeline system Operations, Maintenance and Emergencies functions.

### EQUIPMENT AND MATERIALS

All personnel are to utilize proper repair tools, materials and equipment required for all pipeline system Operations, Maintenance and Emergencies functions.

### INSTRUCTIONS

#### Operator Qualification

This activity is not a covered task under the Operator Qualification Plan.

### Inspection Steps

Each failure or incident shall be treated with the same degree of significance regardless of the magnitude of potential or actual damage and with respect to the necessity for minimizing recurrence. The System Administrator shall initiate an assessment of a failure or incident scenario that shall include, but not be limited to:

- Repair and restoration of gas service in the case of a routine fitting or material failure.
- Preservation of all potential evidence that may be used in an investigation of the failure or incident.
- Protection of human life and property.
- Photographic documentation.
- Interview of participants and witnesses.
- Development of an event oriented log or record.
- Implementation of the Emergency Plan, as necessary.

All failed fittings and materials shall be catalogued, inventoried and examined by the System Administrator. Examination should include determination of the circumstances leading to the cause of failure and review of any similar failures that might indicate developing trends.

All fittings and materials exhibiting active external or internal corrosion shall be examined by an individual qualified to perform such an examination.

Where appropriate, the System Administrator should contact a third party testing laboratory when the subject product(s) are to be subjected to destructive testing and/or failure analysis.



## Procedural Manual for Operations, Maintenance and Emergencies

Maintenance 617	Approval Date: 07/15/04
Revision date: 07/15/04	Supersedes: None

**ALPINE NATURAL GAS**

### Investigation of Failures

---

Damaged and/or failed gas facilities should be placed into Fire Department custody whenever persons have been injured and/or property has been damaged. These specimens shall be submitted for damage/ failure analysis to an American Gas Association, (AGA), recognized laboratory at the request Alpine Natural Gas.

#### **REPORTING/NOTIFICATION**

Form 617 is to be completed for each fitting or material failure.

Form 617-1 is a Log of all incidents of pipeline failure to be completed by ANG's System Administrator.

Appendices M-1, M-2 where injury or property damage has resulted.

#### **RELATED PROCEDURES**

605-B1 General Pipeline Repair  
605 B5-7 Startup-Shutdown-Purging  
605-D Safety Related Conditions  
615 Emergency Plan  
709 Record Keeping  
751 Prevention of Accidental Ignition



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 465	Approval Date: 07/15/04
Revision date: 12/02/10	Supercedes: 04/14/09

## External Corrosion Control – Monitoring (Pipe to Soil) Potential

### SCOPE AND PURPOSE

This procedure is to ensure adequate external corrosion protection for the pipeline systems. It describes cathodic protection inspection practices required under 49 CFR § 192.465. The voltmeter is used for measuring D.C. potentials on buried or submerged metal structures.

### RESPONSIBILITY

The System Administrator is responsible to ensure that cathodic protection levels are checked at the intervals described in this procedure.

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing pipeline system Operations, Maintenance and Emergencies functions.

### EQUIPMENT AND MATERIALS

Tinker-Razor, Model CPV-4 Voltmeter  
Voltmeter/contact leads  
Copper-copper sulfate electrode  
Copper sulfate crystals  
Distilled Water

### OPERATOR QUALIFICATION

**This activity is a covered task under the Operator Qualification Plan, ANG C.T. # 6 and may only be performed by or directed and observed by an individual who is currently qualified to perform pipe-to-soil readings. Refer to the OQ Plan for specific qualification requirements.** INSTRUCTIONS

### Inspection Frequency

Cathodic protection surveys will be performed at least once each calendar year, at intervals not to exceed 15 months. Additional survey tests will be conducted on areas determined to require such testing.

### INSTRUCTIONS

#### Survey Steps

1. Ensure that voltmeter batteries are fully charged.
2. Select the **ON** button.
3. Follow all manufacturer instructions in the use of the Model CPV-4 Voltmeter
4. Place crystals into half-cell cylinder and add Distilled Water.
5. Check the Copper-copper sulfate half cell by contacting the porous plug with the porous plug of another half cell and measure the potential difference across both half cells. A difference of 5 mV or less is acceptable.
6. Connect the positive lead from the voltmeter to the pipe test point lead and the negative voltmeter lead to the Copper-copper sulfate half cell.
7. Place the Copper-copper sulfate half cell in contact with the soil as directly over the pipeline as is possible.
8. Moisten the contact soil area as necessary.
9. Record the pipe-to-soil potential.

If any pipe-to-soil potential is less than  $-850$  mV, notify the System Administrator at the end of the work shift.

#### Insulating devices

Insulation of steel gas mains may be achieved using a steel to plastic (polyethylene) transition fittings, insulating flange assemblies, or insulating compression fittings.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Corrosion Control 465</b>	Approval Date: 07/15/04
Revision date: 12/02/10	Supercedes: 04/14/09

### **External Corrosion Control – Monitoring (Pipe to Soil) Potential**

---

#### **Remedial Action**

Whenever corrosion control deficiencies are detected, further testing and evaluation shall be conducted to determine the cause.

Areas of further testing and evaluation include remainder of anode life, anode replacement and retesting, examination of insulating devices, interference surveys and short detection surveys. All defective pipeline and casing test leads shall be replaced at the earliest opportunity but prior to the next required cathodic protection survey.

#### **Exposed Pipe**

Whenever steel pipe is exposed for any reason, it shall be thoroughly inspected for corrosion damage and coating damage according to §192.459.

If either of these conditions exist, repair shall be made according to 605 General Pipeline Repair.

#### **REPORTING/NOTIFICATION**

All pipe-to-soil potentials are to be recorded on Form 465.

#### **RELATED PROCEDURES**

605-B1 General Pipeline Repair  
627 Tapping a Pipeline Under Pressure  
Appendix H- CPV- Voltimeter  
Appendix X- Copper-Copper Sulfate Ref.  
Electrode Calibration



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>Corrosion Control 455</b>	Approval Date: 07/15/04
Revision date: 12/02/10	Supercedes: 04/14/09

## Installation of Exothermic Electrical Connections

### SCOPE AND PURPOSE

This procedure is to ensure when personnel install exothermic electrical connections that this work is performed in a manner that provides adequate exothermic anode attachment to the pipeline as well as adequate pipe coating repair.

It describes practices required to comply with §§192.455.

### RESPONSIBILITY

The System Operator, or other designee, is responsible to ensure when installing exothermic electrical connections that, this work is performed in a manner that is described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Ensure that the work zone/area is setup to protect the public from danger.  
Ensure that all applicable safety equipment is being utilized as per company policy.

### EQUIPMENT AND MATERIALS

Mechanical Equipment  
Hand Tools  
Appropriately sized and insulated test lead and/or tracer wire  
Exothermic electrical connection tools including;  
Appropriately sized test lead and/or tracer wire copper sleeves  
Exothermic ignition oven (crucible)  
Exothermic metallic disks  
Appropriately sized exothermic ignition charges  
Exothermic charge igniter  
Exothermic furnace cleaning tool

Other equipment and materials, as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 9** and may only be performed or directed and observed by an individual who is currently qualified to perform this procedure.

### INSTRUCTIONS

#### Conventional Exothermic Welding (CADWELD, THERMOWELD, etc.)

1. The pipe surface must be thoroughly cleaned to a bright shiny appearance and free of moisture, oil, and grease prior to exothermic welding.
2. CAUTION – Never exothermically weld to a corroded pipe surface.
3. ANSI/ASME B31.4 and B31.8 list the following minimum pipe wall thickness data for exothermic welding:

Nominal Pipe Diameter, in.	Pipe Schedule	Wall Thickness, in.
3/4	40	0.113
1 to 2	10	0.109
2 1/2 to 4	10	0.112
5 to 8	5	> 0.109

4. Strip the insulation from the solid core copper #12 or #14 AWG anode or test lead wire, about 1 1/2 inches from the end.
5. Crimp a copper sleeve on the bare portion of the wire leaving about 1/8 inch of the wire protruding from the end of the copper sleeve.



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Corrosion Control 455</b>	Approval Date: 07/15/04
Revision date: 12/02/10	Supercedes: 04/14/09

### **Installation of Exothermic Electrical Connections**

---

6. Tie or wrap the wire to the piping so that any mechanical strain will not damage the weld after completion.
7. Open the cover of the oven (crucible) to expose the weld cavity.
8. Clean the cavity using the exothermic furnace cleaning tool, as necessary.
9. Insert an exothermic metallic disk into the weld cavity with the concave side facing downward to fit the shape of the weld cavity.
10. Remove the cap from an exothermic ignition charge container and pour the contents into the weld cavity.
11. Ensure that all of the fine ignition powder from the bottom of the ignition charge container is also poured lastly into the weld cavity.
12. Close the lid of the exothermic ignition oven (crucible) and place it over the wire with the copper sleeve and hold firmly against the pipe surface to be welded.
13. Wear protective gloves to prevent burns, and use the exothermic charge igniter to light the charge. **DO NOT USE MATCHES OR A TORCH.**
14. Hold the exothermic ignition oven (crucible) firmly for a moment allowing the weld to cool.
15. Remove the exothermic ignition oven (crucible) from the pipe and test the completed weld with a hammer. Avoid striking the wire directly.
16. After the weld has cooled completely, repair the pipe coating according to company procedures.

#### **RELATED PROCEDURES**

- 0991 – Coating Application and Repair – Brushed or Rolled
- 1001 – Coating Application and Repair – Sprayed
- 1011 – External Coating Application and Repair – Wrapped

#### **REPORTING/NOTIFICATION**

Complete documentation in accordance with Operation and Maintenance Manual.



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 481	Approval Date: 07/15/04
Revision date: 12/02/10	Supercedes: 07/15/04

## Atmospheric Corrosion Inspection

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of aboveground portions of the pipeline systems by monitoring and controlling atmospheric corrosion as required by 49 CFR § 192.481.

### RESPONSIBILITY

The System Administrator is responsible to ensure that atmospheric corrosion inspections are performed at the appropriate intervals on all aboveground metallic piping and that prompt remedial action is taken where necessary.

### PERSONNEL SAFETY

There are no special personnel safety issues.

### EQUIPMENT AND MATERIALS

No special equipment is required.

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 7** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Inspection Frequency

Once each 3 calendar years, but at intervals not exceeding 39 months, each pipeline facility that is normally exposed to the atmosphere must be inspected for atmospheric corrosion. These locations are indicated on the System Plats/Maps with the exception of customer meter sets.

### Survey Steps

All aboveground piping and all pipe support structures exposed to the atmosphere shall be visually inspected for the following:

1. Disbonded coating with visible rust and pitting of the metal underneath.
2. Disbonded coating with surface rust but no pitting or significant metal loss underneath.
3. Coating is bonded but has small surface blemishes.
4. Coating is in good condition with no evidence of disbondment or corrosion.
5. Normal surface rust on uncoated piping that can be cleaned and painted.

### REPORTING/NOTIFICATION

A copy of Form 481 will be completed for each inspection for atmospheric corrosion conducted under this procedure. A copy of Form 481 must be submitted to the System Administrator for all inspections.

### RELATED PROCEDURES

481-A Remedial Action for Atmospheric Corrosion  
605-B1 General Pipeline Repair  
613 Continuing Surveillance



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 481-A	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

## Remedial Action for Atmospheric Corrosion

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of pipeline systems by performing remediation of atmospheric corrosion as required by 49 CFR § 192.481.

### RESPONSIBILITY

The System Administrator is responsible to ensure that all aboveground metallic piping in need of atmospheric corrosion remediation is promptly taken.

### PERSONNEL SAFETY

Refer to the Material Safety Data Sheets for paints. Avoid breathing paint fumes. Wear eye protection and respiratory protection when using abrasive blasting equipment or power tools.

### EQUIPMENT AND MATERIALS

Wire brush and/or abrasive blasting equipment  
Primer/Paint

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 7** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Repair Steps

At a minimum, the areas of atmospheric corrosion shall be cleaned, primed and painted with materials suitable for the prevention of atmospheric corrosion.

Cleaning – Using a stiff wire brush or an abrasive blast, remove rust in the affected area down to bare metal.

Field Evaluation – If the pipe is suitable for continued service continue to clean and paint bare metallic surfaces. Follow 605-B1 General Pipeline Repair.

### REPORTING/NOTIFICATION

A description of the remedial action should be recorded on Form 481 and placed in the corrosion control files.

### RELATED PROCEDURES

- 481 Inspecting for Atmospheric Corrosion
- 487-B Remedial Action for General Corrosion
- 487-C Remedial Action for Localized Corrosion
- 605-B1 General Pipeline Repair



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 487-B	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

## Remedial Action for General Corrosion

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of pipeline systems by performing remediation of general corrosion as required by 49 CFR § 192.485 (a).

### RESPONSIBILITY

The System Administrator is responsible to ensure that all gas facilities in need of general corrosion remediation is promptly taken.

### PERSONNEL SAFETY

Refer to the Material Safety Data Sheets for paints. Avoid breathing paint fumes. Wear eye protection and respiratory protection when using abrasive blasting equipment or power tools.

### EQUIPMENT AND MATERIALS

Wire brush and/or abrasive blasting equipment  
Primer/Paint

### INSTRUCTIONS

#### Operator Qualification

This activity is a covered task under the Operator Qualification Plan, **ANG C.T. # 10** and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.

#### Repair Steps

All areas of general corrosion where pitting is closely grouped and may affect the remaining strength of the pipe shall be cut out and replaced. Consideration should be given to pipe segment replacement.

Small areas of general corrosion pitting, where the remaining strength of the pipe is not affected, may be repaired by either cleaning and coating, or weld repair.

Cleaning – Remove all coating from areas affected by generalized corrosion. Using a stiff wire brush or an abrasive blast, clean the affected area down to bare steel.

Field Evaluation – If the pipe is suitable for continued service continue to follow 605-B1 General Pipeline Repair for repair of coating.

### REPORTING/NOTIFICATION

A description of the remedial action taken should be recorded on Form 487 and placed in the corrosion control files.

### RELATED PROCEDURES

- 481 Inspecting for Atmospheric Corrosion
- 481-A Remedial Action for Atmospheric Corrosion
- 487-C Remedial Action for Localized Corrosion
- 605-B1 General Pipeline Repair



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 487-C	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

## Remedial Action for Localized Corrosion

### SCOPE AND PURPOSE

This procedure is to ensure the safe operation of pipeline systems by repairing localized corrosion as required by 49 CFR § 192.485 (b).

### RESPONSIBILITY

The System Administrator is responsible to ensure that all gas facilities in need of localized corrosion remediation is promptly taken.

### PERSONNEL SAFETY

Refer to the Material Safety Data Sheets for paints. Avoid breathing paint fumes. Wear eye protection and respiratory protection when using abrasive blasting equipment or power tools.

### EQUIPMENT AND MATERIALS

Wire brush and/or abrasive blasting equipment  
Primer/Paint  
Pit depth gauge

### OPERATOR QUALIFIED

**This activity is a covered task under the Operator Qualification Plan, ANG C.T. # 12 and may only be performed by or directed and observed by an individual who is currently qualified to perform this procedure. Refer to the OQ Plan for specific qualification requirements.**

### INSTRUCTIONS

#### Repair Steps

All areas of localized corrosion where pitting has caused less than 10% of pipe wall thickness to be lost may be repaired using coating repair materials. Areas of localized corrosion pitting where the remaining strength of the pipe may be affected and/or  $\geq 10\%$  of the pipe wall is lost must be repaired by segment replacement.

Wall thickness loss shall be measured by an individual that is qualified to perform such a measurement using either a pit depth gauge or a sonograph instrument. However, should an ANG OME staff member believe that wall thickness loss, through visual inspection, appears to be in excess of 10%, the subject pipe segment shall be scheduled for replacement, without pit depth measurement, at the earliest opportunity.

Cleaning – Remove all coating from areas affected by localized corrosion. Using a stiff wire brush or an abrasive blast, clean the affected area down to bare steel.

Field Evaluation – If the pipe is suitable for continued service continue to follow 605-B1 General Pipeline Repair for repair of coating.

### REPORTING/NOTIFICATION

A description of the remedial action taken should be recorded on Form 487 and placed in the corrosion control files.

A record of all corrosion related pit depth measurement will be recorded on Form 487.

### RELATED PROCEDURES

- 481 Inspecting for Atmospheric Corrosion
- 481-A Remedial Action for Atmospheric Corrosion
- 487-A Remedial Action for General Corrosion
- 605-B1 General Pipeline Repair



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 475	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

## Visual Inspection for Internal Corrosion

### SCOPE AND PURPOSE

This procedure is to ensure when personnel either perform a procedure or otherwise remove segment of gas metallic piping and associated fittings, that the internal surface of these facilities are visually examined for evidence of internal corrosion.

Alpine only has, unburied coated metallic piping, this is located inside its Regulating Station. No other metallic piping exists on Alpines Class 3 distribution system.

It describes practices required to comply with §§192.475, 192.485 and 192.487.

### RESPONSIBILITY

The System Administrator or other designee is responsible to ensure when the internal surface of these facilities are visually examined for evidence of internal corrosion, and that it is performed as described in this procedure.

### PERSONNEL SAFETY (Where Applicable)

Ensure that the work zone/area is setup to protect the public from danger.  
Ensure that all applicable safety equipment is being utilized as per company policy.

### EQUIPMENT AND MATERIALS

System maps and records  
Other equipment and materials, as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

1. Whenever a segment of gas pipe is removed or otherwise taken out of service, the internal surfaces should be examined for evidence of internal corrosion.
2. Indications of internal corrosion require a thorough investigation of adjacent pipe, both longitudinally and circumferentially, in order to discover the actual extent of internal corrosion.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual.

### RELATED PROCEDURES

475-B Measure Internal Corrosion

703- Repair of Damage Pipeline



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 475-B	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

## Measurement for Internal Corrosion

### SCOPE AND PURPOSE

This procedure is to ensure when personnel measure the extent of internal corrosion of piping and associated fittings that is performed to ensure accuracy of specific corrosion pit measurement and extent.

It describes practices required to comply with §192.475, §192.485 and §192.487.

### RESPONSIBILITY

The System Administrator, is responsible to ensure when the extent of detected internal corrosion of piping and associated fittings is measured, that it is performed as described in this procedure.

### PERSONNEL SAFETY

Ensure that the work zone/area is setup to protect the public from danger.  
Ensure that all applicable safety equipment is being utilized as per company policy.

### EQUIPMENT AND MATERIALS

System maps and records OEM Log 475-B  
Ultrasonic Wall Thickness instrument  
Pit depth gauge/deflection indicator  
Other equipment and materials, as needed

### OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan **C.T. # 12** and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

### INSTRUCTIONS

Clean the pipe and/or fitting sample by removing burrs, corrosion deposits, dirt and coating.

1. Use pit depth gauge, with a pit-measuring tip small enough to reach the bottom of the corrosion pit being examined.
2. The body of the pit depth gauge must lay flat on the internal surface being inspected. Holding the pit depth gauge firmly, push the tip into the different pits and record each pit depth result.
3. If a deflection indicator is used thoroughly clean the pipe and/or fitting sample(s). Lay the sample with the outside of the pipe on a smooth, flat inspection surface. Using a pointed tip on the deflection indicator that will reach the bottom of the smallest pit, position the sample under the deflection indicator and measure to a smooth pipe or fitting surface that does not have any corrosion pits. This will establish the wall sample thickness. Adjust the dial to read "zero". Raise the dial tip, do not drag it on the surface of the pipe or fitting, and move the sample into position allowing the tip to move into the bottom of the pit. Read the difference between the "zero" on the dial ace, and the reading in the bottom of the subject pit. Record the information obtained.
4. After completely removing an Ample amount of pipe coating and any associated mastic material, use a sonograph instrument to measure pipe wall thickness on either a pipe or fitting sample in the field, or from removed samples. Turn the sonograph instrument on, and using the instrument calibration block, that most closely matches the assumed pipe wall thickness, apply a small amount of required gel to the



# Procedural Manual for Operations, Maintenance and Emergencies

Corrosion Control 475-B	Approval Date: 07/15/04
Revision date: 04/04/09	Supercedes: 07/15/04

**ALPINE NATURAL GAS**

## Measurement for Internal Corrosion

cleaned pipe or fitting surface and again test the instrument for calibration.

5. Apply the required instrument gel to the general pipe or fitting surface area to be tested. Depending on the transducer and the pipe/fitting wall thickness, the transducer slit/window should be parallel or perpendicular to the pipe or fitting length.
6. Several individual tests will have to be performed unless the instrument has "B Scan" capabilities which allows the transducer to be moved across the pipe or fitting surface while the instrument obtains readings and displays the results on a graph. With an instrument without "B Scan", the transducer will have to be exactly over a pit to register the associated pipe or fitting thickness. Document all readings, recording good pipe wall thickness readings along with defect values.
7. If the sonograph readings indicate that the pipe or fitting wall is reduced to less than 30 % of its original thickness, it is considered "unserviceable", and must be replaced. Multiple pits, close enough together to affect pipe wall mechanical strength should be addressed appropriately.
8. With all cases of internal corrosion, the problem causing corrosion in one section of pipe might be common to the entire piping system and must be thoroughly investigated.

### REPORTING/NOTIFICATION

Complete documentation in accordance with Operation and Maintenance Manual. Form 475 B

### RELATED PROCEDURES

475 – Visual Inspection of Internal Corrosion



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

### SCOPE AND PURPOSE

This procedure is to ensure that appropriate standards are followed to provide safety when emergency conditions occur including receiving, identifying, and classifying notices of potential or actual emergency events, effective communication with fire, police and other public officials, prompt and effective response to all emergency notifications, making available all necessary personnel, equipment and materials, protecting human life first then property, control and minimization of release of hazardous gas, assessing hazardous areas, minimizing public exposure and accidental ignition, establishing and maintain a liaison with fire and police and conducting post accident/incident review(s). These items are required by 49 CFR § 192.615 (a) through (c).

### RESPONSIBILITY

The System Administrator and other personnel assigned to Emergency Response are responsible for compliance with the provisions of this procedure.

### PERSONNEL SAFETY

All personnel are to utilize proper protective clothing/equipment when performing Emergency Response functions.

### EQUIPMENT AND MATERIALS

Equipment and materials available for use in an emergency are listed in Appendix F.

All applicable Supervisors will be given a current copy of the Emergency Plan.

### INSTRUCTIONS

#### Operator Qualification

These activities are not covered tasks under the Operator Qualification Plan.

However, emergency response activities may entail one or more covered tasks. Refer to the

OQ Plan for specific covered tasks and associated qualification requirements.

#### Receiving, identifying and classifying emergency notices

Potential or actual emergency conditions may be reported to the operator by the public, employees or other individuals, as follows:

1. Public/customer telephonic report
2. Employee verbal/written notification as a result of a routine system patrol
3. Direct field observation
4. Leakage Survey Consultants
5. Fire or Police Officials
6. Civil Defense Officials
7. Contractors
8. Other Utility Companies
9. Report by a saboteur or prankster

#### Receiving Emergency Notices

Any employee may be required to receive information regarding a potential or actual emergency event. Therefore, all gas personnel must be capable of obtaining and recording required information from an individual making an emergency report using the Emergency Notification/Activity Log, Form 615-1.

#### Identifying and classifying emergency notices

There are two emergency event classes for a reported emergency:

1. Potential emergency
2. Actual emergency

A **potential** emergency is an event that is:

1. Reported by an individual and cannot be immediately confirmed regarding the information obtained and recorded.
2. Indicated by a deviation in pressure or flow rate but cannot be confirmed.
3. Reported directly by an operator employee.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

An **actual** emergency is an event that is:

1. Reported by an individual but is confirmed through another reliable source including deviation of pressure and flow, or another person or agency.
2. Reported directly by an operator employee.
3. Located in an area where human lives and/or property may be threatened if immediate response is not exercised. In an area of little or no human population, the event may be classified as "**potential**" until confirmation is made.
4. Natural disasters such as unforeseen snow storms, floods, wildfires and/or tornadoes may constitute the necessity to implement the Emergency Plan.

### Instructions to Callers

Employees, or the Answering Service, receiving emergency notification must utilize all information obtained in order to react to each situation. All gas leak calls will be treated as emergencies until an on-site assessment is made. Employees, or the Answering Service, shall obtain the following information from emergency callers:

1. Full Name
  2. Address
  3. Phone Number
  4. Number of building inhabitants
  5. If gas can be smelled?
  6. If gas odor is strong, moderate or weak?
  7. If gas leak can be heard?
  8. If gas leak sound is loud?
  9. If building inhabitants feel ill?
  10. If caller is an Alpine Natural Gas Customer?
10. DO NOT CALL THE CUSTOMER BACK OR HAVE EMPLOYEES CALL THE CUSTOMER BACK

If it is determined that the caller is not an Alpine Natural Gas customer, the caller will be directed to call their natural gas or propane supplier and report the emergency.

Whenever an emergency report includes the possibility of gas inside a building, direct the caller to have all persons leave the building cautioning them to:

1. Lay the phone down
2. Do not operate any electrical devices (lights, switches, garage door openers, etc)
3. Not use smoking materials or open flames
4. Wait at the street for the Alpine Natural Gas/Fire Department/Police Department to arrive

The Answering Service shall send a fax of all information taken after hours to the Alpine Natural Gas office.

### Prompt and effective response

Immediately after receiving notification of a potential or actual emergency, the employee receiving such notice will transfer all pertinent information to all appropriate company officials.

Communication with other emergency response agencies must be maintained during the entire emergency period.

Appropriate emergency response personnel must be dispatched to the emergency site at the earliest opportunity. These personnel shall be advised of all necessary information and equipment/materials required for control and/or mitigation of the emergency event.

Gas personnel will investigate emergency reports that are determined to be minor in nature. Gas personnel will report all findings to management at the earliest opportunity.

Should gas personnel require assistance, a request will be communicated to the System Administrator of a need for assistance.

Gas personnel, will investigate emergency reports that are considered major in nature.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

The System Administrator will also be dispatched to the scene in order to assess the situation and take control of all emergency response activities.

The System Administrator shall designate one, (1), employee at the emergency scene as the Field Work Supervisor overseeing all emergency response fieldwork as deemed necessary.

Field actions may include, but are not limited to, the following:

1. Protection of human life (including Gas employees) and property
2. Evacuation of building(s) and surrounding areas
3. Leakage surveys of suspected and neighboring buildings (inside/outside)
4. Shut down of system components to control pressure and flow (valves, meters, etc.)
5. Notification of Fire, Police and other mutual emergency response agencies
6. Notification of Federal/State Pipeline Regulatory officials

### Notifying Fire, Police and other public officials

Personnel at the headquarters, or other designated operator personnel, shall contact appropriate police, fire and other public officials in an effort to have additional public safety measures near and around the emergency scene.

The Emergency Telephone List, Form 615-2 contains a current list of all emergency responders and shall be used whenever mutual assistance is required.

Open and effective communications with these officials must be maintained throughout the emergency period. Actions by these officials may include, but not be limited to, crowd control, traffic control, evacuation, providing temporary shelter, road/highway closure and emergency medical response.

In cases that constitute a reportable accident/incident, refer to Regulatory Notification Record, Form 615-3 and in this procedure for Federal and State reporting requirements.

### REPORTING REQUIREMENTS

Reports to State and Federal agencies require a record of the individual contacted as well as time and date.

### Minor Gas Leak Field Response

The first Alpine Natural Gas employee(s) at an emergency scene shall take the following actions, as appropriate:

1. Request assistance, as necessary
2. Maintain open communications with management
3. Determine the extent of the emergency regarding the concentration of escaping and migrating gas using only a CGI
4. Evacuation of affected persons from buildings and the emergency area
5. Eliminate all sources of ignition
6. Eliminate gas source when a gas meter set or associated service line piping is suspected or known as the source (take precautions not to breath oxygen deficient air and always utilize proper protective clothing in a gaseous atmosphere)
7. Eliminate gas source when a gas main is suspected or known as the source (this may require assistance and operation of plugs, squeeze tools and/or valves)
8. Eliminate any ignited gas source(s) within capabilities



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supersedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

9. Recheck the affected area (inside and outside) using a CGI, after gas flow has been controlled or eliminated (additional leakage may be present)
10. Leaks that are classified as *Grade 1* must be repaired immediately
11. *Grade 2* and *Grade 3* leaks may be scheduled according the requirements in 723 Leakage Surveys

### Major Gas Leak Field Response

In response to gas leaks determined to be major, including main breaks the first alpine Natural Gas employee(s) at the emergency scene shall take the following actions, as appropriate:

1. Establish and maintain open communications with mutual emergency response agencies on the scene (request and offer assistance, as necessary)
2. Maintain open communications with management
3. Establish an Emergency Operations Center, (EOC), as deemed necessary
4. Determine the extent of the emergency regarding the concentration of escaping and migrating gas using only a CGI
5. Evacuation of affected persons from buildings and the emergency area
6. Eliminate all sources of ignition
7. Eliminate gas source when a gas meter set or associated service line piping is suspected or known as the source (take precautions not to breath oxygen deficient air and always utilize proper protective clothing in a gaseous atmosphere)
8. Eliminate gas source when a gas main is suspected or known as the source (this may require assistance and operation of plugs, squeeze tools and/or valves)
9. Eliminate any ignited gas source(s) within capabilities

10. Request Fire/Police to re-route traffic when a possibility of ignition is suspected (If gas is found in either, steps to prevent ignition shall be implemented)
11. Check storm drains and sanitary sewers for the concentration migrating gas using only a CGI
12. Consider lowering the gas supply pressure, isolating a segment of main or taking a pipe segment out of service (all meter riser valves associated with a “dead main” must be shut off)
13. Begin all necessary repairs
14. Place all affected mains back into service performing required purging and relight procedures
15. Recheck the affected area (inside and outside) using a CGI, after gas flow has been restored (additional leakage may be present)
16. Restore service at the earliest opportunity
17. Announce to management and emergency response agencies when the emergency nature of the situation has been mitigated

### Leaks Inside Buildings

Leaks found to be inside buildings will require a thorough leak investigation, as follows:

1. Clear and zero the CGI in gas free ambient air, preferably at the curbside prior to accessing the subject property
2. Perform a floor to ceiling leak survey at the entrance threshold
3. Evacuate all building inhabitants whenever the gas - in - air percentage is at or in excess of **1.5%** ( $\geq$  **30% of LEL**). Use the table below as a reference:

<u>CGI Gas-in-Air</u>	<u>% of LEL</u>
1/2 %	10
1%	20
<b>1.5%</b>	<b>30</b>
2%	40
3%	60



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

4%	80
5%	100

11. If multiple buildings are involved, contact Fire/Police Departments for evacuation and ventilation assistance
12. DO NOT ATTEMPT TO SELF VENTILATE ANY BUILDINGS
13. Escort evacuees to the curb or another safe locations)
14. Eliminate gas source when a gas main or meter set is suspected or known as the source (this may require assistance and operation of plugs, squeeze tools and/or valve
15. Eliminate all ignition source(s) within capabilities
  
16. Consider lowering the gas supply pressure, isolating a segment of main or taking a pipe segment out of service (all meter riser valves associated with a "dead main" must be shut off)
17. DO NOT ENTER BUILDINGS UNTIL PROPER VENTILATION HAS BEEN PERFORMED
18. Maintain open communications with Fire/Police representatives as well as management personnel

### Fires/Explosions

1. Establish and maintain open communications with mutual emergency response agencies on the scene (request and offer assistance, as necessary)
2. Maintain open communications with management
3. Establish an Emergency Operations Center, (EOC), as deemed necessary
4. Determine the extent of the emergency regarding whether gas is involved and the concentration of escaping and migrating gas using only a CGI
5. When gas is not involved, take action to protect nearby gas facilities

6. When gas is involved, begin evacuation of affected persons from buildings and the emergency area
7. Eliminate all sources of ignition
8. Eliminate gas source when a gas meter set or associated service line piping is suspected or known as the source (take precautions not to breath oxygen deficient air and always utilize proper protective clothing in a gaseous atmosphere)
9. Eliminate gas source when a gas main is suspected or known as the source (this may require assistance and operation of plugs, squeeze tools and/or valves)
10. Eliminate any ignited gas source(s) within capabilities
  
11. Consider lowering the gas supply pressure, isolating a segment of main or taking a pipe segment out of service (all meter riser valves associated with a "dead main" must be shut off)
12. Restore service at the earliest opportunity
13. Announce to management and emergency response agencies when the emergency nature of the situation has been mitigated

### Media Notification/Inquiries

Alpine Natural Gas will notify local media agencies whenever it has been deemed necessary to obtain assistance for broadcasting gas system emergency information to the public. Whenever Alpine Natural Gas staff is/are approached at an emergency scene by the media, any and all media inquiries/questions will be referred to the System Administrator.

### Natural Disasters

During and after the occurrence of natural disasters, the System Administrator will be responsible for maintaining open communication with both gas operations personnel and outside emergency response agencies.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

## Emergency Plan

Form 615-2 contains a current list of emergency response agencies that may be contacted for mutual assistance. System plats/maps should also be available.

Natural disasters may pose unique scenarios for gas personnel many of the guidelines described for particular emergencies may apply to similar circumstances associated with natural disasters.

### Earthquake

After a major earthquake in the gas service area, all available gas personnel will be contacted to report for emergency response duty.

System patrolling will be performed with particular attention to the district regulator station with regard for potential damage and subsequent leakage.

All areas where abnormal movement could affect the serviceability of gas facilities, including creek and bridge crossings, will receive next patrolling priority.

Emergency shutdown of facilities will be performed where such activity is deemed necessary and as described in this Emergency Plan.

### Flash Flooding

Flash flooding will necessitate the protection of human life and property, including gas personnel.

Gas personnel will not risk entering floodwaters for any reason without the aid of emergency personnel and equipment.

The System Administrator will determine which segments of the gas distribution system will be shut down due to inundation by floodwaters.

After floodwaters have receded, the district regulator station will be checked for intake of water. All meter will be removed.

Previously inundated areas will be patrolled for signs of facility damage and movement of large amounts of soil that may have caused washouts of gas facilities.

Restoration of service will be performed as described earlier in this Emergency Plan.

Mains and service lines exhibiting evidence of water intake will be thoroughly purged according to 605-B5 Startup-Shutdown-Purging.

A follow-up leakage detection survey will be performed after all required and purging has been completed but prior to placing any meter sets into service.

### Wildfires

Whenever a wildfire has the potential to impinge upon gas department facilities, the System Administrator will dispatch field personnel to patrol all areas of the gas system where wildfire may become a danger to gas facilities.

Such facilities will be considered for shutdown and isolation until all danger has been mitigated.

All decisions for facility shutdown and isolation will be performed in close conjunction with Fire/Police officials.

System shutdown and startup will be performed according to 605-B5 Startup-Shutdown-Purging.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

### Gathering of Emergency Data

After each major gas leak, fire or explosion, appropriate Alpine Natural Gas officials, in conjunction with other mutual emergency response agencies, shall conduct an investigation in order to gather all facts, data and evidence associated with the emergency. This gathering effort will include, but not be limited to, the following:

1. Requesting a record of all mutual response agency communications, activities and generated reports, during and related to, the emergency
2. A record of all Alpine Natural Gas information, communications and activities transpiring during the emergency
3. A request to have all officials and employees involved in the emergency present to assist or provide input
4. Preservation of all potential or actual physical and recorded evidence (Refer to 617 Investigation of Failures)
5. Consider pressure testing piping segments and conducting meter clocking for evidence of leaking pipe
6. Review system maintenance activities and leakage survey results in the affected area (Refer to 723 Leakage Surveys)
7. Determine whether recent construction activity has taken place in the affected area
8. Review cathodic protection records for the affected area (Refer to 465-A External Corrosion Control – Monitoring)
9. Review odorization records in the affected area (Refer to 625 Odorization)

### Post-Emergency Review

After each emergency event has been mitigated and any required notifications/reports have been filed, operator officials shall conduct a review of all facts and response activities associated with the emergency. This review shall determine the effectiveness of emergency response in order to eliminate any recurrence

and to establish any areas of response that could be improved. Activities identified for improvement shall be scheduled for implementation at the earliest opportunity.

Any Alpine Natural Gas post-accident drug/alcohol testing deemed to be required shall be conducted.

The results of this review shall be documented and maintained at the operations headquarters.

### Emergency Liaison Program

Alpine Natural Gas will offer an annual program to Fire, Police, City Council and other mutual emergency response agencies in order to remain in compliance with 49 CFR 192.615 (a) (2) and (8), as well as 192.615 (c) (1-4).

This program will include discussion of Alpine Natural Gas intentions and employee training provisions for adhering with these requirements, as well as a detailed presentation of natural gas characteristics compared to other pure gases and hydrocarbon vapors.

A record of persons attending, their respective agencies and a synopsis of the program contents shall be maintained at the headquarters.

### Emergency Site Cleanup and Restoration

Each emergency site/area shall be cleaned and restored to a condition that is as near normal to that preceding the emergency, as is possible.

### Annual Plan Review & Employee Training

The System Administrator is responsible for the annual review of Alpine's Emergency Plan. A record of any plan revisions will be kept.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

ALPINE NATURAL GAS

## Emergency Plan

The administrator and the employees will also participate in a table top exercise of an emergency scenario and or review an actual post emergency review that occurred during the year under review.

Any changes or modifications to improve Alpine's emergency response capabilities will be implemented into the plan by the System Administrator at the earliest opportunity.

All Alpine Natural Gas emergency response personnel will be trained regarding the provisions, including any revisions to the Emergency Plan, on an annual basis.

### REPORTING REQUIREMENTS

PHMSA requires that any release of gas involving;

1. human death or inpatient hospitalization, or
2. estimated property damage, including cost of lost gas, to the operator or others, of \$50,000.000 or more. be reported provisions of 49 CFR §191.3.
3. an event that is significant, in the judgment of the operator, even though it did not meet the criteria of 1. or 2., be reported under the provisions of 49 CFR §191.5, §191.9 and §191.15.

The System Administrator, or his/her designee, will submit the following incident notifications/reports:

Emergency scenarios that meet the definition of "incident" under 49 CFR §191.3 (1) (ii) will be telephonically reported to OPS under the requirements of 49 CFR §192.5, §191.9 and §191.15.

CPUC has an additional reporting requirement of an incident meeting definition above that includes an incident that is reported in media. This report can be submitted telephonically 1-800-235-1076 or on the CPUC web site. In

addition, CPUC report Appendix B appears as ANG Appendix M-1.

Distribution system incident reports will be submitted using DOT Form RSPA F 7100.1 as soon as practicable but not more than thirty, (30), days after detection of an *incident* required to be reported telephonically, as stated above.

Should additional relevant information pertaining to a distribution system *incident*, as described above, become available after Submittal of the required written report, Alpine Natural Gas will submit a supplemental report, as deemed necessary, clearly referencing the original written report by date and subject.

Should additional relevant information pertaining to a transmission system *incident*, as described above, become available after submittal of the required written report Alpine Natural Gas will submit a supplemental report, as soon as practicable, clearly referencing the original written report by date and subject.

Form 615-3 can be used to facilitate written reports as described above.

The California Public Utilities Commission, (CPUC), requires gas System Operators to file Quarterly Summary Reports under GO 112-E, Section 122.2(d), not later than the end of the month following the quarter, that includes a summary of all reportable and non-reportable gas leak related incidents which occurred in the preceding quarter, as follows:

1. Incidents that were reported through the CPUC Emergency Reporting website.
2. Incidents for which a DOT Form PHMSA F7100.1 was submitted.
3. Incidents which involved escaping gas from the operator's facilities and property damage including loss of gas in excess of \$1,000.



# Procedural Manual for Operations, Maintenance and Emergencies

Emergencies 615	Approval Date: 08/25/06
Revision date: 12/18/10	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

## Emergency Plan

---

4. Incidents which included property damage between \$0 and \$1,000, and involved fire, explosion, or underground dig-ins.

Additionally, during any quarter the operator does not experience any incidents reportable under Section 122.2(d), the operator must still submit a notice stating that fact via email at the appropriate email address.

### RELATED PROCEDURES

- 465 External Corrosion Control – Monitoring
- 605-B1 General Pipeline Repair
- 605 B5-7 Startup-Shutdown-Purging
- 605-D Safety Related Conditions
- 625 Odorization
- 709 Record Keeping
- 723 Leakage Surveys
- 751 Prevention of Accidental Ignition



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>Integrity Management Plan (DIMP). 1005</b>	Approval Date: 08/25/06
Revision date: 8/1/2011	Original

## Integrity Management Plan

### SCOPE AND PURPOSE

This procedure was implemented as a requirement of 49 CFR § 192.1005 on August 1, 2011. Alpine developed this plan via a tool called SHRIMP, provided by the American Public Gas Association, The IM Plan is Appendix R1 here in Alpines OEM.

The purpose of Alpine’s Distribution Integrity Management Plan is to reference the procedures used to assess the threats and risks to the integrity of Alpine’s Natural Gas Distribution System. The Plan describes Alpines; Design, Operating Conditions, Environmental factors and Maintenance to continually monitor and evaluate in pipeline integrity.

### RESPONSIBILITY

The System Administrator and Operator Qualified personnel are responsible for compliance with the provisions of this procedure and the development and implementation of required actions..

### EQUIPMENT AND MATERIALS

### INSTRUCTIONS

#### Operator Qualification

These activities are not a covered tasks under the Operator Qualification Plan, however, see OQ Plan for specific covered tasks and associated qualification requirements for duties related to this Plan.

**Current Rank:** The tool was used to assess and rank the seven threats to Alpine’s Distribution system Integrity:

1. Excavation Damage
2. Material or Welds

3. Incorrect Operation
4. Equipment Failure
5. Natural Forces
6. Corrosion
7. Other Outside Forces

Other Concerns

### Plan Evaluation

PHMSA annual Leak Report 7100 is collected to update distribution system data. PHMSA 7100.1-2 completed for mechanical fitting failures (this excludes meter sets)

### Plan Revision

DIMP Plan is evaluated every two years (Biennially)

Potential or actual emergency conditions may

### RELEVANT APPENDICES

R-1, R-2, R-3, R-4 and R-5

### RELATED PROCEDURES

- 465 External Corrosion Control – Monitoring
- Internal Corrosion Measurement
- 605-B1 General Pipeline Repair
- 605 B5-7 Startup-Shutdown-Purging
- 605-D Safety Related Conditions
- 625 Odorization
- 709 Record Keeping
- 723 Leakage Surveys
- 751 Prevention of Accidental Ignition
- 615 Public Awaerness Plan
- 614 Damage Prevention



# Procedural Manual for Operations, Maintenance and Emergencies

Forms	Approval Date: 07/15/04
Revision date: 12/06/10	Supercedes: 07/15/04

**ALPINE NATURAL GAS**

## Forms Listing

### OEM Forms

DATE	RECORD NAME	REVIEWED/ REVISION DATE
605	GENERAL PIPELINE REPAIR RECORD	
605 A1	OME MANUAL REVIEW/REVISION RECORD	
605 B-8	OME RECORD-OQ PLAN REVIEW	
503	PRESSURE TEST RECORD	
721	SYSTEM PATROLLING RECORD	
723	LEAKAGE SURVEY RECORD	
724	LEAK REPAIR RECORD LOG	
281-285	PLASTIC FUSION QUALIFICATION RECORDS (6)	
739 B	REGULATOR STATION INSPECTION A	
739 B	REGULATOR STATION INSPECTION B	
739 C	REGULATOR STATION INSPECTION C	
741	REGULATOR STATION MONTHLY PRESSURE	
747	VALVE INSPECTION AND MAINTENANCE	
613	CONTINUING SURVEILLANCE RECORD	
625	ODORANT SAMPLING/SNIFF TEST RECORD	
616	PUBLIC AWARENESS RECORD	
617	INVESTIGATION OF FAILURE RECORD	
617-1	INVESTIGATION OF FAILURE LOG	
465	EXTERNAL CORROSION CONTROL MONITORING	
475-B	INTERNAL CORROSION MEASUREMENT-WALL THICKL.OSS	
481	ATMOSPHERIC CORROSION/ REMEDIAL ACTION	
487	REMEDIAL ACTION GENERALIZED/LOCALIZED CORR.	
615	EMERGENCY PLAN- ANNUAL ADMIN. ASSESMNT	
615-1	EMERGENCY NOTIFICATION RECORD	
615-2	EMERGENCY TELEPHONE LIST	
615-3	REGULATORY NOTIFICATION RECORD	
615-4	EMERGENCY RESPONSE LIASON AGENCY	
402 C-02	ACCIDENT INVESTIGATION RECORD	













# Procedural Manual for Operations, Maintenance and Emergencies

Form 723	Approval Date: 07/15/04
Revision date: 07/1/11	Supercedes: None

ALPINE NATURAL GAS

## Leak Survey Record

### DISTRIBUTION LEAK SURVEY SUMMARY FORM

ANG OQ  
Employ  
ee

Date Started \_\_\_\_\_ Date Completed \_\_\_\_\_ Total Days \_\_\_\_\_

MAP Y / N MAIN LINE	MAP Y/N SERVICE LINES	MAP yIN BUSINESS DISTRICT
LOCATION	APN #OF HOMES	APN #OF HOMES
MILES OF MAIN SURVEYED	TOTAL BUILDINGS INSPECTED	TOTAL BUILDINGS INSPECTED
NUMBER OF SERVICES INSPECTED	POSITIVE BUILDING REPORTS	POSITIVE BUILDING REPORTS
#OF POSITIVE STREET REPORTS	NEGATIVE BUILDING REPORTS	NEGATIVE BUILDING REPORTS
#OF NEG. STREET REPORTS	#OF BUILDING LISTING FORMS	#OF BUILDING LISTING FORMS
#OF LEAK LISTING FORMS	#OF SERVICE LISTING FORMS	#OF SERVICE LISTING FORMS
#OF LEAK INDICATIONS	#OF LEAK LOCATIONS	#OF LEAK LOCATIONS

LEAK INDICATION CLASSIFICATION*		

BUILDING STATUS CERTIFICATION*		

KEY MAP SYMBOLS	LEAK INDICATION CLASSIFICATION
X Indicates Leak Location //   Estimated Area Affected C Catch Basin T Tree D House and building line or edge of road Unless designated as property line.	Grade 1 –Schedule for immediate repair Grade 2- Schedule for repair after grade 1 Indications are completed. Recheck mandatory if leak cannot be repaired within 6 months or before frost. Grade 3- Repair as work scheduled permit if Indication cannot be repaired within 1 year, indication should be rechecked



# Procedural Manual for Operations, Maintenance and Emergencies

Form 724	Approval Date: 12/15/10
Revision date: 12/15/10	Supercedes: 07/15/04

**ALPINE NATURAL GAS**

## Leak Repair Log

Year \_\_\_\_\_

Date	Leak Location- Who Called in.	M a i n	S e r v i c e	Leak Grade	Materials req. to Complete Repair	C O R R O S I O N	E Q U I P M E N T	E X C A V A T I O N S	I N C O R R E C T O P E R	M A T E R I A L - W E L D S	N A T U R A L F O R C E S	O T H E R	ANG REP  Date made safe



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

ALPINE NATURAL GAS

## Plastic Fusion Qualification Record

### ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 1)

#### PIPE JOINING Butt Fusion and Mechanical "stab" Coupling

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

\_\_\_\_\_ BUTT FUSION MANUAL \_\_\_\_\_ BUTT FUSION AUTOMATIC \_\_\_\_\_ PERMASERT

- Cleaned pipe around fusion zone.
- Verified heating iron temperature.
- Observed recommended melt bead prior to timing.
- Pipe end had square cut.
- Cleaned pipe end and outlet.
- Measured and marked pipe end.
- Scraped pipe and outlet end.
- Removed cuttings from interior of pipe.
- Cleaned fitting and scraped areas.
- Installed fitting properly.
- Complete pipe melt pattern
- No gaps or voids
- Melt bead rolled back to pipe.
- Alignment
- Complete facing.
- Immobilized pipe during fusion and cool down periods.
- Maintained pressure on fusion during recommended cool down period.
- Allowed joint to cool in machine for recommended period.

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

### ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 2)

#### ELECTROFUSION



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

**ALPINE NATURAL GAS**

## Plastic Fusion Qualification Record

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

### ELECTRO FUSION COUPLINGS

- Pipe ends were cut square and even.
- Cleaned pipe inside and out.
- Measured and marked pipe ends.
- Scraped pipe ends.
- Took proper precautions to avoid contamination of pipe ends.
- Cleaned fitting and pipe ends with 96% or > Isopropyl Alcohol.
- Properly installed pipe in alignment tool.
- Centered fitting between marks.
- Connected control box to proper 110 volt A.C. power source in correct sequence.
- Verified the operation of sensor switches. (If Innogaz System)
- Had thorough understanding of operation sequence and warning light functions.
- Swiped fitting UPC with optical wand.
- Noted time that FUSION START BUTTON was depressed.
- Marked time of day on pipe at end of fusion.
- Removed leads from fitting 30 seconds or longer after fusion was over.
- Verified presence of plastic flow into both wells. (If Innogaz System)
- Allowed fitting to cool in secured position for recommended time.

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

### ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 3)  
**SADDLE FUSION AND TAPPING TEES**



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

**ALPINE NATURAL GAS**

## Plastic Fusion Qualification Record

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

### SADDLE FUSION and TAPPING TEES

- Cleaned pipe around fusion zone.
- Verified heating iron temperature.
- Observed recommended melt bead prior to timing.
- Pipe end had square cut.
- Cleaned pipe end and outlet.
- Measured and marked pipe end.
- Scraped pipe and outlet end.
- Removed cuttings from interior of pipe.
- Installed fitting properly.
- Followed proper saddle fusion procedure.
- Complete pipe melt pattern
- No gaps or voids
- Complete melt development around base of fitting
- Fitting placed in pipe melt pattern
- Immobilized pipe during fusion and cool down periods.
- Maintained pressure on fusion during recommended cool down period.
- Allowed joint to cool in machine for recommended period.
- Allowed fitting to cool in secured position for recommended time.
- Outlet Connection: Installed service line using 3/4" butt fusion technique

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

### ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Certification Form 1)

**JOINT EVALUATION**



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

**ALPINE NATURAL GAS**

## Plastic Fusion Qualification Record

Visual Examination (During and after assembly. Compare to Photograph or sample of acceptable joint.)

### Procedure/Joint Appearance

PROCEDURE		JOINT APPEARANCE		APPARENT CAUSE OF FAILURE
		PASS		
BUTT FUSION-PIPE JOINING				
PERMASERT COUPLING				
SADDLE FUSION-TAPPING				
ELECTRO FUSION	COUPLING			
	TAPPING			

**FAIL**

### DEFORMATION TEST

- Specimen cut into longitudinal straps. (Joint should be free of voids or un-bonded areas on surface.)

### RECOMMENDATION:

Retest Required. Yes \_\_\_\_\_ No \_\_\_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Electro Fusion Couplings
- Tapping Tees
- Permasert

Authorized Observer/Tester \_\_\_\_\_ Date \_\_\_\_\_

### **ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures**

(Fusion Certification Form 2)

### Joint Evaluation (Visual)



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

ALPINE NATURAL GAS

## Plastic Fusion Qualification Record

PROCEDURE		JOINT APPEARANCE		APPARENT CAUSE OF FAILURE	FAIL
		PASS			
BUTT FUSION-PIPE JOINING					
PERMASERT COUPLING					
SADDLE FUSION-TAPPING					
ELECTRO FUSION	COUPLING				
	TAPPING				

Inspector \_\_\_\_\_

Individual demonstrated the ability to follow the recommended procedures and produce acceptable fusion joints.

Yes  No

RECOMMENDATION:

Retest Required. Yes \_\_\_\_\_ No \_\_\_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Electrofusion Couplings
- Tapping Tees
- Permasert

Authorized Observer/Tester \_\_\_\_\_ Date \_\_\_\_\_

### ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Certification Form 3)

#### Joint Evaluation (Deform joint by bending or compression.)

PROCEDURE	JOINT APPEARANCE	APPARENT CAUSE OF FAILURE
-----------	------------------	---------------------------



# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

**ALPINE NATURAL GAS**

## Plastic Fusion Qualification Record

		PASS			FAIL
<b>BUTT FUSION-PIPE JOINING</b>					
<b>SADDLE FUSION-TAPPING</b>					
<b>PERMASERT COUPLING</b>					
<b>ELECTRO FUSION</b>	<b>COUPLING</b>				
	<b>TAPPING</b>				

Inspector \_\_\_\_\_

Individual demonstrated the ability to follow the recommended procedures and produce acceptable fusion joints.

Yes  No

RECOMMENDATION:

Retest Required. Yes \_\_\_\_\_ No \_\_\_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Electrofusion Couplings
- Tapping Tees
- Couplings Permasert

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Form 281-285	Approval Date: 07/15/04
Revision date: 07/15/10	Supercedes: 04/04/09

## Plastic Fusion Qualification Record

### PLASTIC FUSION QUALIFICATION RECORD

DATE OF QUALIFICATION: \_\_\_\_/\_\_\_\_/\_\_\_\_ NEXT QUAL. DUE DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

EMPLOYEE NAME: \_\_\_\_\_

**BUTT FUSION PROCEDURE:**

SIZE OF PIPE:      3/4" IPS [ ]    2" IPS [ ]    4" IPS [ ]    6" IPS [ ]

**SADDLE FUSION – TAPPING TEE:**

SIZE OF PIPE:      3/4" IPS [ ]    2" IPS [ ]    4" IPS [ ]    6" IPS [ ]

NAME OF QUALIFYING AGENCY: \_\_\_\_\_

**ELETROFUSION:**

SIZE OF PIPE:      3/4" IPS [ ]    2" IPS [ ]    4" IPS [ ]    6" IPS [ ]

PIPE MANUFACTURER/PIPE TYPE: \_\_\_\_\_

FITTINGS MANUFACTURER: \_\_\_\_\_

ELECTROFUSION MACHINE / MANUFACTURER: \_\_\_\_\_

NAME OF QUALIFYING AGENCY: \_\_\_\_\_

**STAB (PERMASERT) JOINING:**

SIZE OF PIPE:      3/4" IPS [ ]    2" IPS [ ]

NAME OF QUALIFYING AGENCY: \_\_\_\_\_



# Procedural Manual for Operations, Maintenance and Emergencies

Form 739-B	Approval Date: 04/24/09
Revision date: 12/15/11	Supercedes: 09/24/09

ALPINE NATURAL GAS

## Regulator Station Inspection Record

### Inspection A-Visual with Pressure Recordings (Monthly)

System MAOP 60 psig

DATE \_\_\_/\_\_\_/\_\_\_

STATION NAME: Alpine Natural Gas Pressure Regulating Station Valley Springs, CA at Highway 26

WORKING REG. MANUFACTURER: Mooney SIZE: \_\_\_\_\_ MODEL #: \_\_\_\_\_

MONITOR REG. MANUFACTURER: Mooney SIZE: \_\_\_\_\_ MODEL #: \_\_\_\_\_

#### REGULATOR VISUAL INSPECTION:

<u>Corrosion Present:</u>	YES [ ]	NO [ ]
<u>Corrosion Type:</u> Atmospheric [ ]	Localized [ ]	General [ ]
<u>Damage:</u>	YES [ ]	NO [ ]
<u>Damage Type:</u> _____		
<u>Leakage:</u> including all piping and components	YES [ ]	NO [ ]
<u>Dirt/Debris:</u>	YES [ ]	NO [ ]
<u>Valve Locks In Place/and Locked:</u>	YES [ ]	NO [ ]
<u>Valves Operational:</u> (SEE VALVE MAINT LOG)	YES [ ]	NO [ ]
<u>Control Lines Secure:</u> Leak tight connections	YES [ ]	NO [ ]
<u>Gauges: No Leaks and Operational</u>	YES [ ]	NO [ ]
<u>Facility Warning Signage Good:</u>	YES [ ]	NO [ ]
<u>Enclosure/Cover and Grounds Good:</u>	YES [ ]	NO [ ]
<u>Enclosure/Cover Secured:</u>	YES [ ]	NO [ ]

Check Regulator filters (one on each Regulator) Cleaned filters \_\_\_yes\_\_\_ no Replaced Filters \_\_\_yes

**System Design Max.Pres Rated: Inlet [P2] 125 psig, South Reg. 90 psig, North Reg. 90 psig**

GAUGE MFG: Marsh-Bellofram RANGE (psig) \_\_\_\_\_ MODEL # \_\_\_\_\_

#### Initial Pressure

Gauge Condition: OK [ ] Broken [ ] Cleaned [ ] Replaced [ ]

Supply Inlet Pressure (0-160 psig): \_\_\_\_\_ (Gauge position [2])

Installation/Calibration Cert. Date \_\_\_\_\_

**Intermediate Pressure** (0-100 psig): \_\_\_\_\_ (Gauge position [5])

Installation/Calibration Cert. Date \_\_\_\_\_

**By-Pass Pressure** (0-100 psig): \_\_\_\_\_ (Gauge position [4])

Installation/Calibration Cert. Date \_\_\_\_\_

**Initial System Outlet Pressure** (0-100psig): \_\_\_\_\_ (Gauge position [8]& [13])

Installation/Calibration Cert. Date \_\_\_\_\_

**Settings Observed: See Form 741**

\_\_\_\_\_  
OQ NAME



# Procedural Manual for Operations, Maintenance and Emergencies

Form 739-B	Approval Date: 04/24/09
Revision date: 12/15/11	Supercedes: 09/24/09

ALPINE NATURAL GAS

## Regulator Station Inspection Record

### Inspection B: Annual Inspection with Pressure Testing and Vault Maintenance:

(Inspection A not required in month Inspection B is performed, Form 741)

System MAOP 60 psig

DATE \_\_\_/\_\_\_/\_\_\_

STATION NAME: Alpine Natural Gas Pressure Regulating Station Valley Springs, CA at Highway 26

WORKING REG. MANUFACTURER: \_\_\_\_\_ SIZE: \_\_\_\_\_ MODEL #: \_\_\_\_\_

MONITOR REG. MANUFACTURER: \_\_\_\_\_ SIZE: \_\_\_\_\_ MODEL #: \_\_\_\_\_

#### REGULATOR VISUAL INSPECTION:

Corrosion Present: YES [ ] NO [ ]  
 Corrosion Type: Atmospheric [ ] Localized [ ] General [ ]  
 Damage: YES [ ] NO [ ]  
 Damage Type: \_\_\_\_\_

#### Annual Inspection with Delfesco Positector metal pipe thickness gauge. YES [ ] NO [ ]

Leakage: including all piping and components YES [ ] NO [ ]  
Dirt/Debris: Cleaned if Present YES [ ] NO [ ]  
Valve Locks In Place/and Locked: YES [ ] NO [ ]  
Valves Operational: YES [ ] NO [ ]  
Control Lines Secure: Leak tight connections YES [ ] NO [ ]  
Gauges: No Leaks and Operational YES [ ] NO [ ]  
Facility Warning Signage Good: YES [ ] NO [ ]  
Vault Enclosure/Cover and Grounds Good: YES [ ] NO [ ]  
Vault Enclosure/Cover Secured: YES [ ] NO [ ]

Check Regulator filters(one on each Regulator) Cleaned filters \_\_\_yes\_\_\_ no Replaced Filters \_\_\_yes\_\_\_

**System Design Max.Pres Rated: Inlet [P2] 125 psig, South Reg. 90 psig, North Reg. 90 psig**

GAUGE MFG: \_\_\_\_\_ RANGE (psig) \_\_\_\_\_ MODEL # \_\_\_\_\_  
 Gauge Condition: OK [ ] Broken [ ] Cleaned [ ] Replaced [ ]

#### Initial Pressure Settings Observed:

Supply Inlet Pressure (psig): \_\_\_\_\_ (Gauge position [2])  
 Intermediate Pressure (psig): \_\_\_\_\_ (Gauge position [4,5])  
 Initial System Outlet Pressure (psig): \_\_\_\_\_ (Gauge position [8] & [13])

#### Lock Up Procedure: OEM 739

With the Working Regulator (South vault) set at: **≤60** psig check and record the following:

Intermediate Pressure (psig): \_\_\_\_\_ (Gauge position [4,5])  
 System Outlet Pressure (psig): \_\_\_\_\_ (Gauge position [8] & [13]) Lock Up \_\_\_Y\_\_\_N

With the Monitor Regulator (North vault) set at: **≤60** psig, check and record the following:

Intermediate Pressure (psig): \_\_\_\_\_ (Gauge position [4,5])  
 System Outlet Pressure (psig): \_\_\_\_\_ (Gauge position [8]&[13]) Lock Up \_\_\_Y\_\_\_N

System returned to normal operational settings: South Vault Reg. \_\_\_\_\_psig / North Vault Reg. \_\_\_\_\_psig

SIGNATURE: \_\_\_\_\_ DATE: /\_\_\_/\_\_\_



# Procedural Manual for Operations, Maintenance and Emergencies

Form 739-C	Approval Date: 04/24/09
Revision date: 12/15/10	Supercedes: 09/24/09

ALPINE NATURAL GAS

## Regulator Station Inspection Record

### INSPECTION C: REGULATOR OPERATIONAL INSPECTION: (Five Year)

System MAOP 60 psig

DATE \_\_\_/\_\_\_/\_\_\_

Initial Pressure Settings: Supply Inlet Pressure (psig): \_\_\_\_\_ (Gauge position [2])

Intermediate Pressure (psig): \_\_\_\_\_ (Gauge position [5])

Initial System Outlet Pressure (psig): \_\_\_\_\_ (Gauge position [8])

With the Working Regulator (upstream vault) set at 60 psig check and record the following:

Intermediate Pressure (psig): \_\_\_\_\_ (Gauge position [5])

System Outlet Pressure (psig): \_\_\_\_\_ (Gauge position [8])

Manufacturer Working Regulator Flow Capacity Verified (P1 = 90 psig, P2 = 60 psig):  
(MCFH) \_\_\_\_\_

Manufacturer Monitor Flow Capacity Verified (P1 = 60 psig, P2 = 45 psig):  
(MCFH) \_\_\_\_\_

Moisture Accumulation: YES [ ] NO [ ] Eliminated [ ]

GAUGE MFG: \_\_\_\_\_ RANGE (psig) \_\_\_\_\_ MODEL # \_\_\_\_\_

Gauge Condition: OK [ ] Broken [ ] Cleaned [ ] Replaced [ ]

#### OEM Procedure 739

- Step 1, By-passed the Regulators
- Step 2, Inspected Regulator Internal Parts
- Disassembled the Regulator: \_\_\_ North \_\_\_ South
- Installed Mooney Flowgrid Pilot Assembly Replacement Kit, Series 20:  
North Reg. \_\_\_\_\_ South Reg. \_\_\_\_\_
- Check Regulator filters (one on each Regulator) \_\_\_yes
- Cleaned filters \_\_\_yes\_\_\_ no Replaced Filters \_\_\_yes
- Step 3, Placed Regulator Station into Normal Service
- Step 4, Performed Lock Up Procedure: Complete & attach Inspection B \_\_\_\_\_ (initials)
- Step 5, Set Regulators to Normal Service Operation.

REMARKS: \_\_\_\_\_

DATE: /\_\_\_/\_\_\_

SIGNATURE: \_\_\_\_\_





# Procedural Manual for Operations, Maintenance and Emergencies

Form 747	Approval Date: 07/15/04
Revision date: 04/1/13	Supersedes 01/15/11

ALPINE NATURAL GAS

## Valve Inspection and Maintenance Record

VALVE LOCATION: \_\_\_\_\_ VALVE # \_\_\_\_\_

VALVE MANUFACTURER: \_\_\_\_\_ SIZE: \_\_\_\_\_ MODEL #: \_\_\_\_\_

VALVE TYPE:        STEEL BALL [ ]        PLASTIC (P.E) BALL [ ]        GATE [ ]  
                          WELD END [ ]        FLANGED [ ]        BUTT FUSED [ ]

VALVE FUNCTION:    EMERGENCY [ ]        OTHER: \_\_\_\_\_

**VALVE INSPECTION:** VALVE # LABEL ATTACHED: Y / N

Protected from Tampering:    YES [ ]        NO [ ]

Valve Boxed:                    YES [ ]        NO [ ]

Valve Box/Lid Condition:        OK [ ]        Lid Missing [ ]        Lid Replaced [ ]

Valve Locks In Place/Operational:        YES [ ]        NO [ ]

Valve Partially Operated:        YES [ ]        NO [ ]

Valve Normal Position:        Open [ ]        Closed [ ]

Valve Position After Inspection:        Open [ ]        Closed [ ]

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE: /\_\_\_\_\_/\_\_\_\_\_

SIGNATURE: \_\_\_\_\_









# Procedural Manual for Operations, Maintenance and Emergencies

Form 617-1	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

**ALPINE NATURAL GAS**

## Investigation of Failure Record

DISCOVERY DATE: \_\_\_/\_\_\_/\_\_\_      EMPLOYEE SIGNATURE: \_\_\_\_\_

DISCOVERY TIME: \_\_\_/\_\_\_/\_\_\_      FACILITY MAP DESIGNATION: \_\_\_\_\_

FAILED FACILITY DESCRIPTION: \_\_\_\_\_

---



---



---



---



---



---



---



---

ON-SITE INVESTIGATION BRIEF: \_\_\_\_\_

---



---



---



---



---



---

REMEDIAL ACTION TAKEN/TIME: \_\_\_\_\_

---



---

**ATTACH DETAILED METALURIGICAL ANALYSIS, CORROSION FAILURE ANALYSIS, REGULATORY AGENCY REPORTS TO THIS FORM, AS APPLICABLE. (INCLUDE PHOTOGRAPHIC SPECIMINS, WHEN AVAILBLE).**







**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Form 475-B	Approval Date: 07/15/04
Revision date: 04/15/13	Supercedes: None

## Internal Corrosion Measurement Action Record

### Wall Thickness Loss Annual Measurement

DATE: \_\_\_/\_\_\_/\_\_\_

OQ EMPLOYEE \_\_\_\_\_

Taken at Regulating station vaults coated metallic piping.

Equipment: Posi-Tector Ultrasonic UTG ME \_\_\_\_\_  
Enter Calibration Date

FACILITY Installed December 1999	FACILITY wall thickness at Installation	CORRSION (YES/NO) / Surface prepped (YES/NO)	TAKEN Wall Thickness Measurement
2" API 5LGr B ERW	Std 0.154"		
4" API 5LGr B ERW	Std 0.237"		

OBSERVATIONS: Wall Thickness Loss YES \_\_\_\_\_ NO \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

### REMEDIAL ACTIONS

\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE: \_\_\_\_\_





# Procedural Manual for Operations, Maintenance and Emergencies

Form 615-1	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

**ALPINE NATURAL GAS**

## Emergency Notification Record/Activity Log

DATE: \_\_\_/\_\_\_/\_\_\_ EMPLOYEE SIGNATURE: \_\_\_\_\_

CALLER NAME: \_\_\_\_\_

CALLER ADDRESS: \_\_\_\_\_

CALLER TELEPHONE NUMBER: \_\_\_\_\_

TIME OF NOTIFICATION: \_\_\_\_\_ [ ] AM [ ] PM

GAS BLOWING: YES [ ] NO [ ] NOISE IS LOUD: YES [ ] NO [ ]

GAS LEAK IS INSIDE/OUTSIDE INSIDE [ ] OUTSIDE [ ]

ODOR OF GAS: YES [ ] NO [ ] STRONG ODOR: YES [ ] NO [ ]

DURATION OF SITUATION: INCIDENT START TIME \_\_\_\_\_ [ ] AM [ ] PM

TYPE OF STRUCTURE(S) INVOLVED: SCHOOL [ ] PUBLIC [ ] HOSPITAL [ ]

MULTIFAMILY [ ] OTHER (DESCRIBE): \_\_\_\_\_

OTHER DETAILS OF NOTIFICATION: \_\_\_\_\_

### ACTIVITY LOG:

ACTIONS TAKEN/INSTRUCTIONS GIVEN/TIME OF EACH: \_\_\_\_\_

EMPLOYEE(S) DISPATCHED TO SCENE: \_\_\_\_\_

EMPLOYEE TO ATTACH SUPPLEMENTAL SHEET(S), AS APPLICABLE, TO THIS RECORD ALONG WITH SIGNATURE



# Procedural Manual for Operations, Maintenance and Emergencies

Form 615-2	Approval Date: 07/15/04
Revision date:10/15/10	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

## Emergency Telephone List

---

### ALPINE NATURAL GAS

**Principal Emergency Contact:**

**Mr. Mike Lamond, System Administrator** (209) 772-3006 (daytime M-F)  
(209) 304-3206 (cell)

**Alternate Emergency Contacts:**

**Answering Service** (209) 772-3006 (After Hrs.,  
Weekends, holidays)  
**On Call Operations Technician Pager** (209) 231-8044  
**Operations Supervisor Cell Phone** (209) 304-2487

### MUTUAL ASSISTANCE GAS OPERATORS

**PG&E** (800) 743-5000

**FOOTHILL FIRE DEPARTMENT** (209) 772-1268 (NON-EMERGENCY)  
911 (EMERGENCIES)

**CALAVERAS COUNTY FIRE DEPARTMENT** (209) 754-6639 (NON-EMERGENCY)  
911 (EMERGENCIES)

**CALIFORNIA DEPARTMENT OF FORESTRY** (209) 754-0675

**JENNY LIND FIRE** (209) 786-2227

**VALLEY SPRINGS AMBULANCE** (209) 772-2924 (NON-EMERGENCY)  
911 (EMERGENCIES)

**VALLEY SPRINGS FIRE** (209) 772-2919

**CALAVERAS COUNTY SHERIFF'S DEPARTMENT  
(VALLEY SPRINGS)** (209) 772-2919 (NON-EMERGENCY)  
911 (EMERGENCIES)

**CALIFORNIA HIGHWAY PATROL** (209) 943-8600 (NON-EMERGENCY)  
911 (EMERGENCIES)

**CALIFORNIA UTILITIES EMERGENCY ASSOCIATION** 1-916-845-8518  
don.boland@calema.ca.gov



# Procedural Manual for Operations, Maintenance and Emergencies

Form 615-2	Approval Date: 07/15/04
Revision date:10/15/10	Supercedes: 08/25/06

**ALPINE NATURAL GAS**

## Emergency Telephone List

---

### NEWS MEDIA

#### NEWSPAPER

THE VALLEY SPRINGS NEWS (209) 772-2234  
info@valleyspringsnews.com  
CALAVERAS ENTERPRISE (209) 754-3861

#### SCHOOLS

VALLEY SPRINGS ELEMENTARY SCHOOL (209) 772-1011  
JENNY LIND ELEMENTARY SCHOOL (209) 772-9521  
TOYON MIDDLE SCHOOL (209) 754-4256

#### UTILITY COMPANIES

CALAVERAS COUNTY WATER DISTRICT (209) 754-3543  
VALLEY SPRINGS PUBLIC UTILITIES DISTRICT (209) 772-2650

#### TRANSPORTATION

CALTRANS (209) 984-4437  
CALAVERAS COUNTY ROAD DEPT. (209) 754-6402  
DEPARTMENT OF TRANSPORTATION (800) 424-8802

#### EMERGENCY MANAGEMENT

CALAVERAS COUNTY OFFICE (209) 754-6303  
OF EMERGENCY SERVICES  
CPUC – CONSUMER PROTECTION &  
SAFETY DIVISION'S (USRB) (800) 235-1076







**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Form 402 C-02	Approval Date: 07/15/04
Revision date: 07/15/04	Supercedes: None

## Accident Investigation Record

DISCOVERY DATE: \_\_\_/\_\_\_/\_\_\_      EMPLOYEE SIGNATURE: \_\_\_\_\_

DISCOVERY TIME: \_\_\_/\_\_\_/\_\_\_      FACILITY MAP DESIGNATION: \_\_\_\_\_

ACCIDENT DESCRIPTION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ON-SITE INVESTIGATION BRIEF: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

REMEDIAL ACTION TAKEN/TIME: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ATTACH DETAILED METALURIGICAL ANALYSIS, CORROSION FAILURE ANALYSIS, REGULATORY AGENCY REPORTS TO THIS FORM, AS APPLICABLE. (INCLUDE PHOTOGRAPHIC SPECIMINS, WHEN AVAILBLE).**



**ALPINE NATURAL GAS**

# **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Appendix</b>	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

## **Appendices**

---

### **Appendices**



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-1	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

## New Customer Information Sheet

### *Getting Started with Alpine Natural Gas* New Customer Information Sheet

Metered natural gas service from Alpine Natural Gas (ANG), a regulated natural gas utility, has been in operation since January 2000. ANG is the sole provider of natural gas in the; La Contenta, Gold Creek, Hogan Dam Estates and Rancho Calaveras sub-divisions in Calaveras County. Our #1 goal here at Alpine Natural Gas, is to operate a safe, reliable natural gas distribution company, for the public, its' customers and employees.

#### *Steps to Sign up:*

- ◆ Determine if gas service is present at desired address. Review this and all other information provided.
- ◆ Complete an Application for Service Form. Please indicate desired start date for gas service.
- ◆ Return application along with the **Thirty-dollar (\$30) fee to initiate service.**
- ◆ Once accepted your service will be made available.

**Construction/Installation:** If, a new line is required a service representative from ANG will meet with you to determine service availability and or plan service connection. Generally, there are no additional fees to install a new service connection to our main line.

#### *Alpine Natural Gas Monthly Charges:*

- ◆ **Customer charge: \$9.00/ month.**
- ◆ **CA Natural Gas Surcharge:** is a state tax on gas consumed and adjusted annually (**2013: \$0.0675/Therm**).
- ◆ **Calaveras Franchise Fee** (2% of Meter and Gas Charges)
- ◆ **Current Month Price per Therm by Tier, printed on Billing Statement.** Pricing is regulated by the CPUC. Gas charges are comprised of two components; the cost to operate the utility and the cost to purchase the gas commodity that we provide. CPUC has to formally approve any change in the first component via a process known as a general rate case. The month to month variance in price that may occur is in the gas commodity component which is dependent on current wholesale market cost of natural gas. Gas consumption is metered, and billed per thermal unit or "Therm". To promote conservation a two-tiered residential gas pricing is in place where an allowance for Therms used/month is seasonally dependent. See table below 2012 average pricing by Tier Rate, **for illustration only:**

TIER I / TIER II Lifeline	<u>2013 Summer (June 1-Oct 31)</u> <u>Allowance</u>	<u>2012 AVG</u> <u>Price per</u> <u>Therm</u>	<u>2013 Winter (Jan. 1-May 31, Nov.</u> <u>1- Dec. 31)</u> <u>Allowance</u>	<u>2012 AVG</u> <u>Price per</u> <u>Therm</u>
<u>Baseline Rate:</u>	<20.4 Therms @ \$TBA/Therm	\$1.17/Therm	<43.7 Therms @ \$TBA/Therm	\$1.18/Therm
<u>Excess Rate:</u>	>20.4 Therms @ \$TBA/Therm	\$1.33/Therm	>43.7 Therms @ \$TBA/Therm	\$1.34/Therm
<u>"Lifeline" Medical Allowance</u>	N/A	N/A	>50.5 Therms @ \$TBA/Therm	\$1.34/Therm

(Over)

*Alpine Natural Gas*



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-1	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

## New Customer Information Sheet

### *General Information:*

**Billing:** Gas meters are read around the 20<sup>th</sup> of each month and Monthly billing statements sent by about the 25<sup>th</sup> of each month. Locked gates and dogs are problematic for meter readings please call us if these are existing issues. **Bills are due on receipt** and past due if not paid by the 10<sup>th</sup> of the following month. Past due accounts are subject to service disconnection. There is a reconnection fee of \$100 if service is disconnected for non-payment of charges.

**Payment: by Cash and Check only,** by mail checks to P.O. Box 550 Valley Springs, CA 95252 or cash or check in our office at **15 St. Andrews Rd. Suite 7**, in the Valley Springs “Thomas Center” facing Highway 26. There is a drop box slot near the door where payments by check can be placed after office hours. Or sign up for **ACH**, to have Alpines monthly bill withdrawn automatically from your bank account on the 5<sup>th</sup> of each month.

**Underground Service Alert: Call 811 two working days before you dig! It's the Law.** An underground gas line is installed on your property you must call this number prior to any excavation on your premises.



**Service Line Responsibility- Maintenance of customer –owned buried piping:** Alpine Natural Gas **is not responsible** for maintaining anything downstream of the gas meter. If you have underground service lines **after the gas meter**, you should have them periodically checked for leaks or corrosion. Any problems you find should be promptly repaired.

**CARE & LIEE:** Low Income Programs for income eligible customers. Ask for a separate application to determine your eligibility for a 20% discount on your gas bill & energy conservation incentives.

**“Lifeline”:** Standard medical allowance of 6.8/Therms for units occupied by paraplegic/quadruplegic and hemiplegic persons or those afflicted with multiple sclerosis or scleroderma. Allowance will be made available on receipt of certification, which may be by physician letter.

**Gas Leak, line break in or do you smell gas?** Please call **209-772-3006**; 24 hours a day we have a representative on call for these types of emergencies. Even though we are not responsible for customer owed pipe inside your home or outside beyond your meter we will investigate all potential gas leaks.

Thank you for signing up with Alpine Natural Gas!





# Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-3	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

PUBLIC AWARENESS-NOTIFICATION

## **IF YOU EVER SMELL GAS, CALL ALPINE NATURAL GAS PROMPTLY!**

### **WHAT IS NATURAL GAS?**

Natural gas is a non-toxic, color-less fuel, about one-third lighter than air. Gas burns, but only when mixed with air in the right proportion and ignited by a spark or flame. In its purified state, gas has no smell. For your protection an odorant is added to natural gas that is harmless and distinctive so you can detect and report the slightest gas leak. Gas Leakage may occur from faulty appliances, loose connections, and service lines inside or outside your home, or from gas mains. Leaks can be dangerous and should be dealt with promptly by experts.

### **HOW SAFE IS NATURAL GAS?**

Alpine provides natural gas for residential fuel through a gas distribution system of underground pipes. Natural gas pipelines are one of the safest forms of energy transportation in the United States. Alpine Natural Gas has an ongoing safety program that meets or exceeds all federal and state requirements for safe pipeline operation and maintenance, however, natural gas pipeline leaks can occur due to natural disasters, damage by digging, or corrosion. Alpine's safety activities include system patrolling, cathodic protection against corrosion, periodic and spot leak surveys and testing, as well as promoting and following safe excavation practices. We also believe it is important for customers and those in and around our pipeline system to learn how to spot and react to a pipeline leak.

#### **THINGS TO KNOW:**

- Whenever gas leaks from a pipe or pipe fitting, there is a possibility of fire or explosion.
- If leaking gas accumulates in a confined place, it can displace air and cause suffocation.
- If a gas appliance is not working properly, incomplete combustion can produce carbon monoxide and other toxic gases.

A pilot light or gas burner can ignite combustible materials and flammable vapors such as gasoline, paint thinner, or aerosols. **For more information call Alpine at 209-772-3006.**

#### **A leak may be present if you:**

**SMELL** - An unusual odor, like that of rotten eggs. Because natural gas is lighter than air, colorless, and odorless, an odorant is added to help customers smell gas if a leak occurs.

**HEAR** - An unusual noise coming from the ground or an above-ground pipeline. A hissing or roaring sound may indicate escaping natural gas.

**SEE** - Discolored vegetation surrounding a pipeline, or water or dirt blowing into the air.

#### **IF YOU SUSPECT A LEAK:**

- **Leave the vicinity immediately.**
- **Warn others.**
- **Do not light a match, start or stop an engine, use a phone, switch on or off lights, or do anything that might create a spark.**
- **From a safe place, call Alpine Natural Gas immediately, day or night; or Call 911.**

**IN CASE OF AN EMERGENCY, OR IF YOU SMELL NATURAL GAS, CALL ALPINE NATURAL GAS: 209-772-3006 OR 911**

***However slim the chances of danger, it doesn't pay to take needless risks. At the first sniff of gas, Play it safe. CALL Alpine Natural Gas!***

- From a safe place call ANG 209-772-3006.
- If odor is very strong and you are indoors, go outside.
- Do not turn any electrical switches on or off.
- *Do not light matches, smoke or create any other source of combustion.*



## Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-3	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

**PUBLIC AWARENESS-NOTIFICATION**

---

### IN CASE OF A GAS EMERGENCY OR GAS LINE BREAK DIAL 911

#### OTHER WAYS TO PREVENT GAS EMERGENCIES:

- ✓ Call before you **dig** CALL '811', *UNDERGROUND SERVICE ALERT*, it is a free call.



- ✓ Keep all appliances cleaned, properly vented and serviced regularly.
- ✓ Make sure everyone in your family knows how to operate gas appliances & shut-off valves.
- ✓ Don't use an open gas oven for heating your home or drying clothes.
- ✓ Don't use or store gasoline, aerosols or other products with flammable vapors near gas appliances.
- ✓ Whenever changing your furnace filter be sure to replace the compartment door.
- ✓ Never cover fresh air vents that supply air to your gas appliances.
- ✓ Have all gas line alterations and appliance repairs performed by a professional.

*Write your fire and police department phone numbers and our emergency service number in the front of your phone book.*

---

**FOR MORE INFORMATION, OR IF YOU SMELL NATURAL GAS, CALL  
ALPINE NATURAL GAS:  
IN CASE OF AN EMERGENCY CALL  
209-772-3006 or 911**

For more information, visit the [National Pipeline Mapping System](#) or [Office of Pipeline Safety](#) website.



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-4	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

## New Installation Assessment for Service Line Installation

### Assessment for a new Service Line Installation

Request for natural gas service where installation of a new service line is required.

NAME \_\_\_\_\_

STREET ADDRESS \_\_\_\_\_

DATE APPLICATION RECEIVED \_\_\_ / \_\_\_ / \_\_\_ Reviewed by: \_\_\_\_\_

#### Assessment

- Application was received and all paper work complete and customer file started.
- Property was identified. APN # \_\_\_\_\_ Seq.# \_\_\_\_\_
- New Construction Yes/ No
- Propane conversion or Electric conversion (circle appropriate)
- Main line is in proximity, or is a main line extension required.
- Short side vs. Long side street crossing

#### Pre-Installation

- Determination of service line location- USA locates requested and white lines marked.
- Property Map started.
- Standard Installation: Y /N (within the allowable footage, no installation fees)
- Appliance assessment for natural gas conversion completed Y / N (form attached)

#### Conversion

- New hot water heater installation requested. H2O Heater ordered. Y /N
- Provided list of sub-contractors for appliance conversion.

\_\_\_\_\_ / \_\_\_ / \_\_\_  
Customer Signature Date

\_\_\_\_\_  
Scheduled Start Date for Installation

Additional work is required: \_\_\_\_\_

Permitting required. \_\_\_ No \_\_\_ Yes Description \_\_\_\_\_ Estimate: \$ \_\_\_\_\_

Customer requests Alpine to perform work above and accepts all financial responsibility.

Signature \_\_\_\_\_ Date \_\_\_\_\_



## Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-5	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

Appendix A-5

---

“Not forsaking safety  
for Profit!”

Our #1 goal here at Alpine  
Natural Gas, is to run a safe,  
reliable Natural Gas  
Distribution Company, for the  
public, customers, and  
employees!

---

Employee Signature

Date



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix A-6	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## PRE-PROJECT MEETING & JOB SITE CHECKLIST

**ANG Supervisor** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**JOB SITE (Address or Description):** \_\_\_\_\_ **Start Time** \_\_\_\_\_

PROJECTED LENGTH OF TIME \_\_\_\_\_  PROPERTY MAP  WORK ORDER  COUNTY NOTIFIED

**USA TICKET #** \_\_\_\_\_ **MAIN LINE** \_\_\_\_\_ **SERVICE LINE** \_\_\_\_\_ **BORING ROAD** Y / N

**SAFETY ISSUES REVIEWED** \_\_\_\_\_

**TRAFFIC CONTROL EQUIPMENT - FLAGGER**  YES  NO  SIGNS  FLAGS  CONES  OTHER \_\_\_\_\_

### EXCAVATION EQUIPMENT

- BACKHOE  RT40 TRENCHER  WB TRENCHER  POWER MOLE  PIPEHORN
- PNEUMATIC BORING DEVICE  COMPRESSOR  UTILITY TRAILER  DUMP TRUCK
- UTILITY TRUCK  MASONARY SAW & BLADES  WHEEL BARROW

### WELDING EQUIPMENT

IRONS  MINI MAC SIZE NEEDED \_\_\_\_\_  PERMASERT

**LENGTH OF SERVICE LINE** \_\_\_\_\_ **LENGTH OF MAIN LINE** \_\_\_\_\_

### MATERIALS

- COUPLERS  COMN. WIRE  RISER  END CAP
- TEES's  ELECTRO FUSION  METER  VALVE COCK
- ELBOWS  BOLT ON TEES's  REGULATOR
- TRACER WIRE  EXCESS FLOW VALVE  BLACK IRON PIPE END FITTINGS

### EXCAVATION AND TRENCH COVERING MATERIALS

- ¼ MINUS (SAND) # OF LOADS \_\_\_\_\_  ROAD BASE # OF LOADS \_\_\_\_\_ CEMENT # OF BAGS \_\_\_\_\_
- STRAW  EROSION CONTROL WATTLE  WACKER  POGO STICK  TRENCH PLATES  ASPHALT PATCH

**Notes:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Employees Assigned to Project

1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_ **End Time** \_\_\_\_\_



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix B-1	Approval Date 12/15/08
Revision date: 12/15/12	Supersedes: 08/20/06

**ALPINE NATURAL GAS**

Customer Service Report

Taken by \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time \_\_\_\_\_

From Customer Y / N or, ANG Personnel Initiated Y / N

Routine Maintenance: Yes \_\_\_ No \_\_\_ Safety Concerns: Yes \_\_\_ No \_\_\_

Check appropriate: Meter-Set \_\_\_ ECR \_\_\_ Service line \_\_\_

Customer, Last \_\_\_\_\_ First \_\_\_\_\_

Service Address: \_\_\_\_\_ Acct. # \_\_\_\_\_

Routine Service Requested For: \_\_\_ Consumption Concern \_\_\_ Possible Gas Leak \_\_\_ Other

**Customer Concern or Request:** \_\_\_\_\_  
(Describe)

Name of Caller if not the customer \_\_\_\_\_

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_  
Hm Phone Number Cell Phone Number

**Extraordinary Event:** Yes \_\_\_ No \_\_\_  
(If, Yes describe Event Type) (Emergency Gas Leak? Complete Gas Leak Report App. B-2)

Meter Reading : \_\_\_\_\_ . 00  
Meter serial number: \_\_\_\_\_ Type/Size: \_\_\_\_\_ Spring Size: \_\_\_\_\_

New Customer  **New Meter Set:** Yes \_\_\_ No \_\_\_  
**Meter-Regulator Pressure Check:** Yes \_\_\_ No \_\_\_ Result: Pass \_\_\_ Fail \_\_\_  
Pres. Gauge- Water Column Reading \_\_\_\_\_  
**System "Shut- In" Test:** Yes \_\_\_ No \_\_\_ **Result:** Pass \_\_\_ Fail \_\_\_  
(Meter holds constant at baseline pressure X 15 minutes)

Work performed: \_\_\_\_\_

Work Completed \_\_\_/\_\_\_/\_\_\_ Time \_\_\_\_\_ am or pm  Scheduled Follow-Up: y or n \_\_\_/\_\_\_/\_\_\_

Work performed by: \_\_\_\_\_  
Print Signature



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix B-2	Approval Date 12/15/08
Revision date: 12/15/12	Supersedes: 08/20/06

**ALPINE NATURAL GAS**

## GAS LEAK REPORT

ALPINE NATURAL GAS  
Company

\_\_\_\_/\_\_\_\_/\_\_\_\_ am/ pm  
Date: \_\_\_\_\_ Time  
Leak Report Taken by: \_\_\_\_\_

Address: \_\_\_\_\_

Location of Leak being Reported: \_\_\_\_\_  
Description, intersection, part of the property etc.)

- Smell of Gas**     Inside house (*Instructed to move outside*) \_\_Yes/ \_\_No     Outside house  
 **Hear or Observe Blowing Gas**     **Fire or Explosion (911 called)** \_\_Yes/ \_\_No

Reported by: \_\_\_\_\_  
(Name) (Address)

- Customer  Answering Service  Emergency Personnel  Neighbor or Family  Contractor  Other  News Reports

### Callers Description of Leak

Suspected origin of Reported Leak:     Main Line  Service- Line  House Meter/Regulator

Dispatched –During Office hours:     Routine (non-emergency) Service call    Time: \_\_\_\_ am/ pm  
 Dispatched to Call person as:     Emergency Call    Time: \_\_\_\_ am / pm  
 Assigned as Immediate Remedial Action Required: Yes \_\_\_\_\_ No \_\_\_\_\_

Investigation Assigned to: \_\_\_\_\_ Investigation by: \_\_\_\_\_  
(Name) (Name)

Date \_\_\_\_/\_\_\_\_/\_\_\_\_ am / pm Leak Found? \_\_\_\_Yes \_\_\_\_No \_\_\_\_  
Arrival Time

CGI Used: \_\_Yes\_\_No    Leak Grade (*circle one*)    1    2    3

Location & Description of Leak:  Customers Appliance     Meter/Reg.  Service Line  Main  
 Cause of Leak:  Outside Force  Equipment Failure  Operations  Contractor or  Cust. Dig In

Work Performed: \_\_\_\_\_

Work Order A-3 Completed: \_\_\_\_\_

Materials Req./Parts Replaced: \_\_\_\_\_

- Reports of Injuries or loss of life     Reports of Property Damage

Notified:     OQ Supervisor     OQ Plan Administrator     Emergency Plan Initiated

Condition Made Safe: \_\_Yes\_\_ No    Date: \_\_\_\_\_ Time: \_\_\_\_\_ am / pm

DOT/PHMSA Notification \_\_Y\_\_N    CPUC notified \_\_Y\_\_N

Copy to Customer File \_\_\_\_ (initials)    Supervisor Posted to Gas Leak Log: \_\_\_\_ (initials)





# Procedural Manual for Operations, Maintenance and Emergencies

Appendix B-4	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## Final Meter Read Form

Homeowner  
 Landlord       Tenant

Taken By: \_\_\_\_\_  
 Date: \_\_\_/\_\_\_/\_\_\_  
 Time: \_\_\_\_\_  
 Meter Read Date: \_\_\_/\_\_\_/\_\_\_

**Request Meter Read:** Final Read: Y / N

**Meter Turned Off:** Y / N, or, Homeowner/Landlord Requests Meter On:     Yes  
**Pinned:** Y / N

**Reason for Read: Moved:** \_\_\_\_\_ Out of Area \_\_\_\_\_ within Service Area  
 Selling Home Y / N    Converting to Rental \_\_\_\_\_    Foreclosure: Y / N

**ANG determined Meter Shutoff:** Y / N    Safety Concerns: Y / N

**Termination for non-payment:** Y / N    Notice previously sent: Y / N  
**Customer Name:** \_\_\_\_\_ ACCT: # \_\_\_\_\_

(Last)

(First)

\_\_\_\_\_ (\_\_\_\_) \_\_\_\_ -- \_\_\_\_\_  
**Service Address:** \_\_\_\_\_ **Phone Number:** \_\_\_\_\_

\_\_\_\_\_  
**New Mailing Address:** \_\_\_\_\_ **City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_  
**Meter Serial Number:** \_\_\_\_\_

**Final Reading:** \_\_\_\_\_

**Read by, Signature** \_\_\_\_\_ **(Red Tagged)** Y/N

**Comments/Notes:** \_\_\_\_\_

**Application presented to new customer:** Y / N    **Door hung with a Application:** Y/N

**Name of New Customer if applicable:** \_\_\_\_\_

**Date New Customer Starts** \_\_\_/\_\_\_/\_\_\_

**Meter Read Reviewed by:** \_\_\_\_\_ **Print** \_\_\_\_\_ **Final Billing Prepared** \_\_\_/\_\_\_/\_\_\_





ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix B-6	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

## NEW METER SET- SHUT IN TEST FORM

Date: \_\_\_/\_\_\_/\_\_\_

New Meter Set:  Propane Conversion  New Construction

Service Line installed and Paperwork with Property Map Completed   
Service Line Pressure Tested

Customer Last Name \_\_\_\_\_ First \_\_\_\_\_

Service Address: \_\_\_\_\_ Phone Number \_\_\_\_\_

Meter Serial Number: \_\_\_\_\_ Type/Size: \_\_\_\_\_ Spring Size: \_\_\_\_\_

1) Customer Fuel Lines Pressure Tested (Meter & Lines Pressure Checked):

Pressure Tested from Meter to turned off appliance valve cocks

Pres. Gauge- Water Column Reading \_\_\_\_\_ (7.5 inches = 1/4lb)

(Manometer holds constant at baseline pressure X 15 minutes)

Time Test began \_\_\_ Time Test Ended \_\_\_ Result: Pass \_\_\_ Fail \_\_\_

Leak Test with GAS ON  Meter and Valve Soap Tested  Tested with CGI

Leaks Detected Yes  No  (If, Yes red tagged until pipes are repaired)

Appliances not installed  All Appliances not yet converted

Gas Off and valve cock pinned: YES  NO

(Contractor/Customer notified meter is set ready for appliances)

2) Appliances System "Shut- In" Test: Testing system for appliance use

Pressure Tested from Meter to appliances with valve cocks open

(If, only test 1 (one) is done at this time the customer service form can be used for test 2)

Pres. Gauge- Water Column Reading \_\_\_\_\_ (7.5 inches = 1/4lb)

(Manometer holds constant at baseline pressure X 15 minutes)

Time Test began \_\_\_ Time Test Ended \_\_\_ Result: Pass \_\_\_ Fail \_\_\_

Meter Reading: \_\_\_\_\_ . 0 0 Customer notified of gas ON or OFF

Status on Departure:

Gas to Meter is ON

Appliances passed Shut In test

Gas valve off and pinned

Safety Concerns: Yes \_\_\_ No \_\_\_

Work performed by:

Print

Signature



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix B-7	Approval Date 12/15/08
Revision date: 12/15/12	Supercedes: 08/20/06

## Request to remediate threaded gas pipe leak on Customer Owned Pipe

### ALPINE NATURAL GAS

ORDER TAKEN BY _____	DATE WORK ORDERED _____ Time _____
----------------------	---------------------------------------

Gas Leak Investigation: Yes / No

ACCOUNT NO. \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

CUSTOMER \_\_\_\_\_

ADDRESS \_\_\_\_\_

METER NO. \_\_\_\_\_ READING \_\_\_\_\_

EMPLOYEE'S OBSERVATION \_\_\_\_\_

A natural gas leak was detected on customer owned piping or appliance. Alpine has determined that the leak is in need of immediate remediation and will shut off the gas and lock the meter. A qualified plumbing contractor or appliance technician must repair/ service this leak prior to the resumption of gas service.

Alpine may determine that THIS IS A PIPE THREAD LEAK and tightening of a gas connection line may remediate your leak.

Upon your request and Alpine believes proper preparation and tightening of this threaded pipe leaking gas connection, will resolve the leak, you may authorize Alpine to attempt to correct in writing.

We make no assertions regarding the proper functioning of any appliances connected to the gas. We are only attempting to quickly, conveniently and safely correct a small leak at a gas connection on customer owned piping.

If, any leak remains after our efforts to correct and testing we will shut off the gas.

CUSTOMER REQUEST: Please attempt to correct the gas leak on my piping/connection; **Yes/ No**

\_\_\_\_\_  
Customer signature

\_\_\_\_\_  
Date

Post Work Assessment: Did this correct the leak: Yes / No

If, No was the Gas shut off and meter red Tagged : Yes /

Alpine Natural Gas Representative

\_\_\_\_\_  
Date



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix C-1	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

## **DAMAGE PREVENTION PLAN- EXCAVATOR NOTIFICATION LETTER**

To: NAME  
MAILING ADDRESS  
CITY, CA ZIP

From: Alpine Natural Gas

**SUBJECT: GAS FACILITY DAMAGE PREVENTION PROGRAM**

Alpine Natural Gas is required by state and federal pipeline safety regulations to communicate on a periodic interval with all known local excavators and contractors working within the operations and service area of our gas distribution facilities. This communication is intended to promote continued public safety regarding the existence of our buried natural gas piping.

Our distribution system lies within the La Contenta, Rancho Calaveras, New Hogan Dam Estates and Gold Creek Estates subdivisions and along Highway 26.

If your company is planning an excavation, drilling, blasting or horizontal directional boring project in areas where Alpine Natural Gas has facilities, we will provide you with a free (no cost) gas pipeline location service. The State of California requires that you call the Underground Service Alert (USA) One-Call Service at least two, (2), working days prior to the beginning of your excavation work. To save yourself time and frustration when calling One-Call, please have the following information at hand when you place the call:

1. Name of the company doing the excavation work.
2. Name of contact person for the company.
3. Street address or other location of the work site.
4. Name of the nearest intersecting street.
5. Legal description for the job site (i.e. R 14 south, T 78 west, Section 8).
6. Type of work being done.
7. Date work is to be started.

You may contact our office directly regarding gas facility locates, however, you are still required to call the Underground Service Alert (USA) One-Call Service at **1-800-227-2600** to locate any underground utilities that other operators may have in the area where you intend to excavate. Once notified, Alpine Natural Gas will mark all gas facilities with temporary fluorescent “yellow”, yellow flags on wire and/or yellow “whiskers” depending on the type of surface.

We are happy to be able to provide this service to you, free of charge, and to work in conjunction with the contractor and excavators in our service area in order to maintain a high level of public safety. Please feel free to contact our office at, **209-772-3006**, if we can assist with this or any other issue.

Thank You,

Alpine Natural Gas

Encl; Gas Facility Map, Annual Letter to Non-Customers, Gas Emergency or Line Break



# Procedural Manual for Operations, Maintenance and Emergencies

<b>Appendix C-2</b>	Approval Date 12/15/08
Revision date: 2/1/13	Supercedes: 12/15/13

## ALPINE NATURAL GAS

### Excavator Notification List

COMPANY NAME	ADDRESS	CITY	STATE	ZIP	PHONE #	EMAIL
A & M BUILDERS	P.O. BOX 744	P.O. BOX 744	CA		334-1218	
ACES LANDSCAPE MAINT.	P.O. BOX 1662	P.O. BOX 1662	CA		772-9409	
ALL SEASONS	2985 HENEY LN.	2985 HENEY LN.	CA		772-9305	
ALLEN CONSTRUCTION	P.O. BOX 335	P.O. BOX 335	CA		772-1665	
AMERICAN BUILDING CONCEPT	1919 VISTA DEL LAGO DR.	1919 VISTA DEL LA CA	CA		772-2464	
ANDERSON CONSTRUCTION	P.O. BOX 465	P.O. BOX 465	CA		772-1902	
BARRY GINOCHIO EXCAVATING	8360 FRICOT CITY RD.	8360 FRICOT CITY CA	CA		736-8000	
BEAR CREEK CONSTRUCTION	P.O. BOX 621	P.O. BOX 621	CA		754-4325	
BECKETT CONSTRUCTION	84 ST. ANDREWS RD.	84 ST. ANDREWS R CA	CA		772-1875	
BITTLE BOBCAT SERVICE					763-5786	
BRIAN'S LANDSCAPE	P.O. BOX 76	P.O. BOX 76	CA		772-0168	
CALAVERAS BUILDERS	4110 MEADOW OAKS DR.	4110 MEADOW OAKCA	CA		772-1772	
CALAVERAS CNTY WATER DIST.	P.O. BOX 846	P.O. BOX 846	CA		754-3543	
COUNTRY GARDEN LANDSCAPE	19510 PORTO FINO RD.	19510 PORTO FINO CA	CA		768-2440	
CRV	28082 NICHOLS RD.	28082 NICHOLS RD CA	CA		367-1706	
DAN PARKER CONSTRUCTION	P.O. BOX 81	P.O. BOX 81	CA		598-8889	
DAVIDSON CONSTRUCTION	2321 SILVER RAPIDS RD.	2321 SILVER RAPID CA	CA		772-0663	
DC ENGINEERING & CONST.	P.O. BOX 359	P.O. BOX 359	CA		786-5020	
DOCTOR CONSTRUCTION	3038 BERKESEY LN.	3038 BERKESEY LN CA	CA		765-9137	
DON STENECK CONSTRUCTION	P.O. BOX 1360	P.O. BOX 1360	CA		754-4011	
DOUGLASM. WIRTH CONSTR.	8933 WESTWOOD CT.	8933 WESTWOOD CA	CA		763-2673	
DP DEVELOPMENT	P.O. BOX 3815	P.O. BOX 3815	CA		668-8334	
DRC CONTRACTING	42 MAIN ST.	42 MAIN ST.	CA		772-8141	
DUHAMMEL EXCAVATION					772-2849	
EMERSON, KW, INC.	P.O. BOX 549	P.O. BOX 549	CA		754-3839	
FRAZIER CONSTRUCTION	P.O. BOX 1472	P.O. BOX 1472	CA		785-0513	
FRED SLONIKER EXCAVATING	P.O. BOX 1515	P.O. BOX 1515	CA		209-532-8276	
GLEN ANDREW	1448 RIBIER DR.	1448 RIBIER DR.	CA		838-1999	
GML ENGINEERING	8037 SAVAGE WAY	8037 SAVAGE WAY CA	CA		786-3055	
HENSLEY CONSTRUCTION	P.O. BOX 1285	P.O. BOX 1285	CA		772-0500	
HEMOCRAFT	182 OAK RIDGE DR.	182 OAK RIDGE DR CA	CA		763-5756	
JD FREY	P.O. BOX 178	P.O. BOX 178	CA		772-0753	



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix C-2	Approval Date 12/15/08
Revision date: 2/1/13	Supercedes: 12/15/13

## ALPINE NATURAL GAS

### Excavator Notification List

JEFF ALLEN'S BACKHOE SERVIC	P.O. BOX 383	CA	786-2633
JERRY PEPPER GEN. CONTRACT	P.O. BOX 1145	CA	772-8048
JERRY ROCCA EXCAVATING	968 CHURCHILL RD	CA	
JIM JARVIS	6539 CANE LN.	CA	772-1124
JOHN W. HERTZIG	9267 HWY 26	CA	286-1234
MCCARTY'S CONSTRUCTION CO	P.O. BOX 112	CA	785-2230
MEL TRUST DEVELOPMENT	P.O. BOX 621	CA	754-3362
MILES EXCAVATING INC.	P.O. BOX 53	CA	772-2849
MILLER KLEIN DEVELOPMENT	4557 QUAIL LAKES DR. STE A	CA	957-3819
MURILLO BUILDERS	6863 DA LEE RD.	CA	772-2522
NATURAL ROCK FORMATIONS &	5825 PETTINGER RD.	CA	772-1442
NORM HULETT	643 SILVER RD.	CA	772-9766
NORTH STATE LAWN CARE	P.O. BOX 911	CA	786-8909
PRO-TECH BUILDERS	7849 ANDERSON ST.	CA	786-2312
REDENBAUGH CONSTRUCTION	2805 ZARAND DR.	CA	595-0767
REUSCHE CONSTRUCTION	8175 SIEGEL ST.	CA	786-0100
RIDGECREST HOMES INC.	4772 FRONTIER WAY,STE.400	CA	466-4433
ROGER JONES	P.O. BOX 295	CA	483-5954
ROOSEVELT CONSTRUCTION	P.O. BOX 173	CA	916-784-6892
SCOTT CABELL CONSTRUCTIO	2707 DANAHER RD.	CA	772-3445
SIDLE CONSTRUCTION	P.O. BOX 238	CA	286-1791
SIERRA EXCAVATION	21158 KNOX DR.	CA	586-5088
SLONIKER & DAUGHTER	4975 BANE RD.	CA	772-3908
SONORA TRACTOR SERVICE	P.O. BOX 38	CA	532-6256
STEPHEN KUBAT	903 ST. ANDREW'S RD.	CA	772-2587
STUEBNER CONSTRUCTION	2893 STAGECOACH DR.	CA	772-2208
SUN VALLEY LANDSCAPING	8670 STINSON VIEW RD.	CA	786-3400
T & T HOMES	P.O. BOX 1419	CA	772-8678
THE DIGGER	191 CARMEL DR.	CA	772-0442
THE MARK PRINGLE COMPANY	90 EL CAMINO REA	CA	650-344-8400
TOP QUALITY FIREPLACES	105 MAIN ST.	CA	772-2501
DN ANDERSON	68 COOMBS ST. G1	CA	
TUSK DEVELOPMENT	3062 ROSS DR.	CA	772-1857



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix C-2	Approval Date 12/15/08
Revision date: 2/1/13	Supercedes: 12/15/13

## ALPINE NATURAL GAS

### Excavator Notification List

---

VALLEY SPRINGS GOLD CREEK I	P.O. BOX 1265	P.O. BOX 1265	CA	367-1706
VERNON GREEN	7994 A GOODELL RD.	7994 A GOODELL R	CA	772-3955
WADE LOVEDAY	6991 CONNER DR.	6991 CONNER DR.	CA	601-0877
WHITTLE CONSTRUCTION				
WILLIAM MICHAEL CUSTOM HMS	1730 W. LODI AVE.	1730 W. LODI AVE.	CA	329-8318
WILSON'S BACKHOE SERVICE	22328 S. COLORADO RIVER DR.	22328 S. COLORAD	CA	532-6012
HIGH COUNTRY BUILDERS	P.O. BOX 260	P.O. BOX 260	CA	



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-2	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

ALPINE NATURAL GAS

## Leak Survey-Contractor OQ PLAN

### Contracted Leak Surveyor OQ-Plan Heath Consultants

<b>OPERATOR QUALIFICATION PROGRAM</b>	Heath Consultants Inc. Training Department
Current Version 4/25/2008	

Purpose:

The purpose of this plan outlines the process Heath Consultants Incorporated (hereto fore referred to as the "company") utilizes to comply with 49 CFR 192 "Operator Qualification" (OQ Rule). The effective date of this written plan is April 27, 2001.

Contents:

1. Definitions
2. Identification of covered tasks – 49 CFR 192.805(a)
3. Evaluations – 49 CFR 192.805(b)
4. Non-qualified individuals – 49 CFR 192.805(c)
5. Evaluations following incidents – 49 CFR 192.805(d)
6. Evaluations related to performance – 49 CFR 192.805(e)
7. Communication of changes – 49 CFR 192.805(f)
8. Evaluation intervals – 49 CFR 192.805(g)
9. Record Keeping – 49 CFR 192.807
10. Implementation – 49 CFR 192

### 1. Definitions

- 1.1. **Abnormal operating conditions** – defined in 49 CFR 192.803 as a condition that indicates 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 or the environment.
- 1.2. **Evaluation** – defined in 49 CFR 192.803 as a process established by the company to determine an individual's ability to performed a covered task by any of the following methods:
  - 1.2.1. Written examination
  - 1.2.2. Oral examination
  - 1.2.3. Work performance history review
  - 1.2.4. Direct observation during the job
  - 1.2.5. Performance on the job
  - 1.2.6. On the job training
  - 1.2.7. Simulations
  - 1.2.8. Other forms of assessment
- 1.3. **Integrity** – the pipelines ability to operate safely and to withstand stresses imposed during operations.



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-2	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

ALPINE NATURAL GAS

## Leak Survey-Contractor OQ PLAN

---

- 1.4. **Qualified** – defined in 49 CFR 192.803 as an individual who has been evaluated and can perform assigned covered tasks and can recognize and react to abnormal operating conditions encountered on the job.
- 1.5. **Transitional** – qualification completed by October 28, 2002 of individuals who have been performing a covered task on a regular basis prior to August 27, 1999 (and have continued to do so).
- 1.6. **Pipeline facility** – defined in 49 CFR 192.3 as new and existing pipeline, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.
- 1.7. **Covered task** – defined in 49 CFR 192.803(a) as an activity identified by the company as meeting all of the following: (**Four – part rule**) New Construction is not a covered task.
  - 1.7.1. The activity is performed on the pipeline facility.
  - 1.7.2. Is an Operations, Maintenance and Emergencies task.
  - 1.7.3. Is performed as a requirement of 49 CFR 192.
  - 1.7.4. Affects the operation or integrity of the pipeline.

### 2. Identification of covered tasks – 49 CFR 192.805(a)

- 2.1. This program includes a list of performed covered task(s) identified by the company using criteria set forth in the OQ Rule and as shown in 1.7 above. Regulatory Agencies and Operators, the company provides service for, can request amendments to the list. (Amendment 1) An OQ Coordinator may be assigned to maintain and/or amend identified covered tasks and/or the program.

### 3. Evaluations – 49 CFR 192.805(b)

- 3.1. Company personnel currently performing “covered tasks” on the Implementation Date of the OQ Rule (August 27, 1999) qualify under “Transitional” clause or “Work History” **Note:** “Work History” will not be used as the sole evaluation method after October 28, 2002.
- 3.2. Any person not previously qualified shall qualify according to guidelines set forth in the company’s training and development programs. The program(s) involving “covered tasks” includes at least one method of evaluation described in the OQ Rule and as shown in 1.2 above.
- 3.3. Evaluation methods and evaluators include management designated internal personnel and materials, approved outside resources, and Operators we provide service for; along with Regulatory Agencies’ recommendations.

### 4. Non-Qualified Individuals – 49 CFR 192.805(c)

- 4.1. Non-Qualified individuals can perform covered tasks only under direct supervision of a qualified person(s) of the company or operator. The qualified person assumes responsibility, ensuring safe performance of covered task: including being in position to take **immediate** corrective action if necessary. Qualified individuals will not exceed a span of control for more than three non-qualified individuals.

### 5. Evaluations Following Incidents – 49 CFR 192.805(d)



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-2	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## Leak Survey-Contractor OQ PLAN

---

5.1. If determined by the company, Operator or Regulatory Agency, qualified person(s) contributed to an incident involving a covered task, the company ensures involved person(s) will no longer perform covered tasks without direct supervision until evaluated and deemed qualified by company and or Operator.

5.2. If company or Operator reasonably deems person(s) is no longer qualified to perform covered task, identified person(s) may no longer perform covered task without direct supervision until evaluated and qualified by company and or Operator.

### 6. Evaluations Related to Performance – 49 CFR 192.805(e)

6.1. The company or Operator requires an individual to be evaluated if there is reason to believe that the individual is no longer qualified to perform a covered task. This could occur if the individual displays unsatisfactory performance of the task or there is any reason to believe the individual can no longer perform the covered task in a qualified manner.

6.2. If the company or Operator has reason to believe that an individual is no longer qualified to perform a task due to unsatisfactory performance or any other reason, the individual's status will be revised to non-qualified, and will be restricted from independently performing the covered task until evaluated and qualified in accordance to 1.2 above.

6.3. The company will be responsible for determining if an individual is no longer qualified to perform a covered task due to unsatisfactory performance or other reasons and will ensure that the individual is evaluated and qualified before resuming performance of the covered task. Evaluation methods and evaluators include management designated internal personnel and materials, approved outside resources, and Operators we provide service for: along with Regulatory Agencies' recommendations.

### 7. Communication of Changes – 49 CFR 192.805(f)

7.1. The company realizes the constant changes in the industry impacting the performance of covered tasks. These changes shall be communicated to the qualified personnel in the most efficient and effective manner available to the company. Channels of communication include, but are not limited to: redesign of internal program(s) and material including evaluation if necessary, written bulletins, tailgate meetings, electronic generated notices, emails, amendments to the OQ Plan, and/or recommendations from Regulatory Agencies or Operators.

### 8. Evaluation Intervals – 49 CFR 192.805(g)

8.1. All personnel performing covered tasks and participating in the company's quality program shall subsequently re-qualify no later than the end of the third calendar year since their last recorded qualification. The evaluation shall include at least one of the methods described in 1.2 above. Any person(s) who has not performed a specific covered task during a rolling twelve month period, must qualify before performing specific task; evaluation to include at least one method indicated in 1.2 above.

### 9. Record Keeping – 49 CFR 192.807



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-2	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## **Leak Survey-Contractor OQ PLAN**

---

- 9.1. The company will provide documentation of qualified personnel including identification of the person, covered task qualified to perform, date of qualification and method of evaluation.
- 9.2. The company shall maintain these records for no less than a five-year period following the last qualification date of each person, including person(s) leaving the company.
- 9.3. This information is available to Regulatory Agencies and Operators having a vested interest.
- 9.4. The current method of maintaining records are electronic data and hard copy: at corporate headquarters, regional locations or as provided by outsourced vendors. Programs and locations may change as technology improves.

### **10. Implementation – 49 CFR 192**

- 10.1. The company complies with the dates and requirements stated in the OQ Rule. (Work History cutoff date, August 27, 1999; Effective date of the rule, October 26, 1999; Publication date of written plan, April 27, 2001; Date after which all persons performing covered tasks are qualified under this plan, October 28, 2002.)



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-3	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## Leak Contractor Covered Task List

---

### Heath Consultants Covered Task List

#### 1. Leak Survey

- 1.1. Perform leakage surveys: Transmission lines – 49 CFR 192.706
- 1.2. Perform leakage surveys: Distribution lines – 49 CFR 192.723

#### 2. Patrolling

- 2.1. Patrolling transmission lines – 49 CFR 192.705
- 2.2. Patrolling distribution lines – 49 CFR 192.721

#### 3. Line Locating

- 3.1. Locate and temporarily mark buried pipelines in an excavation area – 49 CFR 192.614(c)(5)
- 3.2. Standby for prevention of damage to pipelines – 49 CFR 192.614(c)(6)

#### 4. Corrosion Control

- 4.1. Monitor/test for cathodic protection – 49 CFR 192.465(a)
- 4.2. Monitor/test for atmospheric corrosion – 49 CFR 192.481

#### 5. Valve Maintenance

- 5.1. Operate valve to discontinue service to a customer – 49 CFR 192.727(d)
- 5.2. Inspect/maintain distribution valves – 49 CFR 192.747

#### 6. Customer Service

- 6.1 Atmospheric corrosion monitoring: Internal/External-above ground structures – 49 CFR 192 Subpart I – Requirements for Corrosion Control.
- 6.2 Emergency response and restoration – 49 CFR 192.615
- 6.3 Customer pressure regulating, limiting and relief devices OME: Residential, small commercial, large commercial and industrial – 49 CFR 192.619, 49 CFR 192.621, 49 CFR 192.623

#### 7. Meter Reading

- 7.1 Atmospheric corrosion monitoring: Internal/External-above ground structures – 49 CFR 192 Subpart I – Requirements for Corrosion Control.
- 7.2 Emergency response and restoration – 49 CFR 192.615
- 7.3 Prevention of accidental ignition – 49 CFR 192.751
- 7.4 Meter Set – Repair, Rebuild or Replace – 49 CFR 192.739, 49 CFR 192.741, 49 CFR 192.743, 49 CFR 192.747



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-1	Approval Date 12/15/08
Revision date: 12/15/10	Supersedes: 08/20/06

ALPINE NATURAL GAS

## LEAK SURVEY RECORD



ALPINE NATURAL GAS  
LEAKAGE SURVEY  
ALPINE NATURAL GAS CO., VALLEY SPRINGS, CALIFORNIA  
GAS DISTRIBUTION LEAK SURVEY SUMMARY FORM

ANG OQ Employee \_\_\_\_\_

Date Started \_\_\_\_\_ Date Completed \_\_\_\_\_ Total Days \_\_\_\_\_

MAP Y / N MAIN LINE	MAP Y / N SERVICE LINES	MAP Y / N BUSINESS DISTRICT
LOCATION	APN # OF HOMES	APN # OF HOMES
MILES OF MAIN SURVEYED	TOTAL BUILDINGS INSPECTED	TOTAL BUILDINGS INSPECTED
NUMBER OF SERVICES INSPECTED	POSITIVE BUILDING REPORTS	POSITIVE BUILDING REPORTS
# OF POSITIVE STREET REPORTS	NEGATIVE BUILDING REPORTS	NEGATIVE BUILDING REPORTS
# OF NEG. STREET REPORTS	# OF BUILDING LISTING FORMS	# OF BUILDING LISTING FORMS
# OF LEAK LISTING FORMS	# OF SERVICE LISTING FORMS	# OF SERVICE LISTING FORMS
# OF LEAK INDICATIONS	# OF LEAK LOCATIONS	# OF LEAK LOCATIONS

LEAK INDICATION CLASSIFICATION*		

BUILDING STATUS CERTIFICATION*		

- KEY MAP SYMBOLS**
- X Indicates Leak Location
  - //// Estimated Area Affected
  - Δ Catch Basin
  - ⊙ Tree
  - House and building
  - Indicates the Main
  - Represents curb line or edge of road. Unless designated as property line.

- LEAK INDICATION CLASSIFICATION**
- Grade 1** — Schedule for immediate repair
  - Grade 2** — Schedule for repair after grade 1 Indications are completed. Recheck mandatory if leak cannot be repaired within 6 months or before frost.
  - Grade 3** — Repair as work scheduled permit if Indication cannot be repaired within 1 year, indication should be rechecked.

ENERGY FOR YOUR NEIGHBORHOOD

1555 Andrews Road • P.O. Box 590 • Valley Springs, CA 95252 • Phone 209.772.3006 • Fax 209.772.3008 • e-mail: anginfo@gofish.com  
www.alpinenaturalgas.com

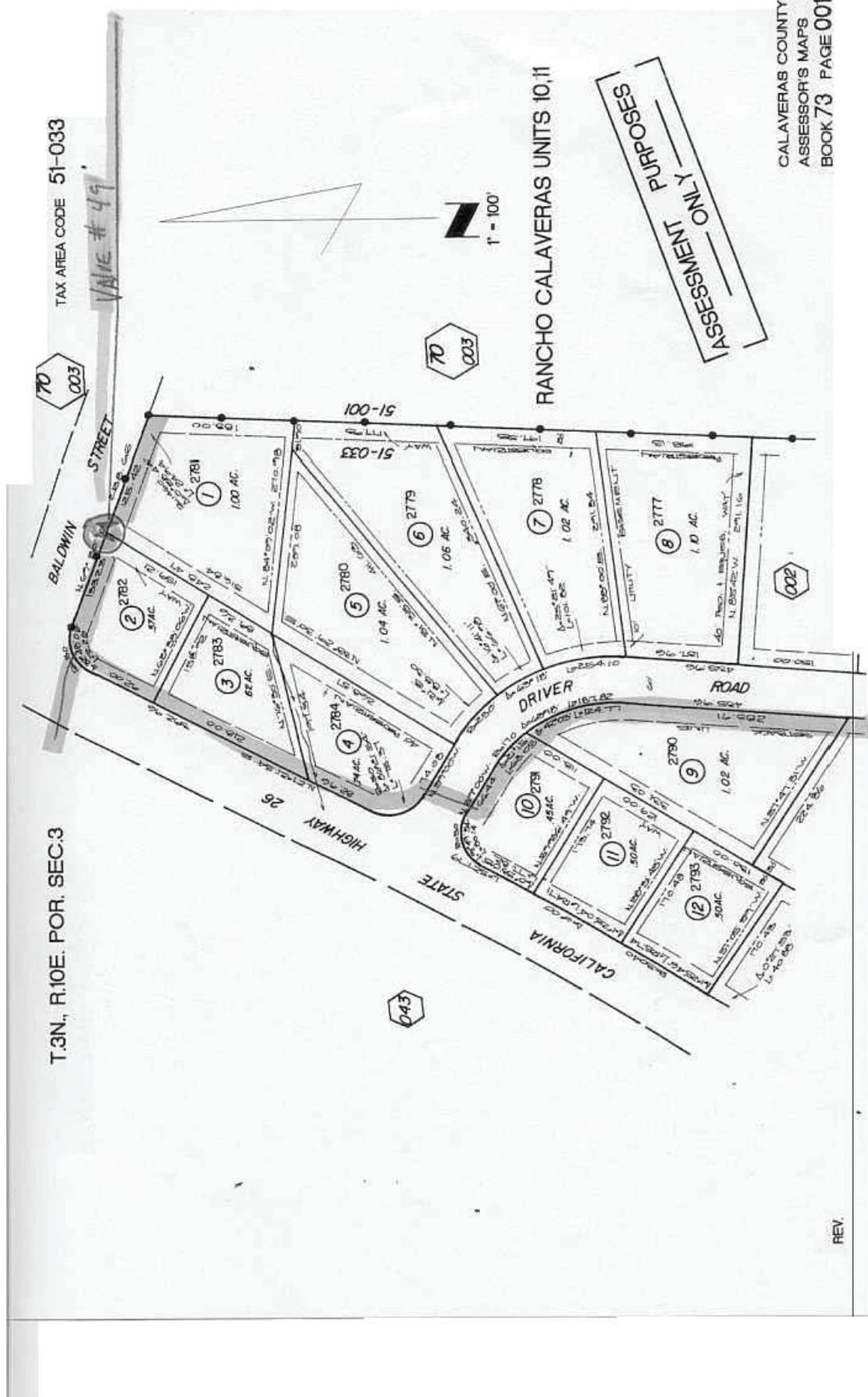


# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-4	Approval Date 12/15/08
Revision date: 12/15/10	Supersedes: 08/20/06

ALPINE NATURAL GAS

Business (HCA) District Maps





ALPINE NATURAL GAS

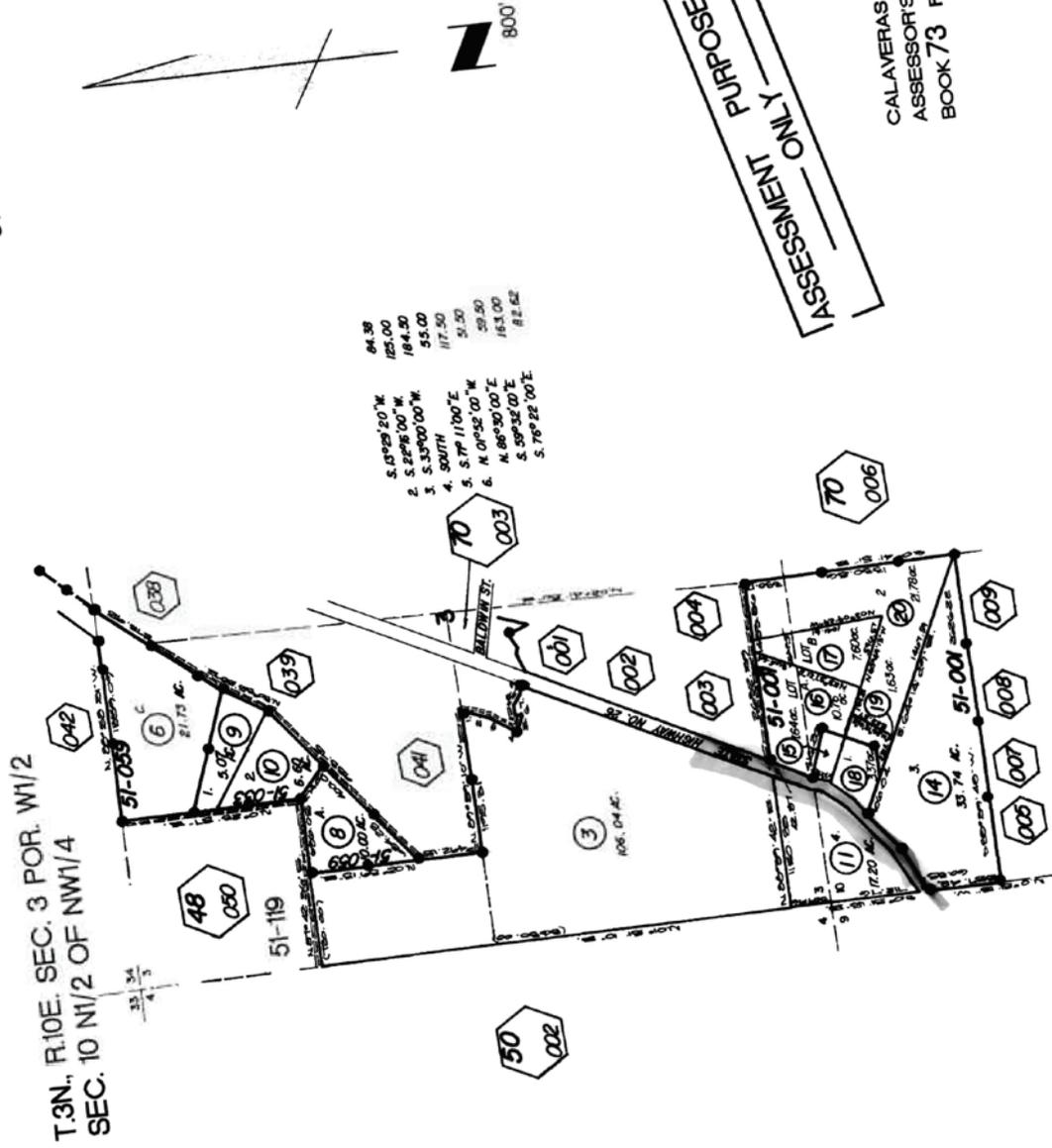
# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-4	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

## Business (HCA) District Maps

20

AX AREA CODE 51-001,51-033, 51-059, 51-119



M. 2-84, 2-190, 4-82, 5-115, 1-14, 7-26, 8-16

R.O.S.

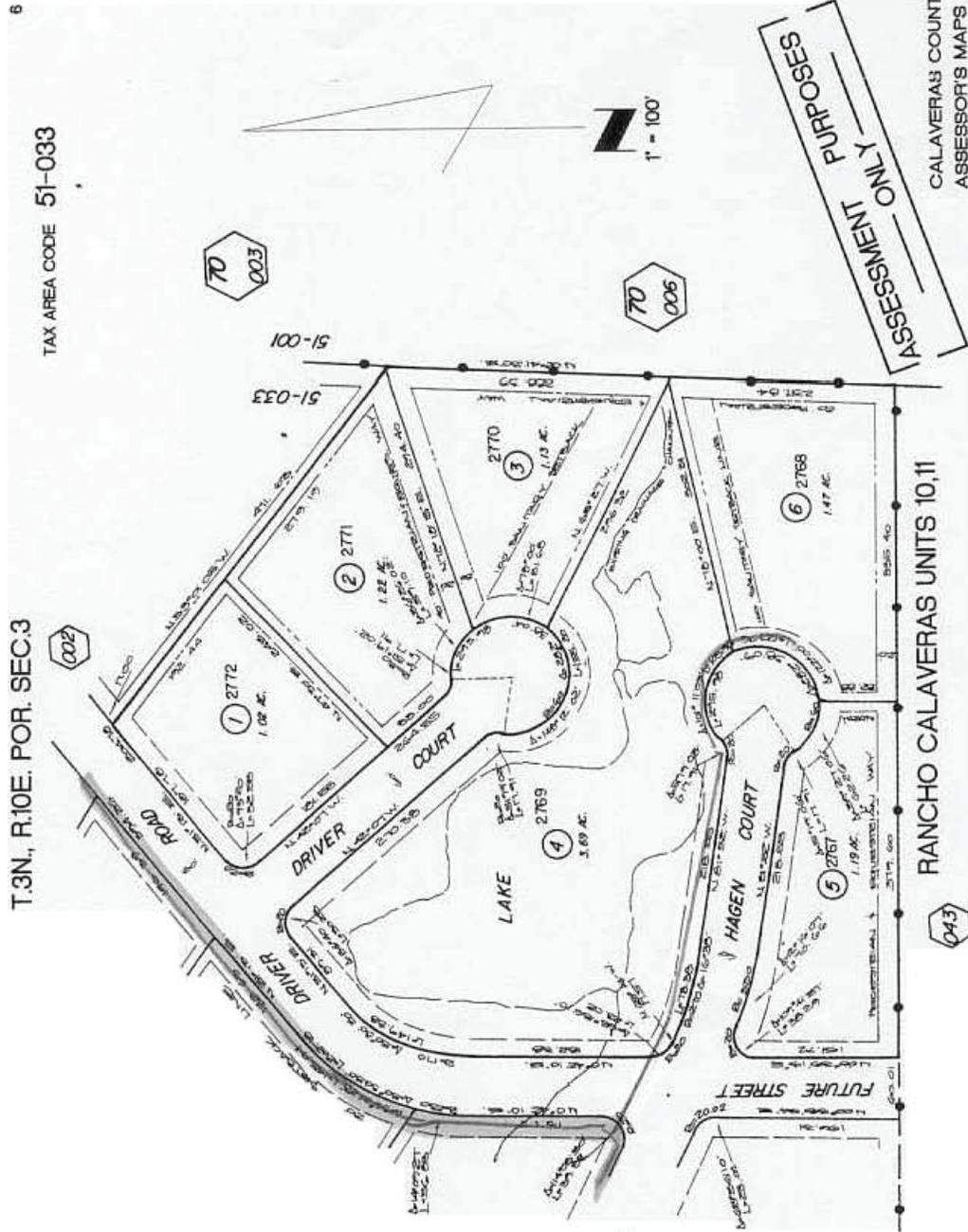


# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-4	Approval Date 12/15/08
Revision date: 12/15/10	Supersedes: 08/20/06

ALPINE NATURAL GAS

Business (HCA) District Maps



R.O.S. 18-116

REV. 2 05/20/96

CALAVERAS COUNTY  
ASSESSOR'S MAPS  
BOOK 73 PAGE 004

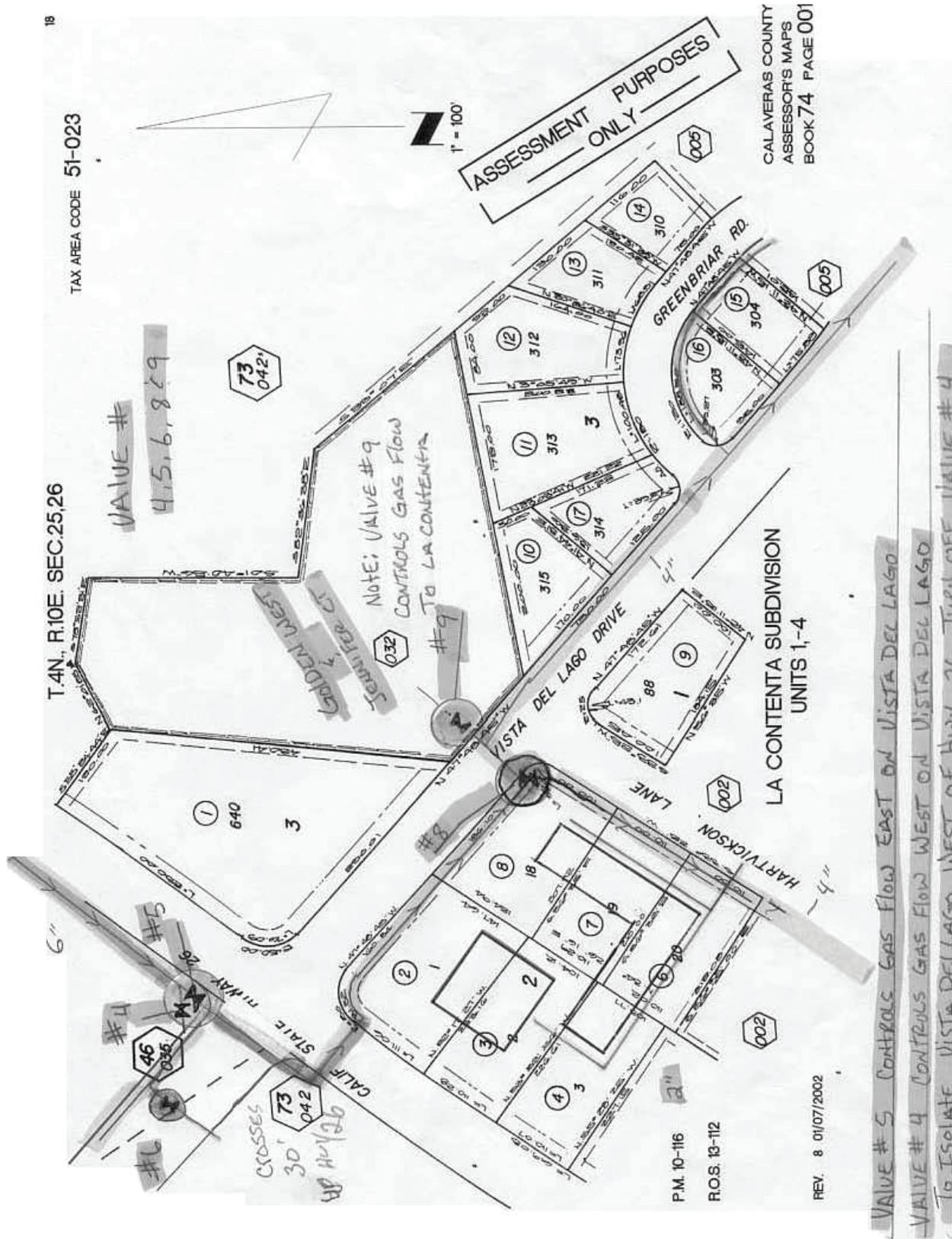


# Procedural Manual for Operations, Maintenance and Emergencies

Appendix D-4	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

ALPINE NATURAL GAS

Business (HCA) District Maps



VALVE # 5 CONTROLS GAS FLOW EAST ON VISTA DEL LAGO  
 VALVE # 4 CONTROLS GAS FLOW WEST ON VISTA DEL LAGO  
 TO ISOLATE VISTA DEL LAGO WEST OF HWY 26 TURN OFF VALVE # 4



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix E	Approval Date 12/15/08
Revision date: 12/15/10	Supercedes: 08/20/06

## Customer Owned Service Lines

### SERVICE LINE RESPONSIBILITIES

The US DOT requires operators of gas distribution systems to notify all customers about the maintenance of *customer-owned buried piping*. This notification should be sent, at time of initial service and at intervals not to exceed three years, to each customer. *[Department of Transportation regulations at 49 CFR Part 192.16]*

Alpine Natural Gas does not maintain customer’s piping including buried metallic pipe, downstream of the gas meter. The customer owned piping should be periodically; i) inspected for leaks, ii) corrosion and iii) repaired if any unsafe condition is discovered. The gas utility cannot do this work but can assist in locating the pipe. We will refer you to a local plumbing or heating contractors who can assist in inspecting, and repairing your buried piping, gas appliances and other gas facilities.

### CUSTOMER ACKNOWLEDGEMENT:

I understand **Alpine Natural Gas** *is not responsible* for any buried service lines or gas piping downstream of my meter.

Signed \_\_\_\_\_ Date \_\_\_\_\_



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Appendix F	Approval Date 12/15/08
Revision date 8/15/12	Supercedes: 08/20/06

### Emergency Response Equipment List

---

OQ Personnel are responsible to ensure the equipment list below is immediately accessible and in proper operating condition. Intended for use during both normal Operations, Maintenance and Emergencies as well as during afterhours on call activities.

#### Vehicles

Pickup Truck  
Backhoe

#### On Board Service Truck

Assorted hand tools  
Plastic pipe squeeze tool  
Portable Fire Extinguisher  
Traffic cones and warning signs  
Ingress/egress ladder  
Combustible Gas Indicator (CGI)  
DP-IR methane gas spectrometer  
CO analyzer  
Hard Hat  
Safety Vest  
Telephone  
Ear protection  
Leather Gloves  
Safety Glasses  
First Aid Kit  
Flashlight

#### Safety Bag

Safety Harness with Lanyard  
Respirator with Face Shield  
Coveralls



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Appendix G	Approval Date 12/15/08
Revision date 8/15/12	Supercedes: 08/20/06

### Reference Guide for Pipe Joining of Polyethylene (PE) Pipe

Alpine Natural Gas references these manufacturer guidelines for the purpose of joining PE pipe in our gas distribution system by heat-fusion processes (heat-iron Fusion and Electrofusion) including Butt, Socket Fusion, Saddle Fusion and Mechanical Coupling procedures in compliance with CFR 49. § 192.281,283 and 285.

- 1) Alpine Natural Gas, Polyethylene Gas Pipe Fusion Manual and Reference Guide, Revised 9-02-10.
- 2) Plastics Pipe Institute, Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe TR-33/
- 3) US Poly, UAC 2000 (PE 2406) Gas Distribution Piping Systems, Technical and Installation Guide
- 4) Kerotest, Innogas Electrofusion Systems, Universal Barcode/Electrofusion Controller “Danielle Processor”, General Operation
- 5) IPEX- Friatec PE Electrofusion Systems, Frialen® Electrofusion coupler installation instructions
- 6) Elster Perfection (A subsidiary of American Meter Company), Perfection Permalock® Tee Installation Instructions
- 7) Elster Perfection (A subsidiary of American Meter Company), Perfection Permasert® Non-Corrosive Mechanical Coupling Installation Instructions
- 8) Elster Perfection (A subsidiary of American Meter Company), Perfection Gas Risers and Transition Fittings
- 9) R.W. Lyall, Lyco Excess Flow Valves, Description and Installation Instructions
- 10) McElroy, No. 2LC & Pitbull® No.14 Fusion Machines, Operators Manual
- 11) McElroy, Mini-Mc™ Fusion Machines, Operators Manual
- 12) McElroy, No. 2CU Fusion Machines, Operators Manual



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix H	Approval Date 12/15/08
Revision date 8/15/12	Supersedes: 08/20/06

ALPINE NATURAL GAS

## Voltmeter and Half Cell Product Instructions



# TINKER & RASOR

1948

60 YEARS OF QUALITY

2008

### PRODUCT INSTRUCTIONS

#### MODEL CPV- 4 VOLTMETER

##### Model CPV - 4

The Model CPV-4 Digital Cathodic Protection Voltmeter is used for measuring D.C. potentials on buried or submerged metal structures.

##### Unpacking

Check all components against packing list. If damage has occurred in shipment, file a claim with the carrier immediately. If it is necessary to contact your supplier or the manufacturer concerning damaged or missing items, be sure to include all the information, such as serial number, purchase order number, and invoice number. This will ensure you of obtaining proper and expeditious service.

##### Preparation of Half-Cell

Please note that in most cases the half-cell is shipped dry, and must be properly charged with distilled water before operation.

##### Operating with Half-Cell Electrode Attached

- Remove protective vinyl cover from end of half-cell electrode.
- Place ceramic end of half-cell in contact with moist earth.
- Connect test lead from negative terminal on instrument to the structure.
- Observe and record meter reading. Note: No switch to push for taking reading once the voltmeter has been turned on.

##### Operating without Half-Cell Electrode

Use same as any standard voltmeter for measuring D.C. potentials.

##### Battery Test

Battery has a shelf life, and needs replacement when the display numerals begin to flash on and off.

##### Battery Replacement

Simply unscrew the top four screws of the voltmeter panel and install the battery where indicated. (Battery is NEDA 1604)

##### Warranty

Warranty is on workmanship and material for 90 days from date of purchase. Warranty does not cover transportation or damages beyond normal wear and tear.

##### Non-warranty Repair Policy

Tinker & Rasor will repair any reparable past-warranty Model CPV-4 (instrument only) for a charge not to exceed 50% of current list price for a period of three years from date of sale.

##### Shipping instructions

All instruments being returned for repair should be sent PREPAID to:

Tinker & Rasor  
791 S. Waterman Ave.  
San Bernardino, CA 92408

Include with shipment, information on nature of problem, purchase order and return address.

010-278

Tel: (909) 890-0700

Fax: (909) 890-0736

P. O. Box 6890 SAN BERNARDINO, CA 92412

Web: www.tinker-rasor.com

E-mail: Info@tinker-rasor.com



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix I	Approval Date 12/15/08
Revision date 8/15/12	Supercedes: 08/20/06

## Regulator Station October 2009 Test Documents

### PROCEDURE TO TEST REGULATOR STATION TO 150% MAOP (275 PSIG)

October 2009

Purpose: Certify Alpine Natural Gas' Regulator Station at Valley Springs, CA steel pipe, valves and all other components up to and including valves 6 and 7 above, has a maximum allowable operating pressure (MAOP) of 275 psig.

Background: Alpine placed its regulator station into service in December 1999. The test to certify maximum operating pressure was performed by the installer, Loy-Clark Pipeline Company, for 4 hours at 275 psig and was attested to by Loy Clark's foreman Dick Schoolcraft and Alpine's design engineer Steve Shute. No recording or signed certificate can be produced. Therefore, a new test is being performed by Alpine.

- 1) Operating pressure is verified by test gauge and Reynolds Recorder times 24 hours.
- 2) Valves (6) and (7), and sense points (11) and (12) turned to off position.
- 3) Test gauge is attached to approximately at position of port (9) and in turn connected to recorder.
- 4) PG&E representative will temporarily increase the delivery pressure from the current 100 psig to 275 psig.
- 5) Monitor pressure gauge on Regulator Station times 4 hours and record.
- 6) Observed pressure should be maintained at 275 psig, if not, terminate procedure. Locate areas that may be leaking.
- 7) If, pressure is maintained and no leaks have been observed, continue procedure and document recording.
- 8) Sign off and attest by two Alpine and 1 PG&E Representatives.
- 9) Place Documents in permanent record.
- 10) Have PG&E rep. reduce delivery pressure back to 100 psig.
- 11) Return Valves (6) and (7), and sense points (11) and (12) to open position.

The above test was performed by the three individuals that signed this document for 4 hours @ 275 psig pressure held on system.

*[Signature]*  
 Mike Lamund, Admin.ist./w/d,  
 10-29-09

10/29/09  
Date

*Larry Oliveira*  
Larry Oliveira, OQ Representative  
Alpine Natural Gas

10/29/09  
Date

*Matt Helm*  
Matt Helm, OQ Representative  
Alpine Natural Gas

10/29/09  
Date

*Roger Morsehead*  
Roger Morsehead, OQ Representative  
Pacific Gas & Electric

October 2009

Regulator Station MAOP Test Procedure





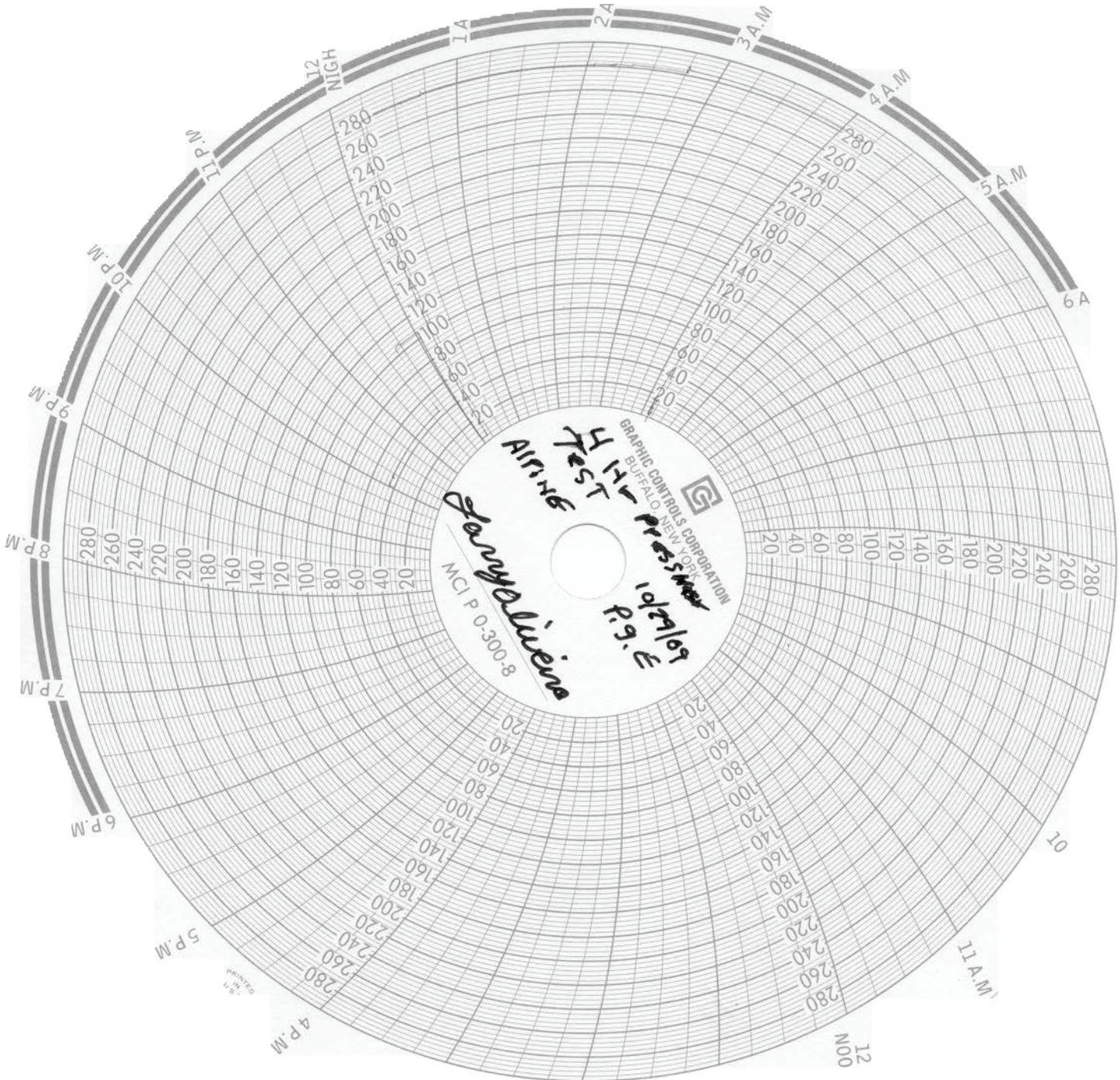
ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix I	Approval Date 12/15/08
Revision date 8/15/12	Supersedes: 08/20/06

## Regulator Station October 2009 Test Documents

### Appendix I





# Procedural Manual for Operations, Maintenance and Emergencies

Appendix J	Approval Date 12/15/08
Revision date 5/1/13	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

## SERVICE LINE INSTALLATION PROPERTY MAP and METER SET DETAIL

DATE: \_\_\_/\_\_\_/\_\_\_ ANG Block # \_\_\_\_\_ ANG Sequence # \_\_\_\_\_

NAME \_\_\_\_\_ Meter# \_\_\_\_\_ ECR # \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

Date Assessed by \_\_\_ ANG COO \_\_\_/\_\_\_/\_\_\_ USA Locate # \_\_\_\_\_ CalavCounty APN \_\_\_\_\_

<b>Date Started</b> ___/___/___ <b>Date Meter Set</b> ___/___/___ Front Door
--

Street Name \_\_\_\_\_ Cross Street \_\_\_\_\_

Install Method \_\_\_\_\_ Pipe Joining Method \_\_\_\_\_

Tie in Location: Short Side \_\_\_ Long Side \_\_\_ (**Street Crossing by Bore Method**) \_\_\_\_\_

Tie In to Prop Line (stub) \_\_\_ Ft. Describe Tie in Location \_\_\_\_\_

**P.E PIPE (ASTM D 2513) INSTALLATION: All Fusion Joints visually Inspected: Y/N OQ Initials** \_\_\_\_\_

$\frac{3}{4}$ " Service Total Length _____ Ft. EFV # _____	<input type="checkbox"/> ASR attached to Service Line <input type="checkbox"/> Valve Cock Ck: <b>Leak</b> Yes/No replaced	# 14 Tracer Wire _____ Yes ECR wire installed _____
Line Tested _____ psig X _____ Minutes TCR Pad Installed Y / N	Service Location ___ Rt. Side ___ Lt. Side	Meter tested _____ lbs Method _____

**O.Q. Name** \_\_\_\_\_ **Date Line Installed** \_\_\_/\_\_\_/\_\_\_



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix K	Approval Date 12/15/08
Revision date 8/15/12	Supercedes: 08/20/06

ALPINE NATURAL GAS

## Appendix K

### Door Hanger "Red Tag" Notice for Meter Shutoff

Gas Meter Turned OFF:

Due to Non-Payment

Final Read@ Customer Request

Emergency Shut off

Alpine Natural Gas Representative

Gas Meter Turned ON:

Turned on @ Customer Request

Time Date

Time Date

Time Date

Signature

Time Date

*Did not turn on gas meter because unable to enter to relight appliances*

Time Date

Alpine Natural Gas Representative

Signature

# DANGER

**DO NOT TAMPER WITH OR  
TURN ON THIS METER  
THIS METER IS SHUT OFF  
DUE TO EXTREME.**

# EMERGENCY

;;z: a a

a a a





# Procedural Manual for Operations, Maintenance and Emergencies

Appendix L	Approval Date 12/15/08
Revision date 8/15/12	Supercedes: 08/20/06

**ALPINE NATURAL GAS**

**Appendix L**

---

**Appendix L**  
**Operator Qualification Plan**



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix	Approval Date 12/15/08
Revision date 8/15/12	Supersedes: 08/20/06

## Appendix M-1

### APPENDIX B CALIFORNIA PUBLIC UTILITIES COMMISSION Report of Gas Leak or Interruption\* CPUC File No. 420

**Part I: CPUC CONTACT INFORMATION**

Utility Name: _____	CPUC Contact: Name _____	Recorder <input type="checkbox"/>	FAX <input type="checkbox"/>
Contact Person _____	Date _____	Time: (24hr) _____	
CPUC Information Request: Written Report <input type="checkbox"/>		Sketch/Photo <input type="checkbox"/>	FD Report <input type="checkbox"/>
Phone: _____	DOT Notified - Yes <input type="checkbox"/> No <input type="checkbox"/>	DOT Report Number: _____	

**Part II: INCIDENT DETAILS**

<u>Incident Location</u>	<u>Incident Time</u>	<u>Reported to the Utility</u>
City/County: _____	Date _____	Date: _____ Time: (24hr) _____
Address/Location: _____	Time: (24hr) _____	Reported by: _____
<u>Reason(s) for Reporting</u> (check all that apply)		
<u>Gas leak associated with:</u>		<u>Emergency action required:</u>
Death <input type="checkbox"/>	Injury <input type="checkbox"/>	\$\$\$Damage <input type="checkbox"/>
Service Interruption <input type="checkbox"/>	Operator Judgment <input type="checkbox"/>	Traffic Rerouted <input type="checkbox"/>
Transmission Line Test Failure <input type="checkbox"/>	Required Transmission Line Shutdown <input type="checkbox"/>	Area Blocked Off <input type="checkbox"/>
		Building Evacuated <input type="checkbox"/>
<u>Incident Cause</u>		
Dig In <input type="checkbox"/>	Fire/Explosion <input type="checkbox"/>	Construction Defect <input type="checkbox"/>
		Material Failure <input type="checkbox"/>
		Corrosion <input type="checkbox"/>
		Vehicle Impact <input type="checkbox"/>
		Suicide <input type="checkbox"/>
UNKNOWN - MORE INFORMATION TO FOLLOW <input type="checkbox"/> Other (describe) _____		
<u>Escaping Gas Involvement</u> (check all that apply)		
	Leak Only <input type="checkbox"/>	Fire <input type="checkbox"/> Explosion <input type="checkbox"/> None <input type="checkbox"/>
<u>Summary</u> (Briefly describe the incident and the probable cause.)		
<u>Gas Equipment Affected</u> (check all that apply)		
Main <input type="checkbox"/>	Regulator <input type="checkbox"/>	Meter <input type="checkbox"/>
Service Line <input type="checkbox"/>	Controls <input type="checkbox"/>	Service Riser <input type="checkbox"/>
Customer Facility <input type="checkbox"/>		Transmission Line <input type="checkbox"/>
Other (describe) _____	Pipe Size _____	Operating Pressure _____
	MAOP _____	
<u>Specification of Failed Equipment</u>		<u>Injuries and Fatalities</u>
Valve <input type="checkbox"/>	Material <input type="checkbox"/>	Steel <input type="checkbox"/>
		Cast Iron <input type="checkbox"/>
		None <input type="checkbox"/>
		Plastic <input type="checkbox"/>
		Copper <input type="checkbox"/>
		Other <input type="checkbox"/>
		Company: _____
		Other: _____
		Injuries _____ Fatalities _____
<u>Dig In Information</u>		
USA notification required: Yes <input type="checkbox"/> No <input type="checkbox"/>	Name of Excavator: _____	<u>Estimated Damage</u>
USA notified: Yes <input type="checkbox"/> No <input type="checkbox"/>	Excavator Contact Person: _____	Damage to gas facilities: _____
Facilities properly marked: Yes <input type="checkbox"/> No <input type="checkbox"/>	Phone: _____	Other damage involving gas: _____
		Total: _____
<u>Recovery from Incident</u>		
<u>Public Agencies on Scene</u>	<u>Customer Outage</u>	
Date _____ Time (24hr) _____	Media <input type="checkbox"/>	Police <input type="checkbox"/>
Co Personnel on Scene _____	Fire <input type="checkbox"/>	Ambulance <input type="checkbox"/>
Gas flow stopped _____		Customers out of service _____
Service restored _____		Customer-hours outage _____

**Part III: CPUC INVESTIGATION**

Is further investigation warranted? Yes <input type="checkbox"/> No <input type="checkbox"/>	Signature of CPUC Engineer _____
Date incident investigated: _____	Field report attached? Yes <input type="checkbox"/> No <input type="checkbox"/>
	CPUC Inspector: _____

\*The information contained in this report is provided solely for the confidential use of the Commission and its staff and is not open to public inspection (PUC GO 66-C, Public Utilities Code, Sections 315 and 583).



**ALPINE NATURAL GAS**

# Procedural Manual for Operations, Maintenance and Emergencies

<b>Appendix</b>	Approval Date 12/15/08
Revision date 8/15/12	Supersedes: 08/20/06

## Appendix M-2

### Appendix M-2

**CPUC Quarterly Report of Gas Leak Spreadsheet Report**

Utility Name	DOT Notified	County	Incident Address	Incident Date	Cause of Incident	Pipeline Facilities	Pipe Material	
ALPINE							Fire Non	
Pipeline Facilities	Pipe Material	Excavating Equipment	Pipe Size	Estimated Operating Pressure	Release of Gas	Fire SWG	Fire Non	
			MAOP					
Explosion	Injury Co	Injury Other	Fatal Co	Total Cost	Number of Outages	Damaging Party	DP Address	
DP City	DP State	DP Zip Code	DP Phone	SUOF	USA	Ticket Valid	Facility Marked	
Marked within Timeframe	Provide Standby	Ground Delineations	Facility Struck	Brief Summary				



# Procedural Manual for Operations, Maintenance and Emergencies

	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

**ALPINE NATURAL GAS**

## Appendix N-1

### Annual PAP Notification Letter to Customers

To: Residents in proximity to buried natural gas lines

From: Alpine Natural Gas

**SUBJECT: ALPINE'S GAS FACILITY DAMAGE PREVENTION PUBLIC AWARENESS PROGRAM**

Alpine Natural Gas is required by state and federal pipeline safety regulations to communicate Periodically with known residents, including non-customers, regarding Alpine's service area and gas distribution facilities. This communication is intended to promote continued public awareness and safety regarding the existence of Alpine's buried natural gas piping.

Our distribution system lies south of Valley Springs, CA within the La Contenta, Rancho Calaveras, New Hogan Dam Estates, Olive Orchard and Gold Creek Estates subdivisions and along Highway 26 (enclosed please find general map of service area). Customers and non-customers, alike, of Alpine Natural Gas who resides within our natural gas distribution area, receive information regarding gas leak and excavation safety. We have identified your home as being adjacent to our buried natural gas distribution system.

Besides promoting calling 911, in case of emergencies, we also communicate with residents, excavators and contractors regarding gas leak detection and excavation safety. Alpine is a member of USA North so we promote their "call before you dig" program as well as provide useful safety tips. We remind all those planning an excavation, drilling, blasting or horizontal directional boring project in areas where Alpine Natural Gas has facilities, that we will provide free (no cost) gas pipeline location service. The State of California requires that Underground Service Alert (USA) One-Call "811" Service in notified at least two, (2), working days prior to the beginning of excavation work. Once notified, Alpine Natural Gas will mark all gas facilities with temporary fluorescent "yellow", yellow flags on wire and/or yellow "whiskers" depending on the type of surface.

It is Alpine's continued goal to maintain a high level of public safety and awareness in case of gas leaks, break-ins or catastrophic emergencies. Alpine has available, qualified gas System Operators, on call 24 hours per day by contacting our office phone at **1-209-772-3006**. We hope you find this information useful including being reminded that a buried natural gas line may exist either in front, along side, or across the street from your home.

Enclosed, please find safety information regarding natural gas and what to do if you detect or smell a gas leak. For additional information regarding excavation safety (see reverse side), visit <http://www.usanorth.org/> or call Alpine Natural Gas at **1-209-772-3006**.

Thank You,

Mike Lamond, Administrator  
Alpine Natural Gas



# Procedural Manual for Operations, Maintenance and Emergencies

	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

**ALPINE NATURAL GAS**

## Appendix N-2

### Annual PAP Notification Letter to Non-customers

To: Residents in proximity to buried natural gas lines

From: Alpine Natural Gas

**SUBJECT: ALPINE’S GAS FACILITY DAMAGE PREVENTION PUBLIC AWARENESS PROGRAM**

Alpine Natural Gas is required by state and federal pipeline safety regulations to communicate Periodically with known residents, including non-customers, regarding Alpine’s service area and gas distribution facilities. This communication is intended to promote continued public awareness and safety regarding the existence of Alpine’s buried natural gas piping.

Our distribution system lies south of Valley Springs, CA within the La Contenta, Rancho Calaveras, New Hogan Dam Estates, Olive Orchard and Gold Creek Estates subdivisions and along Highway 26 (enclosed please find general map of service area). Customers and non-customers, alike, of Alpine Natural Gas who resides within our natural gas distribution area, receive information regarding gas leak and excavation safety. We have identified your home as being adjacent to our buried natural gas distribution system.

Besides promoting calling 911, in case of emergencies, we also communicate with residents, excavators and contractors regarding gas leak detection and excavation safety. Alpine is a member of USA North so we promote their “call before you dig” program as well as provide useful safety tips. We remind all those planning an excavation, drilling, blasting or horizontal directional boring project in areas where Alpine Natural Gas has facilities, that we will provide free (no cost) gas pipeline location service. The State of California requires that Underground Service Alert (USA) One-Call “811” Service in notified at least two, (2), working days prior to the beginning of excavation work. Once notified, Alpine Natural Gas will mark all gas facilities with temporary fluorescent “yellow”, yellow flags on wire and/or yellow “whiskers” depending on the type of surface.

It is Alpine’s continued goal to maintain a high level of public safety and awareness in case of gas leaks, break-ins or catastrophic emergencies. Alpine has available, qualified gas System Operators, on call 24 hours per day by contacting our office phone at **1-209-772-3006**. We hope you find this information useful including being reminded that a buried natural gas line may exist either in front, along side, or across the street from your home.

Enclosed, please find safety information regarding natural gas and what to do if you detect or smell a gas leak. For additional information regarding excavation safety (see reverse side), visit <http://www.usanorth.org/> or call Alpine Natural Gas at **1-209-772-3006**.

Thank You,

Mike Lamond, Administrator



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix N-3	Approval Date 3/2/2012
Revision date: 3/02/12	Supersedes:

**ALPINE NATURAL GAS**

## Appendix N-3

### **5 STEPS TO A SAFE EXCAVATION**

#### **1. Survey & Mark**

Survey your proposed excavation site. Make a list of affected owner/operators of underground facilities (owner/operators) at your job site, their needs and requirements. Mark the excavation site on paved surfaces with white spray chalk paint; use flags, stakes, whiskers, etc. on unpaved surfaces. (Homeowners can use flour).

#### **2. Call Before You Dig**

Call USA North 2 working days before you dig in California and Nevada. Only owner/operators who are members of the USA North program will be notified. USA North accepts design stage requests through its Internet access only, call 925-798-9504 ext 0 for more information. Emergency calls are not accepted in California. In case of a life-threatening situation, call 911 or your local fire department. Compare your list of affected owner/operators determined in Step 1, with the list of owner/operators notified by USA North. For your safety, contact any owner/operator at your job site that is not a member of USA North.

#### **3. Wait The Required Time**

The 2 working day notice in CA & NV allows USA North members to examine their underground facility records and respond to you. Our members, who are owner/operators of underground facilities, will provide you information about the location of their facility, mark, or stake the horizontal path of their facility with the appropriate color code, or advise of clearance. Depending on our member's workload, they may contact you to try to negotiate a new start time for your excavation. This will allow them the opportunity to provide you with greater service.

#### **4. Respect The Marks**

Preserve facility marks for the duration of the job. If any of the owner/operator markings are not reasonably visible, you must call USA North and request re-marking by the affected owner/operator(s). A re-mark request requires a 2 working day notice in CA & NV. When you request a owner/operator(s) to re-mark their facilities, you will be asked if your excavation site is still outlined in white spray chalk, so the USA North members can respond to your request. Your ticket is active for 28 calendar days in CA and 14 calendar days in NV from the date of your call to USA North. You must have an active USA North ticket for the entire duration of your excavation.

#### **5. Dig With Care**

In California hand excavate within 24" of the outside diameter of the facility - in Nevada, 30". Facilities that are in conflict with your excavation are to be located by hand and protected before power equipment is used. Notify the affected utility of any contact, scrape, dent, nick or damage to their facility. Refer to California Government Code 4216 and Nevada Regulatory Statute 455.080 - 455.180 for liability risks. There are fines of up to \$50K and \$100K respectively for violations of these state laws.

### **USA NORTH**

4090 Nelson Avenue, Suite A • Concord, CA 94520-1232

Call 6:00A.M. - 7:00P.M. (PT) • Monday - Friday

Dig ~ Safely.

[www.usanorth.org](http://www.usanorth.org)



ALPINE NATURAL GAS

## Procedural Manual for Operations, Maintenance and Emergencies

Appendix N-3	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

### Appendix N-3

---

# 1-800-221-2600

Call two working days before you dig

***It's the law and it's FREE***

Whether you're a homeowner or professional excavator, if you're going to dig you must call USA North- the one call center serving Northern and Central California and Nevada. Excavations in California and Nevada require a full two (2) **working day notice.**

In addition to your personal safety and the safety of others, calling before you dig is about protecting the vital buried facilities that supply electric, gas, water, cable and more to our homes, schools, facilities and businesses. Remember, it's **the law and it's free.**

**let's all do our part to protect our vital buried facilities.**

**Please take a flyer and color code booklet with you**

*For more information, visit USA North online at [www.usanorth.org](http://www.usanorth.org)*

*Dig ~ Safely.*



**ALPINE NATURAL GAS**

# **Procedural Manual for Operations, Maintenance and Emergencies**

	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

## **Appendix O**

---

### **Master Main & Service Line Installation Listing including Sequenced System Maps**



**ALPINE NATURAL GAS**

## **Procedural Manual for Operations, Maintenance and Emergencies**

	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

### **Appendix P**

---

**ANG P.E. Valve Map & Maintenance Book**

**Under separate cover in the System Administrators Office**



# Procedural Manual for Operations, Maintenance and Emergencies

Revision date: 3/02/12	Approval Date 3/2/2012
	Supercedes:

## ALPINE NATURAL GAS

### Appendix Q

#### ANG OQ Plan- Covered Tasks (C.T.) Listed by C.T. Number

ANG Covered Task	CFR Code	Description of Task	Task Category	Knowledge based:	Performance- Skill assessment by
			<u>ENERGY U</u>	Classroom, Online-	NCCR
			<u>COURSE</u>	Computer Training	Qualified
			(Online	Re-Qualification	Evaluator
			Computer	<u>Interval</u>	Or Equivalent
			Training		<u>Interval</u>
			Module)		(in months)
C.T. 1		No Task	Un-Designated		
C.T. 2		No Task	Un-Designated		
C.T. 3		No Task	Un-Designated		
C.T. 4		No Task	Un-Designated		
C.T. 5		No Task	Un-Designated		
C.T. 6	\$192.465	Measuring pipe-to-soil potential	CORROSION CONTROL	192-0512	48
C.T. 7	\$192.481	Inspecting for atmospheric corrosion	CORROSION CONTROL	192-0401	48
C.T. 8	\$192.459	Inspecting the condition of exposed pipe or pipe coating	CORROSION CONTROL	192-0505	48
C.T. 9	\$192.455	Installing/replacing an anode on an existing line	CORROSION CONTROL	192-0503	48
C.T. 10	\$192.477	Visually inspecting for internal corrosion)	CORROSION CONTROL	192-0401	48



# Procedural Manual for Operations, Maintenance and Emergencies

Revision date: 3/02/12	Approval Date 3/2/2012
Supercedes:	

## ALPINE NATURAL GAS

### Appendix Q

C.T. 11	\$192.469,471	Install/replace a corrosion test station on a pipeline	CORROSION CONTROL	192-0501	48	48
C.T. 12	\$192.487	Repair coating on existing steel mains and service lines	CORROSION CONTROL	192-0402	48	48
C.T. 13	\$192.615	Investigating leak/odor complaints on company piping	CUSTOMER SERVICE	192-1202,1203 & 2011	48	48
C.T. 14	\$192.614	Locating and marking lines	DAMAGE PREVENTION	192-0801	48	48
C.T. 15	\$192.614	Inspection of 3 <sup>rd</sup> party excavations for damage prevention	DAMAGE PREVENTION	192-803,4	48	48
C.T. 16	\$192.805	Directing and observing a non-qualified person to perform a covered task	OPERATIONS/ ADMINISTRATION	192-0701	48	48
C.T. 17	\$192.619	Controlling and monitoring gas pressures and flows	GAS CONTROL	192-1434, 1435 & 1436	48	48
C.T. 18	\$192.605	Repair distribution line leaks	LEAK REPAIR	192-1405 & 1408	48	48



# Procedural Manual for Operations, Maintenance and Emergencies

Revision date: 3/02/12	Approval Date 3/2/2012
Supercedes:	

## ALPINE NATURAL GAS

### Appendix Q

C.T. 19	§192.273, 283	Mechanically joining pipe other than by welding during maintenance	MAINTENANCE	192-1005 192-1408 192-1002, 1003, 1004 & 1006	48 48
C.T. 20	§192.309	Repair a non-leaking damaged pipe	MAINTENANCE	192-1002, 3,4 & 6 192-1405 & 8	48 48
C.T. 21		NO TASK	Un-Designated		
C.T. 22	§192.325,327	Excavating a pipeline for maintenance	MAINTENANCE	192-0804 1431, 1405 & 8	48 48
C.T. 23	§192.629	purging air from a pipeline	MAINTENANCE	192-1418	48
C.T. 24		NO TASK	Un-Designated		
C.T. 25	§192.511,513	Performing a pressure test on existing pipe	MAINTENANCE	192-0702 1803	48 48



# Procedural Manual for Operations, Maintenance and Emergencies

Revision date: 3/02/12	Approval Date 3/2/2012
	Supercedes:

## ALPINE NATURAL GAS

### Appendix Q

C.T. 26	\$192.511,513	Pressure testing piping after repairs	MAINTENANCE	192-0702	48	48		
C.T. 27	\$192.619,621	Starting, Stopping or controlling gas flow	MAINTENANCE	192-1803 192-1414 2705	48	48		
C.T. 28	\$192.739	Inspect and test pressure regulator stations	MEASUREMENT & REGULATION	192-1434 192-1802,3	48	48		
C.T. 29		NO TASK	Un-Designated					
C.T. 30	\$192.741	Field interpretation of pressure recording charts/gauges	MEASUREMENT & REGULATION	192-1803	48	48		
C.T. 31	\$192.741	Change/repair pressure recording devices/gauges at pressure reg stations	MEASUREMENT & REGULATION	192-1803	48	48		
C.T.32	\$192.625	Monitor natural gas Odorization levels	MEASUREMENT & REGULATION	192-1501	48	48		
C.T.33		NO TASK	Un-Designated					
C.T. 34	\$192.727	Abandonment or deactivation of facilities	MEASUREMENT & REGULATION	192-1401 192-2011	48	48		
C.T. 35	\$192.627	Tapping of pipelines under pressure	MEASUREMENT & REGULATION	192-1426	48	48		



# Procedural Manual for Operations, Maintenance and Emergencies

Revision date: 3/02/12	Approval Date 3/2/2012
	Supercedes:

## ALPINE NATURAL GAS Appendix Q

		Conducting gas leakage surveys	PATROLLING & INSPECTION	192-1201		
C.T. 36	\$192.723			1202, 1203	48	48
C.T. 37	\$192.721	Facility patrolling	PATROLLING & INSPECTION	192-2011	48	48
C.T. 38	\$192.747	Inspect, repair and maintain emergency valves	EMERGENCY VALVE	192-1427	48	48
		Joining plastic pipe for maintenance	PLASTIC PIPE	192-2010		
C.T. 39	\$192.281,283			192-1411 & 1422	48	48
		Inspection of plastic pipe fusion joint after maintenance	PLASTIC PIPE	192-1411		
C.T. 40	\$192.287			192-0803	48	48
		Replacing a section of existing tracer wire	PLASTIC PIPE	192-0701		
C.T. 41	\$192.321			192-0801	48	48



**ALPINE NATURAL GAS**

# **Procedural Manual for Operations, Maintenance and Emergencies**

<b>Integrity Management</b>	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

## **Appendix R-1**

---

### **Integrity Management Plan**

Plan under separate cover







# Procedural Manual for Operations, Maintenance and Emergencies

Integrity Management	Approval Date 3/2/2012
Revision date: 4/01/13	Supercedes: 3/2/2012

ALPINE NATURAL GAS

## Appendix R-4

### MECHANICAL FITTING FAILURE LOG

“Mechanical fitting” means a mechanical device used to connect sections of pipe. The term Mechanical fitting” applies only to:

- a. Stab Type fittings (e.g. Elster Permasert, Constab type couplers);
- b. Nut Follower Type;
- c. Bolted Type fittings (Elster Permasert; or
- d. Other Compression Type fittings.

If, this failure caused a “Hazardous (Class 3) Leak” then a PHMSA FORM 7100.1-2 MUST ALSO BE COMPLETED FOR EACH FAILURE AND REPORTED AND REPORTED BY MARCH 15 OF THE FOLLOWING CALENDAR YEAR. (Form 7100.1-2 is not required if there were no leaks during the reporting year)

<u>DATE FAILED</u>	<u>DESCRIPTION OF MECHANICAL FITTING</u>	<u>SUMMARY OF FAILURE</u>	<u>INVESTIGATED BY</u>



# Procedural Manual for Operations, Maintenance and Emergencies

<b>Integrity Management</b>	Approval Date 3/2/2012
Revision date: 4/01/13	Supercedes: 3/2/2012

## ALPINE NATURAL GAS

## Appendix R-5

### ANNUAL LOG FOR I.M. PERFORMANCE MEASUREMMENT DATA

<u>YEAR OF DATA</u>	<u># HAZARDOUS LEAKS</u>		<u># LEAKS CAUSED BY EXCAVATION</u>		<u># of Excavation Tickets</u>	<u># of Leaks Repaired</u>	<u># of Hazardous Repaired</u>		<u>SUMMARY OF MODIFICATIONS to Alpine's Leak Management Plan</u>	<u>Performance Data Evaluated by</u>
	<u>Service Lines</u>	<u>Main Line</u>	<u>USA ticket</u>	<u>No USA Ticket</u>			<u>Steel</u>	<u>P.E</u>		
<u>DATE EVALUATED</u>									Policies Modified or Created:  Any additional Measures needed to  Are Performance Measurements Effective?	
<u>Comments:</u>										



# Procedural Manual for Operations, Maintenance and Emergencies

Integrity Management	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

ALPINE NATURAL GAS

Appendix R-6

---

## PLAN RE-EVALUATION LOG (BIENNIAL)

<u>DATE EVALUATED</u>	<u>SUMMARY OF MODIFICATIONS</u>	<u>PERFORMED BY</u>







# Procedural Manual for Operations, Maintenance and Emergencies

Operations	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

ALPINE NATURAL GAS

## Appendix T-1



### ALPINE NATURAL GAS REPORT OF INJURY FORM

I am reporting a work related: <input type="checkbox"/> Injury <input type="checkbox"/> Illness <input type="checkbox"/> Near Miss	
Your Name:	
Job Title:	
Supervisor:	
Have you told your supervisor about this injury/near miss? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of injury/near miss:	Time of injury/near miss:
Names of witnesses (if any):	
Where exactly, did it happen?:	
What were you doing?:	
Describe step by step what led up to the injury/near miss	
What parts of your body were injured? If near miss, how could you have been hurt?	
Did you see a doctor about this injury/illness? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, whom did you see?	Doctor's phone #:
Date:	Time:
Has this part of your body been injured before? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, when?:	Supervisor?
Your Signature:	Date:

ENERGY FOR YOUR NEIGHBORHOOD

15 St. Andrews Pass • P.O. Box 550 • Valley Springs, GA 30252 • Phone 208.772.0026 • Fax 208.772.0095 • e-mail: [arpine@goldrush.com](mailto:arpine@goldrush.com)  
[www.alpinenaturalgas.com](http://www.alpinenaturalgas.com)



# Procedural Manual for Operations, Maintenance and Emergencies

Operations	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

ALPINE NATURAL GAS

## Appendix T-2



### ALPINE NATURAL GAS EXTRAORDINARY EVENT FORM

DISCOVERY DATE: ___/___/___		FACILITY MAP DESIGNATION: _____	
DISCOVERY TIME: ___/___/___			
PERSONS/EMPLOYEE INVOLVED IN EVENT: _____			
EVENT DESCRIPTION: _____			
_____			
_____			
_____			
_____			
ON-SITE INVESTIGATION BRIEF: _____			
_____			
_____			
_____			
REMEDIAL ACTION TAKEN/TIME: _____			
_____			
_____			
ANY INJURIES DUE TO THIS EVENT?: <input type="checkbox"/> YES <input type="checkbox"/> NO			
WHO WAS INJURED? _____			
IF YES, PLEASE COMPLETE ALPINE NATURAL GAS REPORT OF INJURY FORM.			
EMPLOYEE SIGNATURE:		DATE:	
_____		_____	
SUPERVISOR SIGNATURE:		DATE:	
_____		_____	



# Procedural Manual for Operations, Maintenance and Emergencies

Appendix U	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

## ALPINE NATURAL GAS Equipment Reference Manual Calibration Log

### MAINTENANCE LOG

PURCHASE DATE	EQUIPMENT	CALIBRATION FREQUENCY	LAST CALIBRATION DATE
JAN,2004	GAS SURVEYOR 500 CGI MODLE# 500 SERIES	<b>REPAIR / MAINTENANCE NOTES</b> ONCE EACH CALENDAR YEAR, NOT TO EXCEED 15 MONTHS	July 2011
JAN,2004	ODORATOR	ONCE EACH CALENDAR YEAR, NOT TO EXCEED 15 MONTHS	November 2011
Dec,2006	PIPEHORN	BATTERY CHECK PRIOR TO EACH USE	Prior to Use
DEC,2001	ELECTRO FUSION CONTR	<i>Auto Calibration at start up and periodic upon notification for CALIBRATION by manufacturer</i>	
DEC,2002	BACHARACH LEAKATOR MDL# 075637	BATTERY CHECK PRIOR TO EACH USE	
DEC,2010	CATHODIC PROTECTION VOLTMETER MDL# CPV-4	<b>NO RECOMMENDATIONS FOR CALIBRATION</b>	
DEC,2010	COPPER-COPPER SULPHATE REFERENCE ELECTRODE	ONCE EACH CALENDAR YEAR, NOT TO EXCEED 15 MONTHS	December 1, 2010
MAY,2011	INFRARED POLARIZATION SPECTROMETER MDL# DP-IR	PRIOR TO EACH USE	Prior to Use
MAY,2011	DELFESCO POSITECTOR MDL# UTG ME	ONCE EVERY 36 MONTHS NOT TO EXCEED 39 MONTHS	May-11



# Procedural Manual for Operations, Maintenance and Emergencies

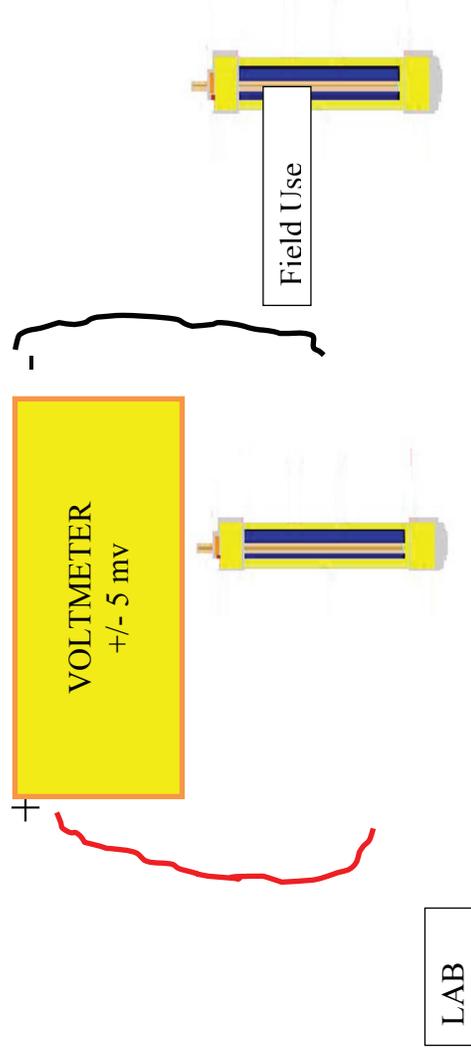
Appendix V	Approval Date 3/2/2012
Revision date: 3/02/12	Supercedes:

## ALPINE NATURAL GAS Appendix V

### Copper-Copper Sulfate Reference Electrode Calibration

#### Instructions:

1. Place both the LAB (perfect condition) USE half-cell and the half-cell to be calibrated into a container of distilled water.
2. Connect the half-cell to the leads of a voltmeter capable of giving readings in millivolts.
3. Turn on the voltmeter and wait until the voltmeter reads a potential difference of (+/-) 5mv.
4. Wait up to five (5) minutes.
5. If the half-cells do not show 5mv or less difference, the half-cell being calibrated is out of calibration and should be cleaned and rechecked.



Authorized Observer/\_\_\_\_\_  
Reference Cell ID number \_\_\_\_\_  
Test requirements once \_\_\_\_\_ calibration documentation fo  
Date \_\_\_\_\_



ALPINE NATURAL GAS

# Procedural Manual for Operations, Maintenance and Emergencies

Appendix W	Approval Date 10/2/2010
Revision date: 3/02/12	Supercedes:

## Appendix W

### INSTALLATION OF PE MAIN LINE

#### CONSTRUCTION NOTES AND MAPS

DATE:    /    /   

**LOCATION:** \_\_\_\_\_

(DISCRIPTION OF INTERSECTION, PART OF PROPERTY ETC.)

**PROJECT DISCRIPTION:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PIPELINE FCILITIES INSTALLED BY:** \_\_\_\_\_

(PROJECT SUPERVISOR):

PIPE SIZE: \_\_\_\_\_ INCH    ASTM of PIPE: D2513    LENGTH \_\_\_\_\_ FEET

Manufacturer \_\_\_\_\_

TEST PIPE WITH AIR: YES / NO    TEST PRESSURE \_\_\_\_\_ PSIG

BEGIN TIME: \_\_\_\_\_ END TIME: \_\_\_\_\_ DURATION OF TEST: \_\_\_\_\_ MINUTES

Manufacturer \_\_\_\_\_

**TEST PERFORMED BY:** \_\_\_\_\_

PASS/FAIL

Valve Installed Yes /No

Valve # & Location \_\_\_\_\_

ALL WELDS CHECKED YES / NO

METHOD \_\_\_ SOAP \_\_\_ DPIR \_\_\_ CGI

PURGED LINE: YES / NO

LINE IN SERVICE: YES / NO

Pipe Fittings Installed \_\_\_\_\_ Type of Mechanical Fitting \_\_\_\_\_

**MATERIALS LIST:**

**EQUIPMENT LIST:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# **Alpine Natural Gas**

## **Appendix B**

### **Distribution Integrity Management Plan**

# **DISTRIBUTION INTEGRITY MANAGEMENT PLAN**

**For ALPINE NATURAL GAS**

**PO BOX 550  
VALLEY SPRINGS, California 95252**

**Generated Date: 2013-04-12 Version: 2.1.1  
Effective Date: 2012-03-15 Replaces Version:  
Legacy Effective: (No Prior Plan)**

**DISTRIBUTION INTEGRITY MANAGEMENT PLAN: For ALPINE  
NATURAL GAS**

**PO BOX 550  
VALLEY SPRINGS, California 95252**

**Generated Date: 2013-04-12 Version: 2.1.1 Effective Date: 2012-03-  
15 Replaces Version: Legacy Effective: (No Prior Plan)**

# Table of Contents

Revisions .....	iv
1. SCOPE .....	1
2. DEFINITIONS .....	2
3. KNOWLEDGE OF THE DISTRIBUTION SYSTEM .....	3
4. THREAT ASSESSMENT .....	4
4.1. Overview .....	4
4.2. ALPINE NATURAL GAS Threat Assessment .....	4
4.2.1. Corrosion .....	4
4.2.2. Equipment Malfunctions .....	6
4.2.3. Excavation Damage .....	7
4.2.4. Incorrect Operations .....	8
4.2.5. Materials, Welds and Joints .....	8
4.2.6. Natural forces .....	9
4.2.7. Other outside forces .....	9
4.2.8. Other threats .....	9
5. RISK EVALUATION AND PRIORITIZATION ..	11
5.1. Overview .....	11
5.2. ALPINE NATURAL GAS Section Risk Ranking .....	11
6. ADDITIONAL/ACCELERATED MEASURES TO ADDRESS RISKS ..	14
6.1. MANDATORY ADDITIONAL ACTIONS ..	14
6.2. RISK BASED ADDITIONAL ACTIONS .....	17
7. MEASURE PERFORMANCE, MONITOR RESULTS AND EVALUATE EFFECTIVENESS	
19	
7.1. MANDATORY PERFORMANCE MEASURES .....	19
7.2. RISK BASED PERFORMANCE MEASURES .....	19
7.3. MONITOR RESULTS AND EVALUATE EFFECTIVENESS .....	20
8. PERIODIC EVALUATION AND IMPROVEMENT .....	21
9. REPORTING .....	22
10. RECORD KEEPING .....	24
11. ATTACHMENTS .....	25
11.1. IMPLEMENTATION PLAN .....	25
11.2. LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS .....	27
11.3. DESCRIPTION OF THE PROCESS FOLLOWED TO DEVELOP THIS PLAN .....	52
11.3.1. Process Description .....	52
11.3.2. Relative Risk Model .....	59
12. REFORMAT TEMPLATE Heading 1 .....	65
12.1. REFORMAT TEMPLATE Heading 2 .....	65
12.1.1. REFORMAT TEMPLATE Heading 3 ..	65

# Revisions

**Table 1. Plan Version History**

Plan Version	Program Version	Date	By User	Notes
2.1.1	2.1.7	2013-04-12	anginc@goldrush.com	Implementation Plan, Required Settings, Risk Rankings and Plan Finalized
Legacy	1.1.31	2013-04-12	anginc@goldrush.com	Plan Generated Prior To Version Tracking. Cannot determine Year, Mode, Effective Date.

**Table 2. SHRIMP Version History**

Program Version	Date	Notes
2.1.7	2013-02-25	May choose from multiple Plan Years. Detects leak trend changes when Plan Year changed. Updated Relative Risk Model description.
2.1.6	2013-01-02	Data for 2012 may now be entered.
2.1.5	2012-12-13	Corrects crashes due to certain revision notes; Shows plan type (preview or final) in list of Written Plans.
2.1.4	2012-12-02	Corrects prior plan effective date; interview end during review or correct modes; required settings.
2.1.3	2012-11-28	Fix problem with editable areas when using "Correct" mode.
2.1.2	2012-11-18	SHRIMP update adding New Leaks mode and new Required Settings.
2.1.1	2012-04-24	Initial release of SHRIMP with full DIMP version tracking and revisions.
1.1.31	2012-04-24	All versions of SHRIMP prior to the incorporation of version tracking.

# Chapter 1. SCOPE

This document is the distribution integrity management plan (Plan) for ALPINE NATURAL GAS. It is intended to meet the requirements of 49 CFR Part 192, Subpart P Distribution Integrity Management Programs (DIMP).

This Plan covers the Entire System of ALPINE NATURAL GAS.

This Plan is effective on 2012-03-15.

This Plan is Version 2.1.1.

This Plan replaces Version Legacy.

This Plan is based on data for the Plan Year ending 2009. Only data to and including 2009 is used in the assessments.

# Chapter 2. DEFINITIONS

Excavation damage	Any impact that results in the need to repair or replace an underground facility due to a weakening, or the partial or complete destruction, of the facility, including, but not limited to, the protective coating, lateral support, cathodic protection or the housing for the line device or facility.
Excavation ticket	All receipts of information by the operator from the ONE-CALL notification center requesting marking of the location of gas pipeline facilities.
Hazardous Leak	<p>A leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous. Examples include:</p> <ul style="list-style-type: none"><li>• Escaping gas that has ignited.</li><li>• Any indication of gas which has migrated into or under a building, or into a tunnel,</li><li>• Any reading at the outside wall of a building, or where gas would likely migrate to an outside wall of a building,</li><li>• Any reading of 80% LEL, or greater, in a confined space,</li><li>• Any reading of 80% LEL, or greater in small substructures (other than gas associated substructures) from which gas would likely migrate to the outside wall of a building,</li><li>• Any leak that can be seen, heard, or felt, and which is in a location that may endanger the general public or property, or</li><li>• Any leak which, in the judgment of operating personnel at the scene, is regarded as an immediate hazard.</li></ul>

# Chapter 3. KNOWLEDGE OF THE DISTRIBUTION SYSTEM

This Plan was developed based on the design, construction, operation and maintenance records of ALPINE NATURAL GAS, including: incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, and excavation damage experience, as well as the judgment and knowledge of ALPINE NATURAL GAS' employees. The specific elements of knowledge of the infrastructure used to evaluate each threat and prioritize risks are listed in Chapter 4, *THREAT ASSESSMENT*, Chapter 5, *RISK EVALUATION AND PRIORITIZATION* and Section 11.2, "LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS" of this Plan. Section 11.2, "LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS" also lists the data sources used to answer each question.

Any additional information needed and the plan for gaining this currently unknown information over time through normal activities is described in Section 11.1, "IMPLEMENTATION PLAN".

The processes used for Threat Evaluation and Risk Prioritization are the processes found in the Simple, Handy, Risk-based Integrity Management Plan™ (SHRIMP™) software package developed by the APGA Security and Integrity Foundation (SIF). SHRIMP™ uses an index model developed by the consultants and advisors of the SIF. Threat assessment is performed using questions developed by the Gas Piping Technology Committee (GPTC) as modified and added to by the SHRIMP™ advisors. A description of the process followed is included in Section 11.3, "DESCRIPTION OF THE PROCESS FOLLOWED TO DEVELOP THIS PLAN".

This Plan will be reviewed at least every 2 years to continually refine and improve this Plan. Reviews may be performed more frequently as described in Chapter 8, *PERIODIC EVALUATION AND IMPROVEMENT* of this Plan.

Records for all piping system installed after the effective date of this Plan will be captured and retained by ALPINE NATURAL GAS. This will include the location where new piping and appurtenances are installed and the material of which they are constructed. The manner in which this will be accomplished is described in Section 11.1, "IMPLEMENTATION PLAN".

# Chapter 4. THREAT ASSESSMENT

## 4.1. Overview

The following threats were evaluated on the distribution piping covered under the scope of this Plan: corrosion, natural forces, excavation damage, other outside force damage, material, weld or joint failure (including compression coupling), equipment malfunction, incorrect operation, and any other concerns that could threaten the integrity of the pipeline. The results of these threat assessments are discussed in the following sections. Answers to all questions asked by SHRIMP and the data sources for those answers is found in Section 11.2, “LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS”.

## 4.2. ALPINE NATURAL GAS Threat Assessment

### 4.2.1. Corrosion

#### Atmospheric Corrosion On The Entire System

Atmospheric corrosion on the entire system was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Inspections have not found metal loss due to atmospheric corrosion over the past 5 years.
- Leaks caused by atmospheric corrosion have not required repair over the past 5 years.
- Inspections have not found problems with above ground pipe coatings that could not be fixed by routine maintenance

#### External Corrosion On Coated, Cathodically Protected, Steel Mains And Services

External corrosion on coated, cathodically protected, steel mains and services was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Repaired leaks per mile of mains are not increasing.
- Exposed pipe inspections do not indicate a corrosion problem.
- Cathodic protection of the section is adequate.

#### External Corrosion On Bare, Cathodically Protected, Steel Mains And Services

External corrosion on bare, cathodically protected, steel mains and services was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- bare, cathodically protected, steel mains and services are not present.

#### External Corrosion On Coated, Unprotected, Steel Mains And Services

External corrosion on coated, unprotected, steel mains and services was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- coated, unprotected, steel mains and services are not present.

## **External Corrosion On Bare, Unprotected, Steel Mains And Services**

External corrosion on bare, unprotected, steel mains and services was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- bare, unprotected, steel mains and services are not present.

## **External Corrosion On Cast, Wrought, Ductile Iron Mains And Services (8" Or Smaller)**

External corrosion on cast, wrought, ductile iron mains and services (8" or smaller) was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- cast, wrought, ductile iron mains and services (8" or smaller) are not present.

## **External Corrosion On Plastic Mains And Services With Metal Fittings**

External corrosion on plastic mains and services with metal fittings was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- plastic mains and services with metal fittings are not present.

## **External Corrosion On Other Metal**

External corrosion on other metal was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- other metal is not present.

## **External Corrosion On Cast, Wrought, Ductile Iron Mains And Services (larger Than 8")**

External corrosion on cast, wrought, ductile iron mains and services (larger than 8") was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- cast, wrought, ductile iron mains and services (larger than 8") are not present.

## **Internal Corrosion On The Entire System**

Internal corrosion on the entire system was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- ALPINE NATURAL GAS inspections of the inside of metal pipe or coupons removed from metal pipe do not show signs of internal corrosion.

- Leaks caused by internal corrosion have not occurred in ALPINE NATURAL GAS.
- Gas received in ALPINE NATURAL GAS is pipeline quality.
- Liquids have not been found in ALPINE NATURAL GAS piping.

## **4.2.2. Equipment Malfunctions**

### **Equipment Malfunctions On The Entire System**

Equipment malfunctions on the entire system was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Leaks are occurring or inspections indicate potential equipment malfunctions.
- System contains equipment known/prone to malfunction (Industry wide).

### **Equipment Malfunctions Due To Failing Valves**

Equipment malfunctions due to failing valves was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- failing valves are not present.

### **Equipment Malfunctions Due To Failing Regulators/relief Valves**

Equipment malfunctions due to failing regulators/relief valves was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Operator did not identify specific makes/models/sizes of failing equipment.
- The equipment malfunctioning is due to failing seals, gaskets, o-rings, packing, boots, etc.
- Equipment does fail more than one time per year.

The possible consequences of a failure of this portion due to the indicated threat would be about the same as for the ALPINE NATURAL GAS system in general.

### **Equipment Malfunctions Due To Failing Other Equipment**

Equipment malfunctions due to failing other equipment was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- failing other equipment are not present.

### **Equipment Malfunctions Due To Valves Prone To Failure**

Equipment malfunctions due to valves prone to failure was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- valves prone to failure are not present.

### **Equipment Malfunctions Due To Regulators / Relief Valves Prone To Failure**

Equipment malfunctions due to regulators / relief valves prone to failure was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Equipment prone to failure has been specified.

Equipment malfunctions due to regulators / relief valves prone to failure was determined to be limited to certain portions of the system and, therefore, separate threat assessments were performed on the following sections of the system:

### **Section Specific\_00:**

Equipment malfunctions due to regulators / relief valves prone to failure was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice on the **Specific\_00 section (described as ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF (FISHER, HRS-BBALYN, 3/4" INLET))** because:

- The equipment malfunctioning is due to failing seals, gaskets, o-rings, packing, boots, etc.

The possible consequences of a failure of this portion due to the indicated threat would be about the same as for the ALPINE NATURAL GAS system in general.

## **Equipment Malfunctions Due To Other Equipment Prone To Failure**

Equipment malfunctions due to other equipment prone to failure was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- other equipment prone to failure are not present.

## **4.2.3. Excavation Damage**

### **Excavation Damage Due To Concentrated Damages Or Tickets**

Excavation damage due to concentrated damages or tickets was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- There are no areas with concentrations of excavation damages.
- There are no areas with concentrations of locate tickets.

### **Excavation Damage Due To Your Crew Or Contractor Damages**

Excavation damage due to your crew or contractor damages was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Excavation damage has not been caused by operator's crews or contractors.

### **Excavation Damage Due To Third Party Damages**

Excavation damage due to third party damages was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Excavation damages have occurred due to third parties during the past few years.
- Excavation damages are being caused by third-party excavators not following one call laws.

- Excavation damages caused by third-party excavators have been due to unmarked or inaccurately marked facilities.

The possible consequences of a failure of this portion due to the indicated threat would be about the same as for the ALPINE NATURAL GAS system in general.

## **Excavation Damage Due To Blasting Damage**

Excavation damage due to blasting damage was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- No portions of the system are located where excavation in the area of pipeline would require the use of explosives.
- No portions of the system are in known areas of blasting or demolition activity, such as rock quarries or coal mining,
- No damage has occurred due to blasting.

## **4.2.4. Incorrect Operations**

### **Incorrect Operations Due To Inadequate Procedures**

Incorrect operations due to inadequate procedures was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- failures due to inadequate procedures have not been experienced during the period examined.

### **Incorrect Operations Due To Failure To Follow Procedures**

Incorrect operations due to failure to follow procedures was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Failures due to a failure to follow procedures are not increasing per year.

### **Incorrect Operations Due To Operator Qualification Revocation**

Incorrect operations due to operator qualification revocation was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- no employees or contractors have had operator qualification credentials revoked due to poor performance of any covered task.

### **Incorrect Operations Due To Drugs And Alcohol**

Incorrect operations due to drugs and alcohol was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- no employees or contractors tested positive for drugs or alcohol (other than pre-hire tests).

## **4.2.5. Materials, Welds and Joints**

### **Material, Weld Or Joint On The Entire System**

Material, weld or joint on the entire system was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Failures due to workmanship defects have been experienced.

## **Material, Weld Or Joint Due To Manufacturing Defects**

Material, weld or joint due to manufacturing defects was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- manufacturing defects on pipe or non-pipe components have not been experienced.

## **Material, Weld Or Joint Due To Workmanship Defects**

Material, weld or joint due to workmanship defects was determined to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Your current material specification requirements and construction/installation procedures have not been modified to address this issue.

The possible consequences of a failure of this portion due to the indicated threat would be about the same as for the ALPINE NATURAL GAS system in general.

## **Material, Weld Or Joint Due To Known Problem Materials**

Material, weld or joint due to known problem materials was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- none of the known problem materials exist in the system.

## **4.2.6. Natural forces**

### **Natural Forces On The Entire System**

Natural forces on the entire system was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Leaks, failures or damages are not averaging one (1) or more per year.

## **4.2.7. Other outside forces**

### **Other Outside Forces On The Entire System**

Other outside forces on the entire system was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- Leaks, failures or damages are not averaging one (1) or more per year.

## **4.2.8. Other threats**

### **Other Threats On The Entire System**

Other threats on the entire system was determined not to be a threat warranting further consideration for additional action beyond code compliance or current system practice because:

- This system has not experienced failures or other safety problems due to causes that were not addressed during the evaluation of the other seven threats.

# Chapter 5. RISK EVALUATION AND PRIORITIZATION

## 5.1. Overview

Of the sections identified during the Threat Assessment as requiring further consideration for additional actions, ALPINE NATURAL GAS has determined that the relative risk of these threats to the integrity of these lines ranks in the following priority, beginning with the highest relative risk.

RANK indicates the final relative risk rank after review and validation by ALPINE NATURAL GAS.

USER RANK indicates if the threat-segment was re-ranked by ALPINE NATURAL GAS. A zero indicates it was left where SHRIMP’s risk model ranked it – any other number indicates it was moved higher or lower by ALPINE NATURAL GAS. Where a threst-segment was re-ranked an explanation for the reason is included in the discussion for that segment.

SHRIMP Rank is where SHRIMP’s risk ranking model originally ranked the threat-segment. Segments under Other Threats were not ranked by SHRIMP so are initially placed at the bottom of the segment list. ALPINE NATURAL GAS has placed these segments in the risk ranking list based in its knowledge and judgment.

Relative Risk score is a numeric score from 0-30 based on the four factors listed – Probability, Consequence, Leak Cause Factor and Incident Probability Factor. The risk model is described in detail in Section 11.3.2, “Relative Risk Model”.

The risk ranking is based on relative risk, not absolute risk. It should not be construed to suggest that the highest ranked segment is unsafe or that additional actions are required to maintain public safety. It is merely a tool to assist ALPINE NATURAL GAS to prioritize its inspection and maintenance programs.

## 5.2. ALPINE NATURAL GAS Section Risk Ranking

a. **Section:** ALPINE NATURAL GAS portion of ALPINE NATURAL GAS

**Threat:** Excavation Damage -> Third Party Damages

**Description:** Entire System

**Table 5.1.**

Rank	User Rank	SHRIMP Rank	Relative Risk Score	Probability Score	Consequence Score	Leak Cause Factor	Incident Probability Factor	
1	1	1	12	6.81	1.1	1.282	1.25	
	Explanation:	Increasing public awareness of gas system and safety has and will continue to decrease damage and improve safety.						
No Previous Plan								

Ranked here, in part, for the following reasons:

- Excavation damages are being caused by third-party excavators not following one call laws.

- Excavation damages caused by third-party excavators have been due to unmarked or inaccurately marked facilities.
- Disruption of service and cost to return the system to service after the damages caused by the (crews/contractors/excavators) identified for this section are about the same when compared to all other excavation caused damages
- Operator override ranking with this explanation:  
Increasing public awareness of gas system and safety has and will continue to decrease damage and improve safety.

b. **Section: Specific\_00** portion of ALPINE NATURAL GAS

**Threat:** Material, Weld or Joint Failure -> Workmanship Defects

**Description:** P.E., 2", 11, 2000, contractor

**Table 5.2.**

Rank	User Rank	SHRIMP Rank	Relative Risk Score	Probability Score	Consequence Score	Leak Cause Factor	Incident Probability Factor	
2	2	2	1.12	1	1	1.115	1.00	
	Explanation:	Corrected if discovered.						
No Previous Plan								

Ranked here, in part, for the following reasons:

- Failures in this section occur less than once per 5 years.
- Operator override ranking with this explanation:  
Corrected if discovered.

c. **Section: Specific\_00** portion of Prone To Failure portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Prone to Failure -> Specific Regulators Prone to Failure

**Description:** ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF (FISHER, HRS-BBALYN, 3/4" INLET)

**Table 5.3.**

Rank	User Rank	SHRIMP Rank	Relative Risk Score	Probability Score	Consequence Score	Leak Cause Factor	Incident Probability Factor	
3	3	3	1.04	1	1	1.038	1.00	
	Explanation:	Can easily be found at time of leak investigation as it is a known possible source of gas leak at the meter.						
No Previous Plan								

Ranked here, in part, for the following reasons:

- The likelihood of this piece of equipment failing is low.

- Operator override ranking with this explanation:

Can easily be found at time of leak investigation as it is a known possible source of gas leak at the meter.

d. **Section: Failing Equipment** portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Experiencing Failure

**Description:** Regulators/Relief Valves

**Table 5.4.**

Rank	User Rank	SHRIMP Rank	Relative Risk Score	Probability Score	Consequence Score	Leak Cause Factor	Incident Probability Factor
4	3	3	1.04	1	1	1.038	1.00
	Explanation:						
No Previous Plan							

Ranked here, in part, for the following reasons:

- The likelihood of this piece of equipment failing is low.
- Operator override ranking with this explanation:

# Chapter 6. ADDITIONAL/ACCELERATED MEASURES TO ADDRESS RISKS

## 6.1. MANDATORY ADDITIONAL ACTIONS

The following are mandatory additional actions required by DIMP regulations.

### LEAK CLASSIFICATION AND ACTION CRITERIA

These leak classification and action criteria are taken from the Guide for Gas Transmission and Distribution Piping Systems, 2003 edition. A complete copy of the GPTC Guide can be purchased at [www.aga.org](http://www.aga.org).

**Table 6.1. Leak Classification And Action Criteria - Grade 1**

LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 1		
Grade Definition	Examples	Action Criteria
A leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. See §192.703(c).	<ol style="list-style-type: none"> <li>1. Any leak which, in the judgment of operating personnel at the scene, is regarded as an immediate hazard.</li> <li>2. Escaping gas that has ignited.</li> <li>3. Any indication of gas which has migrated into or under a building, or into a tunnel.</li> <li>4. Any reading at the outside wall of a building, or where gas would likely migrate to an outside wall of a building.</li> <li>5. Any reading of 80% LEL, or greater, in a confined space.</li> <li>6. Any reading of 80% LEL, or greater in small substructures (other than gas associated substructures) from</li> </ol>	<p>Requires prompt action* to protect life and property, and continuous action until the conditions are no longer hazardous</p> <p>* The prompt action in some instances may require one or more of the following:</p> <ol style="list-style-type: none"> <li>a. Implementation of an emergency plan (§192.615).</li> <li>b. Evacuating premises.</li> <li>c. Blocking off an area.</li> <li>d. Rerouting traffic.</li> <li>e. Eliminating sources of ignition.</li> <li>f. Venting the area by removing manhole covers, barholing, installing vent holes, or other means.</li> <li>g. Stopping the flow of gas by closing valves or other means.</li> </ol>

<b>LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 1</b>		
<b>Grade Definition</b>	<b>Examples</b>	<b>Action Criteria</b>
	<p>which gas would likely migrate to the outside wall of a building.</p> <p>7. Any leak that can be seen, heard, or felt, and which is in a location that may endanger the general public or property.</p>	<p>h. Notifying police and fire departments.</p>

**Table 6.2. Leak Classification And Action Criteria - Grade 2**

<b>LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 2</b>		
<b>Grade Definition</b>	<b>Examples</b>	<b>Action Criteria</b>
<p>A leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard.</p>	<p>A. Leaks Requiring Action Ahead of Freezing or Adverse Venting Conditions.</p> <p>Any leak which, under frozen or other adverse soil conditions, would likely migrate to the outside wall of a building.</p> <p>B. Leaks Requiring Action Within Six Months</p> <p>1. Any reading of 40% LEL, or greater, under a sidewalk in a wall-to-wall paved area that does not qualify as a Grade 1 leak.</p> <p>2. Any reading of 100% LEL, or greater, under a street in a wall-to-wall paved area that has significant gas migration and does not qualify as a Grade 1 leak.</p>	<p>Leaks should be repaired or cleared within one calendar year, but no later than 15 months from the date the leak was reported. In determining the repair priority, the following should be considered.</p> <p>a. Amount and migration of gas.</p> <p>b. Proximity of gas to buildings and subsurface structures.</p> <p>c. Extent of pavement.</p> <p>d. Soil type, and soil conditions, such as frost cap, moisture and natural venting.</p> <p>Grade 2 leaks should be reevaluated at least once every six months until cleared.</p>

<b>LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 2</b>		
<b>Grade Definition</b>	<b>Examples</b>	<b>Action Criteria</b>
		The frequency of reevaluation should be determined by the location and magnitude of the leakage condition.
	3. Any reading less than 80% LEL in small substructures (other than gas associated substructures) from which gas would likely migrate creating a probable future hazard.	
	4. Any reading between 20% LEL and 80% LEL in a confined space.	
	5. Any reading on a pipeline operating at 30 percent SMYS, or greater, in a class 3 or 4 location, which does not qualify as a Grade 1 leak.	
	6. Any reading of 80% LEL, or greater, in gas associated substructures.	
	7. Any leak which, in the judgment of operating personnel at the scene, is of sufficient magnitude to justify scheduled repair.	

**Table 6.3. Leak Classification And Action Criteria - Grade 3**

<b>LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 3</b>		
<b>Grade Definition</b>	<b>Examples</b>	<b>Action Criteria</b>
A leak that is nonhazardous at time of detection and can be reasonably expected to remain non-hazardous.	Leaks at the Reevaluation Intervals	Requiring Periodic Reevaluation during the next scheduled survey, or within 15 months of the date reported, whichever occurs first, until the leak is regraded or no
	1. Any reading of less than 80% LEL in small gas associated substructures.	

LEAK CLASSIFICATION AND ACTION CRITERIA – GRADE 3		
Grade Definition	Examples	Action Criteria
	2. Any reading under a street in areas without wall-to-wall paving where it is unlikely the gas could migrate to the outside wall of a building.	longer results in a reading.
	3. Any reading of less than 20% LEL in a confined space.	

LEAK LOCATION PROCEDURE(S) ALPINE NATURAL GAS has adopted leak location procedures which can be found at OEM - Maintenance 723. Leakage Surveys.

## 6.2. RISK BASED ADDITIONAL ACTIONS

The following lists the additional/accelerated actions that will be taken and describes the part of ALPINE NATURAL GAS to which each applies to address the priority risks described in the previous section of this Plan. Further details can be found in Section 11.1, “IMPLEMENTATION PLAN”.

a. **Section: ALPINE NATURAL GAS** portion of ALPINE NATURAL GAS

**Threat:** Excavation Damage -> Third Party Damages

**Description:** Entire System

For **excavation damage due to third party damages** on the **ALPINE NATURAL GAS** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS are adequately addressed by current inspection and maintenance. No additional actions are required. The following explanation was provided:

We believe Alpine's damage prevention plan has decreased the incidents of homeowners and excavators not calling in USA North tickets.

b. **Section: Specific\_00** portion of ALPINE NATURAL GAS

**Threat:** Material, Weld or Joint Failure -> Workmanship Defects

**Description:** P.E., 2", 11, 2000, contractor

For **material, weld or joint due to workmanship defects** on the **Specific\_00** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS are adequately addressed by current inspection and maintenance. No additional actions are required. The following explanation was provided:

The leaks cited were detected during leak survey and were on sections of pipe welded diuring initial installation of gas main system.

c. **Section: Specific\_00** portion of Prone To Failure portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Prone to Failure -> Specific Regulators Prone to Failure

**Description:** ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF (FISHER, HRS-BBALYN, 3/4" INLET)

For **equipment malfunctions due to regulators / relief valves prone to failure** on the **Specific\_00** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS are adequately addressed by current inspection and maintenance. No additional actions are required. The following explanation was provided:

This equipment is checked during any report of possible leak.

d. **Section: Failing Equipment** portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Experiencing Failure

**Description:** Regulators/Relief Valves

For **equipment malfunctions due to failing regulators/relief valves** on the **Failing Equipment** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS are adequately addressed by current inspection and maintenance. No additional actions are required. The following explanation was provided:

None

# Chapter 7. MEASURE PERFORMANCE, MONITOR RESULTS AND EVALUATE EFFECTIVENESS

## 7.1. MANDATORY PERFORMANCE MEASURES

ALPINE NATURAL GAS will keep records of the following performance measures:

1. The number of hazardous leaks either eliminated or repaired, categorized by cause;
2. The number of excavation damages;
3. The number of excavation tickets received;
4. The number of leaks either eliminated or repaired, categorized by cause; and
5. The number of hazardous leaks either eliminated or repaired, categorized by material.

## 7.2. RISK BASED PERFORMANCE MEASURES

The following lists the performance measures that will be tracked and describes the part of ALPINE NATURAL GAS to which each applies to evaluate the effectiveness of the additional measures taken to address risks as described in the previous section of this Plan.

a. **Section: ALPINE NATURAL GAS** portion of ALPINE NATURAL GAS

**Threat:** Excavation Damage -> Third Party Damages

**Description:** Entire System

For **excavation damage due to third party damages** on the **ALPINE NATURAL GAS** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS does not warrant additional actions. Since no additional actions are called for there is no need for action-specific performance measures.

b. **Section: Specific\_00** portion of ALPINE NATURAL GAS

**Threat:** Material, Weld or Joint Failure -> Workmanship Defects

**Description:** P.E., 2", 11, 2000, contractor

For **material, weld or joint due to workmanship defects** on the **Specific\_00** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS does not warrant additional actions. Since no additional actions are called for there is no need for action-specific performance measures.

c. **Section: Specific\_00** portion of Prone To Failure portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Prone to Failure -> Specific Regulators Prone to Failure

**Description:** ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF (FISHER, HRS-BBALYN, 3/4" INLET)

For **equipment malfunctions due to regulators / relief valves prone to failure** on the **Specific\_00** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS does not warrant additional actions. Since no additional actions are called for there is no need for action-specific performance measures.

d. **Section: Failing Equipment** portion of ALPINE NATURAL GAS

**Threat:** Equipment Malfunction -> Regulators Experiencing Failure

**Description:** Regulators/Relief Valves

For **equipment malfunctions due to failing regulators/relief valves** on the **Failing Equipment** section, ALPINE NATURAL GAS will:

- The relative risk posed by this threat on this section of ALPINE NATURAL GAS does not warrant additional actions. Since no additional actions are called for there is no need for action-specific performance measures.

## 7.3. MONITOR RESULTS AND EVALUATE EFFECTIVENESS

Monitoring results and evaluating effectiveness is addressed in Chapter 8, *PERIODIC EVALUATION AND IMPROVEMENT* of this Plan.

# Chapter 8. PERIODIC EVALUATION AND IMPROVEMENT

ALPINE NATURAL GAS will conduct a complete re-evaluation of this Plan no less than every 2 years. Trends in each of the performance measures listed in Chapter 7, *MEASURE PERFORMANCE, MONITOR RESULTS AND EVALUATE EFFECTIVENESS* will be reviewed during the re-evaluation. If any performance measure indicates that any of the additional action taken is not effective in reducing the risk it is intended to address, ALPINE NATURAL GAS will consider implementing additional actions to address that risk.

Re-evaluation of the Plan will also occur when changes occur on the system that may significantly change the risk of failure, including but not limited to:

- Completion of any additional actions listed in Chapter 6, *ADDITIONAL/ACCELERATED MEASURES TO ADDRESS RISKS* of this Plan,
- A review of performance measures concludes that a change of approach is warranted.

# Chapter 9. REPORTING

The following will be submitted annually to the Pipeline And Hazardous Materials Safety Administration (PHMSA) as part of the Distribution Annual Report (Form F7100.1-1) and California Public Utilities Commission along with the distribution annual report.

**PERFORMANCE MEASURES** ALPINE NATURAL GAS will track and report the following performance measures:

- Number of hazardous leaks either eliminated or repaired, categorized by cause;
- Number of excavation damages;
- Number of excavation tickets;
- Total number of leaks either eliminated or repaired, categorized by cause;

**EXCESS FLOW VALVES** ALPINE NATURAL GAS will track the number of excess flow valves installed on the system

These data will be sent to the PHMSA Information Resource Manager as part of the Distribution Annual Report (Form F7100.1-1).

**MECHANICAL FITTING FAILURES** ALPINE NATURAL GAS will track and report information relating to each hazardous leak resulting from the failure of a mechanical fitting. This information will include, at a minimum:

- location of the failure in the system,
- nominal pipe size,
- material type,
- nature of failure including any contribution of local pipeline environment,
- fitting manufacturer,
- lot number,
- date of manufacture, and
- any other information that can be found in markings on the failed fitting

Mechanical fitting failures will be sent to the PHMSA Information Resource Manager on the mechanical fitting failure report (Form 7100.1-2) either periodically as these failures occur or aggregated into one or more submissions made no later than March 15 of the following calendar year after the fitting failure(s).

Form 7100.1-1 and Form 7100.1-2 will be sent to the PHMSA Information Resource Manager via the online electronic reporting system available at PHMSA's home page at <http://phmsa.dot.gov>.

These data will also be sent to the California Public Utilities Commission  
at:

California Public Utilities Commission

320 West 4th Street, Suite 500  
Los Angeles, CA 90013

# Chapter 10. RECORD KEEPING

The following records will be maintained for ten years.

1. This Plan,
2. Copies of previous written DIMP Plans,
3. Records of data required to be collected to calculate performance measures listed in Chapter 7, *MEASURE PERFORMANCE, MONITOR RESULTS AND EVALUATE EFFECTIVENESS*,
4. Records of mechanical fitting failures
5. Inspection, maintenance and other records relied upon in developing this written DIMP plan, as listed in the Data Source fields in Section 11.2, “LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS” of this Plan.

# Chapter 11. ATTACHMENTS

## 11.1. IMPLEMENTATION PLAN

This Attachment lists all the action items that are included in this written Distribution Integrity Management Plan.

Section A describes how ALPINE NATURAL GAS will modify procedures, policies and/or recordkeeping systems to implement:

1. mandatory data collection and recordkeeping requirements in the regulation as listed in Section 7.1, “MANDATORY PERFORMANCE MEASURES” of this Plan, and
2. performance measures specific to Additional/Accelerated Actions as listed in Section 7.2, “RISK BASED PERFORMANCE MEASURES” of this Plan.

Section B describes how ALPINE NATURAL GAS will implement Additional/Accelerated Actions, if any, listed in Chapter 6, *ADDITIONAL/ACCELERATED MEASURES TO ADDRESS RISKS* of this Plan.

Section C describes how ALPINE NATURAL GAS will implement procedures to collect additional information needed to fill gaps, if any, found during the development of this Plan.

A. Procedures, policies and/or recordkeeping systems will be modified as follows to collect and retain information required to be collected and retained under the DIMP plan, including:

1. The following Recordkeeping tasks:

- a. Records for all piping system installed after the effective date of this Plan, including, at minimum, the location where new piping and appurtenances are installed and the material of which they are constructed.

ALPINE NATURAL GAS will implement as follows:

Appendix R-2 or R-3 in Alpines'Operations and Equipment Manual, pipe installation log documents where and what type of pipe including a pipe description that was installed for the year. The log summarizes the construction notes for each facility installation (main or service line).

b. Mechanical fitting failure data, including:

- i. location of the failure in the system,
- ii. nominal pipe size,
- iii. material type,
- iv. nature of failure including any contribution of local pipeline environment,
- v. fitting manufacturer,
- vi. lot number and date of manufacture, and
- vii. other information that can be found in markings on the failed fitting

ALPINE NATURAL GAS will implement as follows:

Any incidents of mechanical fitting failure will be Will be logged in Appendix R-4 as well as be reported in annual PHMSA report 7100-1.2

2. The following mandatory Performance Measures:

- a. Number of hazardous leaks either eliminated or repaired as required by 49 CFR 192.703(c) (or total number of leaks if all leaks are repaired when found), categorized by cause.

ALPINE NATURAL GAS will implement as follows:

All leaks are repaired when found. These leaks will continue to be logged in FORM 724 of OEM and are reported in PHMSA 7100-1.1

- b. Number of excavation damages.

ALPINE NATURAL GAS will implement as follows:

All excavation damages are repaired when found. These leaks will continue to be logged in FORM 724 of OEM and are reported in PHMSA 7100-1.1

- c. Number of excavation tickets (receipt of information by the underground facility operator from the notification center).

ALPINE NATURAL GAS will implement as follows:

Each USA ticket called in for year that are within the the area of Alpine's pipe distribution system are collected and kept on file by calendar year. All USA North tickets within our system are responded to and counted for an annual total.

- d. Total number of leaks either eliminated or repaired, categorized by cause.

ALPINE NATURAL GAS will implement as follows:

All leaks for the year are investigated by Alpines personnel and documented on Alpines leak report B-2 and then categorized and included in PHMSA 7100-1.1 by system administrator.

- e. Number of hazardous leaks either eliminated or repaired as required by Sec. 192.703(c) (or total number of leaks if all leaks are repaired when found), categorized by material;

ALPINE NATURAL GAS will implement as follows:

All leaks are repaired when found and reported on leak report B-2

3. The following threat specific Performance Measures (presented by section in risk rank order):

B. Additional/Accelerated Actions included in this DIMP plan:

1. The following mandatory Accelerated/Additional Actions:

- a. Leak classification and action criteria as chosen and described in Section 6.1, "MANDATORY ADDITIONAL ACTIONS" of this Plan.

ALPINE NATURAL GAS will implement as follows:

All leaks are considered to require remedial action and repair. Non-hazardous leaks can be rescheduled by the operator if it is determined that the leak repair can be safely delayed.

2. The following threat specific Additional/Accelerated Actions (presented by section in risk rank order):

C. The following Procedures to collect additional information needed to fill gaps:

a. The following gaps identified by ALPINE NATURAL GAS.

ALPINE NATURAL GAS will implement as follows:

No additional information needed.

## 11.2. LIST OF ANSWERS AND DATA SOURCES FROM SHRIMP™ INTERVIEWS

The following lists the interview responses and data sources entered during the threat assessments.

### Corrosion Threat

- **Corrosion (CORR) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (CORR)

Your Choice (weight: 0) --Continue

- How many leak repairs resulting from corrosion occurred during the years shown? (CORR-Leak)

Your Choice (weight: 0) --

**Table 11.1. Leak Repairs From PHMSA 7100.1-1**

End of Year	Corrosion		Totals	
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	0	0	0	0
In 2006	0	0	0	0
In 2007	0	0	0	0
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	0	0	0	0
In 2011	0	0	0	0
In 2012	0	0	0	0

- Review/Edit the data or Keep as is.

Review The Guidance and Choose (ECMETALNO)

Your Choice (weight: 0) --Edit

- General System Description (EC101)

Your Choice (weight: 0) --

**Table 11.2. Material**

	<b>Mains</b>	<b>Services</b>
Plastic	33.520	1243
Unprotected, Bare	0.000	0
Cathodically Protected, Bare	0.000	0
Unprotected, Coated	0.000	0
Cathodically Protected, Coated	0.004	0
Cast Iron, Wrought Iron	0.000	0
Ductile Iron	0.000	0
Copper	0.000	0
Other(1)	0.000	0
Other(2)	0.000	0

- Mains By Size (EC101sm)

Your Choice (weight: 0) --

**Table 11.3. Material**

	<b>Unknown</b>	<b>2" or less</b>	<b>Over 2" thru 4"</b>	<b>Over 4" thru 8"</b>	<b>Over 8" thru 12"</b>	<b>Over 12"</b>	<b>Total</b>
PVC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PE	0.000	24.870	3.000	5.650	0.000	0.000	33.520
ABS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steel	0.000	0.002	0.002	0.000	0.000	0.000	0.004
Cast Iron, Wrought Iron	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ductile Iron	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Copper	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other(1)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other(2)	0.000	0.000	0.000	0.000	0.000	0.000	0.000

- Services By Size (EC101ss)

Your Choice (weight: 0) --

**Table 11.4. Material**

	<b>Unknown</b>	<b>1" or less</b>	<b>Over 1" thru 2"</b>	<b>Over 2" thru 4"</b>	<b>Over 4" thru 8"</b>	<b>Over 8"</b>	<b>Total</b>
PVC	0	0	0	0	0	0	0
PE	0	1243	0	0	0	0	1243
ABS	0	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0

		Unknown	1" or less	Over 1" thru 2"	Over 2" thru 4"	Over 4" thru 8"	Over 8"	Total
Cast Iron,	0	0	0	0	0	0	0	0
Wrought Iron								
Ductile Iron	0	0	0	0	0	0	0	0
Copper	0	0	0	0	0	0	0	0
Other(1)	0	0	0	0	0	0	0	0
Other(2)	0	0	0	0	0	0	0	0

- Does your plastic system contain isolated metallic fittings? (EC110)

Your Choice (weight: 0) --No

- Provide Additional Information (EC101b)

Your Choice (weight: 0) --

- **Atmospheric Corrosion (CORRAC) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (CORRAC)

Your Choice (weight: 0) --Continue

- Does ALPINE NATURAL GAS have any facilities that require atmospheric corrosion inspections? (CORRAC101)

Your Choice (weight: 0) --Yes

- Over the past 5 years, have any atmospheric corrosion inspections found metal loss due to atmospheric corrosion? (CORRAC103)

Your Choice (weight: 0) --No

- Over the past 5 years, have leaks caused by atmospheric corrosion required repair? (CORRAC104)

Your Choice (weight: 0) --No

- Have inspections found problems with above ground pipe coatings that could not be fixed by routine maintenance? (CORRAC105)

Your Choice (weight: 0) --No

- Confirm that no other atmospheric corrosion problems are known. (CORRAC204b)

Your Choice (weight: 0) --Accept

- **External Corrosion (CORRECSTL-PC) (Cathodic Protected, Coated Steel - Entire System)**

- Interview Start (CORRECSTL-PC)

Your Choice (weight: 0) --Continue

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Choice (weight: 0) --

**Table 11.5. End of Year**

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	0.000	0	0.000
In 2006	0.000	0	0.000
In 2007	0.000	0	0.000
In 2008	0.000	0	0.000
In 2009	0.000	0	0.000
In 2010	0.000	0	0.000
In 2011	0.000	0	0.000
In 2012	0.000	0	0.000

- SHRIMP has determined that leaks, failures or damages are not increasing. (see guidance).

Do you accept this determination? (EC252ok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that repaired leaks per mile of mains are not increasing. (EC252)

Your Choice (weight: 0) --Continue

- Are repaired corrosion leaks per service increasing? (EC201)

Your Choice (weight: 0) --

**Table 11.6. End of Year**

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	0	0	0.000
In 2006	0	0	0.000
In 2007	0	0	0.000
In 2008	0	0	0.000
In 2009	0	0	0.000

	<b>Number of Services</b>	<b>Corrosion Leaks Repaired</b>	<b>Repaired Leaks/service</b>
In 2010	0	0	0.000
In 2011	0	0	0.000
In 2012	0	0	0.000

- SHRIMP has determined that leaks, failures or damages are not increasing. (see **guidance**).

Do you accept this determination? (EC254ok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that repaired leaks per service are not increasing. (EC254)

Your Choice (weight: 0) --Continue

- Do exposed pipe inspections indicate a corrosion problem? (EC202)

Your Choice (weight: 0) --No

- Is cathodic protection of the section adequate? (EC203)

Your Choice (weight: 0) --Yes

- Confirm that no corrosion problems are known. (EC204a)

Your Choice (weight: 0) --Accept

- **Internal Corrosion (CORRIC) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (CORRIC)

Your Choice (weight: 0) --Continue

- Do inspections of the inside of metal pipe or coupons removed from metal pipe show signs of internal corrosion? (CORRIC101)

Your Choice (weight: 0) --No

- Have leaks caused by internal corrosion occurred? (CORRIC102)

Your Choice (weight: 0) --No

- Do you receive any gas that is not of transmission pipeline quality? (CORRIC103)

Your Choice (weight: 0) --No

- Have liquids been found in your distribution piping? (CORRIC104)

Your Choice (weight: 0) --No

- Confirm that no other internal corrosion problems are known. (CORRIC204a)

Your Choice (weight: 0) --Accept

## Equipment Malfunction Threat

- **Equipment Malfunction (EQIP) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (EQIP)

Your Choice (weight: 0) --Continue

- How many leak repairs resulting from equipment problems occurred during the years shown? (EQIP-Leak)

Your Choice (weight: 0) --

**Table 11.7. Leak Repairs From PHMSA 7100.1-1**

End of Year	Equipment Malfunction Totals			
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	0	0	0	0
In 2006	0	0	0	0
In 2007	0	0	0	0
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	0	3	0	3
In 2011	0	0	0	0
In 2012	0	0	0	0

- Are leaks occurring or do inspections indicate potential equipment malfunctions? (EQ101a)

Your Choice (weight: 1) --

Regulators/Relief Valves

- Does system contain equipment known/prone to malfunction (Industry wide)? (EQ102a)

Your Choice (weight: 1) --

Regulators/Relief Valves

- Provide Additional Information (EQ105)

Your Choice (weight: 0) --

- **Regulators Experiencing Failure (EQ-FailR) (Failing Equipment - Regulators/Relief Valves)**

- Interview Start (EQ-FailR)

Your Choice (weight: 0) --Continue

- Would you like to identify specific makes/models/sizes of failing equipment? (EQ101a)

Your Choice (weight: 0) --No

- What is the inspection/maintenance frequency for this type of equipment? (EQ301)

Your Choice (weight: 0) --Bi-Annual (Every other year) or Greater

- Are failures related to Set Point drift? (EQ302)

Your Choice (weight: 0) --No

- Is the equipment malfunctioning due to failing seals, gaskets, o-rings, packing, boots, etc.? (EQ303)

Your Choice (weight: 0) --Yes

- Is the regulating equipment sized appropriately for current operating conditions? (EQ304)

Your Choice (weight: 0) --Yes

- Is the regulating equipment installed per the manufacturer's specifications? (EQ305)

Your Choice (weight: 0) --Yes

- Would equipment failure cause system pressure to exceed the MAOP? (EQ306)  
Your Choice (weight: 0) --No
  
- Does equipment fail more than one time per year? (EQ307)  
Your Choice (weight: 0) --Yes
  
- What is the likelihood of this piece of equipment failing? (EQ308)  
Your Choice (weight: 1) --Low
  
- What is the likelihood that a failure of this equipment will result in a Grade 1 leak? (EQ309)  
Your Choice (weight: 0) --Low
  
- Review the guidance. (EQCSQ0)  
Your Choice (weight: 0) --Continue
  
- Is the size/capacity of the equipment substantially greater or lesser than other equipment in the system as a whole? (EQCSQ1)  
Your Choice (weight: 0) --About the same
  
- Does the equipment primarily affect the system located in the business district? (EQCSQ2)  
Your Choice (weight: 0) --Outside Business Districts
  
- How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure? (EQCSQ3)  
Your Choice (weight: 0) --Less than one (1) hour
  
- What would be the impact on the utility and its customers if this equipment were to fail? (EQCSQ4)  
Your Choice (weight: 0) --Low
  
- **Regulators Prone to Failure (EQ-ProneR) (Prone To Failure - Regulators/Relief Valves)**
  - Interview Start (EQ-ProneR)

Your Choice (weight: 0) --Continue

- Would you like to identify specific makes/models/sizes of problem equipment? (EQ101a)

Your Choice (weight: 0) --Yes

- What equipment is suspected of being prone to malfunction? (EQ101b)

Your Choice (weight: 0) --

### Table 11.8. Equipment

	Make	Model	Size(s)	Description
Specific_00	FISHER	HRS-BBALYN	3/4" INLET	ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF
Specific_01				
Specific_02				
Specific_03				
Specific_04				
Specific_05				

- Provide Additional Information (EQ101d)

Your Choice (weight: 0) --

- **Specific Regulators Prone to Failure (EQ-ProneR-1a) (Specific\_00 - ORIFICE 1/8", SPRING 6-8 WATER COLUMN WITH INTERNAL RELIEF (FISHER, HRS-BBALYN, 3/4" INLET))**

- Interview Start (EQ-ProneR-1a)

Your Choice (weight: 0) --Continue

- What is the inspection/maintenance frequency for this type of equipment? (EQ301)

Your Choice (weight: 0) --Bi-Annual (Every other year) or Greater

- Are failures related to Set Point drift? (EQ302)

Your Choice (weight: 0) --No

- Is the equipment malfunctioning due to failing seals, gaskets, o-rings, packing, boots, etc.? (EQ303)

Your Choice (weight: 0) --Yes

- Is the regulating equipment sized appropriately for current operating conditions? (EQ304)  
Your Choice (weight: 0) --Yes
  
- Is the regulating equipment installed per the manufacturer's specifications? (EQ305)  
Your Choice (weight: 0) --Yes
  
- Would equipment failure cause system pressure to exceed the MAOP? (EQ306)  
Your Choice (weight: 0) --No
  
- Does equipment fail more than one time per year? (EQ307)  
Your Choice (weight: 0) --No
  
- What is the likelihood of this piece of equipment failing? (EQ308)  
Your Choice (weight: 1) --Low
  
- What is the likelihood that a failure of this equipment will result in a Grade 1 leak? (EQ309)  
Your Choice (weight: 0) --Low
  
- Review the guidance. (EQCSQ0)  
Your Choice (weight: 0) --Continue
  
- Is the size/capacity of the equipment substantially greater or lesser than other equipment in the system as a whole? (EQCSQ1)  
Your Choice (weight: 0) --About the same
  
- Does the equipment primarily affect the system located in the business district? (EQCSQ2)  
Your Choice (weight: 0) --Outside Business Districts
  
- How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure? (EQCSQ3)

Your Choice (weight: 0) --Less than one (1) hour

- What would be the impact on the utility and its customers if this equipment were to fail? (EQCSQ4)

Your Choice (weight: 0) --Low

## Incorrect Operations Threat

- **Incorrect Operations (IOP) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (IOP)

Your Choice (weight: 0) --Continue

- How many leak repairs resulting from incorrect operations occurred during the years shown? (IOP-Leak)

Your Choice (weight: 0) --

**Table 11.9. Leak Repairs From PHMSA 7100.1-1**

End of Year	Incorrect Operations Totals			
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	5	16	5	16
In 2006	0	0	0	0
In 2007	0	8	0	8
In 2008	0	8	0	8
In 2009	0	0	0	0
In 2010	0	7	0	7
In 2011	0	0	0	0
In 2012	0	0	0	0

- Have failures due to inadequate procedures been experienced during the past 5 years? (IOP101)

Your Choice (weight: 0) --No

- Have failures due to a failure to follow procedures been experienced? (IOP104)

Your Choice (weight: 1) --Yes

- Have any employees or contractors had operator qualification credentials revoked due to poor performance of any covered task? (IOP105)

Your Choice (weight: 0) --No

- Have employees or contractors tested positive for drugs or alcohol (other than pre-hire tests)? (IOP106)

Your Choice (weight: 0) --No

- Provide Additional Information (IOPSet2)

Your Choice (weight: 0) --

- **Failure To Follow Procedures (IOP-Follow) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (IOP-Follow)

Your Choice (weight: 0) --Continue

- Is the number of failures due to a failure to follow procedures increasing? (IOP-Proc101)

Your Choice (weight: 0) --

**Table 11.10. End of Year**

	<b>Failures</b>
In 2005	0
In 2006	0
In 2007	0
In 2008	0
In 2009	0
In 2010	0
In 2011	0
In 2012	0

- SHRIMP has determined that leaks, failures or damages are not increasing. **(see guidance)**.

Do you accept this determination? (IOP-Proc102dok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that failures due to a failure to follow procedures are not increasing per year. (IOP-Proc102d)

Your Choice (weight: 0) --Continue

- Confirm that no other incorrect operations problems are known. (IOP-Proc204)

Your Choice (weight: 0) --Accept

## Material, Weld or Joint Failure Threat

- **Material, Weld or Joint Failure (MW) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (MW)

Your Choice (weight: 0) --Continue

- How many leak repairs resulting from material, weld or joint problems occurred during the years shown? (MW-Leak)

Your Choice (weight: 0) --

**Table 11.11. Leak Repairs From PHMSA 7100.1-1**

End of Year	Material, Weld or Joint Failure Totals			
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	0	0	0	0
In 2006	0	0	0	0
In 2007	0	7	0	7
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	2	0	2	0
In 2011	0	0	0	0
In 2012	0	0	0	0

- Have manufacturing defects on pipe or non-pipe components been experienced? (MW101)

Your Choice (weight: 0) --No

- Have failures due to workmanship defects been experienced? (MW102)

Your Choice (weight: 1) --Yes

- What workmanship is defective? (MW-SegWrk)

Your Choice (weight: 0) --

**Table 11.12. Geographic Area or Project Name**

	Pipe or Size Component Item	Wall Thickness or SDR	Grade	Manufacturing Process	Coating	Date Manufactured	Date Installed	Contractor / Crews	Supplier
Specific_00	P.E.	2"	11				2000	contractor	
Specific_01									
Specific_02									
Specific_03									
Specific_04									

- Do any of the following materials exist on the system? (MW103)

Your Choice (weight: 0) --

None of These

- Provide Additional Information (MWSet3)

Your Choice (weight: 0) --

- **Workmanship Defects (MW-Work) (Specific\_00 - P.E., 2", 11, 2000, contractor)**

- Interview Start (MW-Work)

Your Choice (weight: 0) --Continue

- How often do failures occur in this section? (MW301)

Your Choice (weight: 1) --Less than once per 5 years

- Are failures in this section/component increasing or decreasing? (MW302)

Your Choice (weight: 0) --

**Table 11.13. End of Year**

	Failures
In 2005	0
In 2006	0

Failures	
In 2007	0
In 2008	0
In 2009	0
In 2010	2
In 2011	0
In 2012	0

- SHRIMP has determined that leaks, failures or damages are not increasing. **(see guidance)**.  
Do you accept this determination? (MW302dok)  
Your Choice (weight: 0) --Accept
- Your data and choices indicate that failures due to materials, welds or joints are not increasing per year. (MW302d)  
Your Choice (weight: 0) --Continue
- Do failures occur more frequently than the scheduled leak survey intervals? (MW303)  
Your Choice (weight: 0) --No
- Have your current material specification requirements and construction/installation procedures been modified to address this issue? (MW304)  
Your Choice (weight: 0) --No
- Has the pipe/component on this section been pressure tested in accordance to Part 192, subpart J? (MW305)  
Your Choice (weight: 0) --Yes
- What is the likelihood that a leak in this section will become a Grade 1 leak? (MW306)  
Your Choice (weight: 0) --Low
- Review the guidance. (MWCSQ0)  
Your Choice (weight: 0) --Continue

- Are the pressure and/or diameter of this section greater than or about the same as the system as a whole? (MWCSQ1)

Your Choice (weight: 0) --About the same

- Is this section predominantly located in business districts or outside business districts (as those are defined for leak survey)? (MWCSQ2)

Your Choice (weight: 0) --Outside Business Districts

- How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure? (MWCSQ3)

Your Choice (weight: 0) --Less than one (1) hour

- What would be the impact on the utility and its customers if this section were to fail? (MWCSQ4)

Your Choice (weight: 0) --Low

## Excavation Damage Threat

- **Excavation Damage (OFEXC) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFEXC)

Your Choice (weight: 0) --Continue

- Does your system participate in a qualified one-call system (see 192.614)? (OFEXC101)

Your Choice (weight: 0) --Yes

- Which system do you do you use? (OFEXC102)

Your Choice (weight: 0) --California-Underground Service Alert North

- Are you a Master Meter Operator? (OFEXC103)

Your Choice (weight: 0) --No

- Do you physically control access to your pipeline location? (OFEXC104)

Your Choice (weight: 0) --No

- How many excavation leak repairs occurred during the years shown? (OFEXC105)

Your Choice (weight: 0) --

**Table 11.14. Leak Repairs From PHMSA 7100.1-1**

End of Year	Excavation Damage Totals			
	Mains	Services	Mains	Services
In 2004	1	3	1	3
In 2005	0	8	0	8
In 2006	0	5	0	5
In 2007	1	4	1	4
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	0	0	0	0
In 2011	0	0	0	0
In 2012	0	0	0	0

- How many excavation caused damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFEXC105a)

Your Choice (weight: 0) --

**Table 11.15. End of Year**

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0

- How many excavation tickets (receipt of information by the underground facility operator from the one-call system) were received during the years shown? (OFEXC106)

Your Choice (weight: 0) --

**Table 11.16. End of Year**

	<b>Damages Previously Entered</b>	<b>Excavation Tickets</b>	<b>Damages Per 1000 Tickets</b>
In 2005	0	0	0
In 2006	5	330	15
In 2007	5	229	21
In 2008	0	181	0
In 2009	0	137	0
In 2010	0	457	0
In 2011	0	0	0
In 2012	0	0	0

- SHRIMP has determined that leaks, failures or damages are not increasing. **(see guidance)**.

Do you accept this determination? (OFEXC106bok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that excavation damages per 1000 tickets are not increasing. (OFEXC106b)

Your Choice (weight: 0) --Continue

- Provide Additional Information (OFEXC106e)

Your Choice (weight: 0) --

- **Blasting Damage (OFEXC-Blast) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFEXC-Blast)

Your Choice (weight: 0) --Continue

- Has damage occurred due to blasting? (OFEXC137)

Your Choice (weight: 0) --No

- Are there portions of the system located where excavation in the area of pipeline would require the use of explosives? (OFEXC135)

Your Choice (weight: 0) --No

- Are there portions of the system in known areas of blasting or demolition activity, such as rock quarries or coal mining? (OFEXC136)

Your Choice (weight: 0) --No

- Confirm that no other excavation problems are known. (OFEXC204)

Your Choice (weight: 0) --Accept

- **Concentrated Damages (OFEXC-Conc) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFEXC-Conc)

Your Choice (weight: 0) --Continue

- You previously entered this information regarding excavation damages and tickets during the years shown.

Click Next to proceed. (OFEXC206)

Your Choice (weight: 0) --

**Table 11.17. End of Year**

	<b>Damages Previously Entered</b>	<b>Excavation Tickets Previously Entered</b>	<b>Damages Per 1000 Tickets</b>
In 2005	0	0	0
In 2006	5	330	15
In 2007	5	229	21
In 2008	0	181	0
In 2009	0	137	0
In 2010	0	457	0
In 2011	0	0	0
In 2012	0	0	0

- Are these excavation damages concentrated in certain locations or distributed across the entire system? (OFEXC207)

Your Choice (weight: 0) --Distributed across the entire system

- Are these locate tickets concentrated in certain locations or distributed across the entire system? (OFEXC208)

Your Choice (weight: 0) --Distributed across the entire system

- Confirm that no other excavation problems are known. (OFEXC204)

Your Choice (weight: 0) --Accept

- **Crew or Contractor Damages (OFEXC-Crew) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFEXC-Crew)

Your Choice (weight: 0) --Continue

- Has excavation damage been caused by your crews or your contractors? (OFEXC115)

Your Choice (weight: 0) --No

- Confirm that no other excavation problems are known. (OFEXC204)

Your Choice (weight: 0) --Accept

- **Third Party Damages (OFEXC-Third) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFEXC-Third)

Your Choice (weight: 0) --Continue

- During the past few years, have excavation damages occurred due to third parties? (OFEXC127)

Your Choice (weight: 0) --Yes

- How many excavation damages were caused by third parties during the years shown? (OFEXC128)

Your Choice (weight: 0) --

**Table 11.18. End of Year**

Third Party Damages	
In 2005	0
In 2006	4
In 2007	4
In 2008	2
In 2009	0
In 2010	0
In 2011	0
In 2012	0

- SHRIMP has determined that leaks, failures or damages are not increasing. (see guidance).

Do you accept this determination? (OFEXC128bok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that excavation damages due to third parties are not increasing. (OFEXC128b)

Your Choice (weight: 0) --Continue

- Are excavation damages being caused by third-party excavators not following one call laws? (OFEXC131)

Your Choice (weight: 10) --Yes

- Have any excavation damages caused by third-party excavators due to mis-located lines been caused by poorly performing locating equipment? (OFEXC132)

Your Choice (weight: 0) --No

- Are excavation damages caused by third-party excavators due to unmarked or inaccurately marked facilities? (Do not include excavation damages caused by poorly performing locating equipment.) (OFEXC133)

Your Choice (weight: 10) --Yes

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC134)

Your Choice (weight: 0) --

No Damages

- Are there specific third parties that cause a greater number of damages compared to other third parties? (OFEXC129)

Your Choice (weight: 0) --Yes

- Do you want to section your system for this threat based on damages by specific third parties? (OFEXC130)

Your Choice (weight: 0) --No

- Review the guidance. (OFEXCCSQ0)

Your Choice (weight: 0) --Continue

- Have the (crews/contractors/excavators) identified for this section caused damage that resulted in a reportable incident? (OFEXCCSQ1)

Your Choice (weight: 0) --No

- Considering disruption of service and cost to return the system to service, how serious are the damages caused by the (crews/contractors/excavators) identified for this section when compared to all other excavation caused damages? (OFEXCCSQ2)

Your Choice (weight: 0.1) --About the same

## Natural Forces Threat

- **Natural Forces (OFNF) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFNF)

Your Choice (weight: 0) --Continue

- Do leaks repaired per year average one (1) or more? (OFNF101rp)

Your Choice (weight: 0) --

**Table 11.19. Leak Repairs From PHMSA 7100.1-1**

End of Year	Natural Forces		Totals	
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	0	0	0	0
In 2006	0	0	0	0
In 2007	0	0	0	0
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	0	0	0	0
In 2011	0	0	0	0
In 2012	0	0	0	0

- How many natural forces damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFNF101nr)

Your Choice (weight: 0) --

**Table 11.20. End of Year**

	<b>Mains</b>	<b>Services</b>
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0

- Here is a summary of your natural forces damages during the years shown.

Click Next to Continue. (OFNF101)

Your Choice (weight: 0) --

**Table 11.21. End of Year**

	<b>Leak Repairs</b>	<b>Damages Not Reported</b>	<b>Total</b>
In 2005	0	0	0
In 2006	0	0	0
In 2007	0	0	0
In 2008	0	0	0
In 2009	0	0	0
In 2010	0	0	0
In 2011	0	0	0
In 2012	0	0	0

- SHRIMP has determined that leaks, failures or damages are not averaging one (1) or more per year.(see **guidance**).

Do you accept this determination? (OFNF101bok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that leaks, failures or damages are not averaging one (1) or more per year. (OFNF101b)

Your Choice (weight: 0) --Continue

- Confirm that no natural force problems are known. (OFNF204)

Your Choice (weight: 0) --Accept

## Other Outside Forces Threat

- **Other Outside Forces (OFOTHR) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OFOTHR)

Your Choice (weight: 0) --Continue

- Do leaks repaired per year average one (1) or more? (OFOTHR101rp)

Your Choice (weight: 0) --

**Table 11.22. Leak Repairs From PHMSA 7100.1-1**

End of Year	Other Outside Forces Totals			
	Mains	Services	Mains	Services
In 2004	0	0	0	0
In 2005	0	0	0	0
In 2006	0	0	0	0
In 2007	0	0	0	0
In 2008	0	0	0	0
In 2009	0	0	0	0
In 2010	0	0	0	0
In 2011	0	0	0	0
In 2012	0	0	0	0

- How many other outside forces damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFOTHR101nr)

Your Choice (weight: 0) --

**Table 11.23. End of Year**

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	1	0
In 2011	0	0
In 2012	0	0

- Here is a summary of your other outside forces damages during the years shown.

Click Next to Continue. (OFOTHR101)

Your Choice (weight: 0) --

**Table 11.24. End of Year**

	<b>Leak Repairs</b>	<b>Damages Not</b>	<b>Total</b>
		<b>Reported</b>	
In 2005	0	0	0
In 2006	0	0	0
In 2007	0	0	0
In 2008	0	0	0
In 2009	0	0	0
In 2010	0	1	1
In 2011	0	0	0
In 2012	0	0	0

- SHRIMP has determined that leaks, failures or damages are not averaging one (1) or more per year.(see guidance).

Do you accept this determination? (OFOTHR101bok)

Your Choice (weight: 0) --Accept

- Your data and choices indicate that leaks, failures or damages are not averaging one (1) or more per year. (OFOTHR101b)

Your Choice (weight: 0) --Continue

- Confirm that no other outside force problems are known. (OFOTHR204)

Your Choice (weight: 0) --Accept

**Other Threats Threat**

- **Other Threats (OTHR) (ALPINE NATURAL GAS - Entire System)**

- Interview Start (OTHR)

Your Choice (weight: 0) --Continue

- Has this system experienced failures or other safety problems due to causes that were not addressed during the evaluation of the other threats? (OTHR101)

Your Choice (weight: 0) --No

- You have indicated that there are no other issues to be considered. (OTHR204)

Your Choice (weight: 0) --Continue

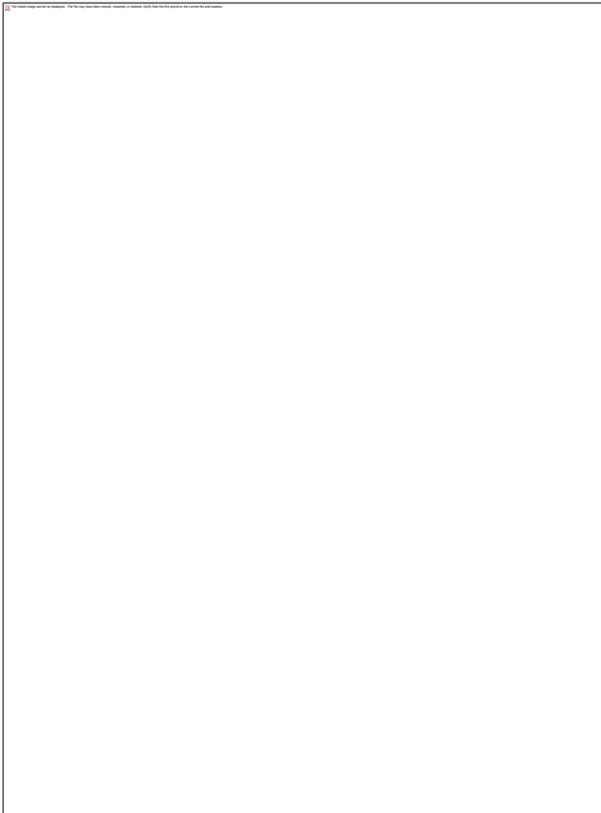
## 11.3. DESCRIPTION OF THE PROCESS FOLLOWED TO DEVELOP THIS PLAN

### 11.3.1. Process Description

#### Procedures for developing and implementing DIMP elements using SHRIMP

Creating a written DIMP Plan using SHRIMP should follow the steps shown in the SHRIMP process diagram. Each step should be completed before moving on to the next step.

**Figure 11.1. SHRIMP Process Diagram**



#### 1. Enter/confirm system information

If your system filed a Distribution Annual Report (Form 7100.1-1) you should find your system data already entered into SHRIMP. Note, this may not be the most current data – at the time SHRIMP was created only

the annual reports for 2009 were available. This information is shown only to allow you to confirm that this is your system – it is not used for any other purpose in SHRIMP.

If your annual report data is not already entered in SHRIMP, e.g. you are a master meter or LP piping system operator that is not required to file annual reports, or your annual report is missing from PHMSA's database, you must enter the data manually.

## 2. **Select settings**

The next step is to enter settings for your plan. These include:

- The name of your system as you want it to appear in the plan,
- A description of what part of your system this plan covers (default is entire system),
- The effective date of the plan (for your first plan this should be no later than August 2, 2011 as required by the DIMP rule),
- The effective date of the DIMP Plan replaced by this Plan – SHRIMP automatically generates this,
- The History Period – this is how many years back you will enter inspection and maintenance data such as leak repairs, line locate tickets, etc. in the threat interviews. The default and minimum is 5 years and but you can change this to up to 10 years if you have the data. More years data = better DIMP plans.
- A LEAK management policy – Either select one of the two pre-written options in SHRIMP or if you already have a leak management plan that meets the rule's requirements enter a cross reference to that policy, and
- A program re-evaluation period, anywhere from 1 to 5 years.

You can go back and change these at any time by clicking on the Required Settings link in the menu bar on the left side of SHRIMP screens

## 3. **Complete threat interviews**

SHRIMP uses an interview process to assess each of the eight threats required by the DIMP rule. The 8 threats are:

1. Corrosion
2. Equipment Malfunction
3. Incorrect Operations
4. Material, Weld or Joint Failure
5. Excavation Damage
6. Natural forces
7. Other outside forces
8. Other Threats

Some of the threats are broken down into two or more subthreats. You must complete each threat and subthreat interview before going to Steps 4 and beyond. You can go back and change any of the information you provide in the threat interviews by clicking on the System Overview link on the menu then clicking on the blue "Review" link next to the threat interview in which you wish to make changes. Select the blue question number link by the question and the interview form will open. Make changes, but you may have to

re-complete all of the interview questions after that question if your change affects answers to later questions. This is described in more detail later in this users guide.

## Note

You can complete the first seven threat interviews in any order, however you **MUST** complete the first seven interviews before attempting to complete the "Other Threats" interview. The answers you provide in the Other Threats interview depend on the answers you provided in the other 7 threat interviews.

The threat interviews are intended to satisfy the following two requirements of the DIMP rule: Section 192.1007 (a) Knowledge and (b) Identify Threats. These requirements and the procedure followed by SHRIMP are further described in an attachment to this document.

### 4. Validate Risk Rankings

After all 8 threat interviews have been completed SHRIMP will rank each threat and section by relative risk, from highest to lowest, based on a numerical model that considers the likelihood and consequences were a segment of your system to fail due to the threat. A complete description of this risk ranking model is found in an appendix to this user's guide and an attachment to your written DIMP Plan created by SHRIMP.

Click on Risk Ranking in the left menu to open the risk ranking screen. If you entered any threats in the "Other Threats" interview those threats will be listed first with no assigned rank. These threats **MUST** be manually placed by the user where the user feels these threats belong in the list of threats. The process for that is described in further detail in the risk ranking section of the user's guide. You should not automatically accept SHRIMP's order of risk ranking. Review it, consider the summary description of why SHRIMP ranked each threat and, if you disagree with the order, rearrange the order of threats as you believe it should be, and be sure to enter a description of what factors you considered that led you to change the order. **This is a very important step!**

The risk ranking validation process is intended to satisfy the following requirement of the DIMP rule: Section 192.1007 (c) Evaluate and rank risk.

### 5. Select Additional Actions\*

After you are satisfied that all threat-sections are ranked in the correct order, the next step is to select additional actions you will undertake to reduce those threats. Additional actions means actions above and beyond what is required by pipeline safety regulations. Other than implementing a leak management program, the DIMP rule does not presume that any further additional actions are necessary. You must decide whether any of the threats pose a level of risk that warrants additional action. SHRIMP cannot make that determination. There is additional guidance on selecting additional actions in the additional actions section of this user's guide.

SHRIMP offers at least one additional action for each threat. Click on the blue Choose AAs link in the Risk Ranking screen to display a list of possible additional actions for that threat. If you decide additional actions are warranted you can select one or more of SHRIMP's additional actions or you can create your own by clicking on the Manage AAs link in the left-side menu in SHRIMP.

This step is intended to satisfy the following requirement of the DIMP rule: Section 192.1007 (d) Identify and implement measures to address risks.

### 6. Select Performance Measures

The next step is to select performance measures for each of the additional actions you selected in Step 5. If you didn't feel any threats warranted additional actions you can skip this step.

The process of selecting performance measures is identical to selecting additional actions in the prior step. Click on the Choose PMs link then select one or more of the displayed, threat-specific performance measures. You can create your own performance measures by clicking on Manage PMs in the left-side menu.

This step is intended to satisfy the following requirement of the DIMP rule: Section 192.1007 (e) Measure performance, monitor results and evaluate effectiveness.

#### 7. **Create Implementation Plan**

Now you are ready to review the actions required to implement your written DIMP plan. All of the actions required by the rule or selected by you in the additional actions and performance measures steps can be displayed by clicking on "Implementation Plan" in the left-side menu. The Implementation Plan should answer the questions of Who, What, When, Where and How each required action will be accomplished. Action items in your written DIMP Plan can be summarized in the following areas:

1. Describing how you will modify your procedures, policies and recordkeeping system(s) as necessary to collect and retain information required to be collected and retained under the DIMP plan, including mandatory performance measures and performance measures you selected in the previous step, and
2. Describing how you will implement any Additional/Accelerated Actions that you included in your written DIMP plan.

Each action item will be listed separately with a text box in which you must enter a description of how you will accomplish this action.

#### 8. **Download your written DIMP Plan**

When you are satisfied that Steps 1-7 are complete you should download your written DIMP plan to your computer. Click on Written Plan in the left-side menu and a list of download options will be displayed.

Review the Required Settings one more time to ensure your system name appears as you want it to appear in your Plan and that the other information is correct.

Click on Web Page Format to display the written plan on your web browser. You can do this at any time during the process of creating your plan to see how selections you have made up to that point affect what is written into your plan. It is recommended that you look at the Plan in the Web Page Format frequently as you work on Steps 1-7 to see how data you enter appears in your Plan – it may affect how you write some text that will go into your Plan.

You may save your plan to your computer as a Web Page using the Save command on your web browser.

Click on Microsoft WORD Document to download your plan as a WORD file that you can edit using Microsoft WORD or other word processing software. (Note that the translator that creates this file may lose some formatting of the Table of Contents and other portions of the Plan. We apologize for any inconvenience this may cause you. We are evaluating other options for creating WORD files.)

Click on Adobe PDF Format to download your written Plan as an Adobe PDF file.

## **SHRIMP Procedures Compared To DIMP Rule Requirements**

This section describes the procedures to be followed to develop and implement the 7 required elements of the Distribution Integrity Management Programs (DIMP) written Plan. For each required element the text of the DIMP rule is provided, followed by a description of the procedure to develop and implement that element.

### a. Knowledge

**The Rule:** An operator must demonstrate an understanding of its gas distribution system developed from reasonably available information.

1. Identify the characteristics of the pipeline's design and operations and the environmental factors that are necessary to assess the applicable threats and risks to its gas distribution pipeline.
2. Consider the information gained from past design, operations, and maintenance.
3. Identify additional information needed and provide a plan for gaining that information over time through normal activities conducted on the pipeline (for example, design, construction, operations or maintenance activities).
4. Develop and implement a process by which the IM program will be reviewed periodically and refined and improved as needed.
5. Provide for the capture and retention of data on any new pipeline installed. The data must include, at a minimum, the location where the new pipeline is installed and the material of which it is constructed.

**The Procedure:** (Numbers in parenthesis refer to the requirements shown above)

(1 & 2) During the 8 threat assessments SHRIMP asks questions about the user's system design, operations and environmental factors necessary to assess the applicable threats and risks to distribution pipeline integrity. The user should refer to current and past design, construction, operation, inspection and maintenance records, as well as the knowledge of utility personnel to accurately answer questions posed by SHRIMP. SHRIMP includes a Data Source field with each question for the user to record the source of information used to answer each question. Information entered into this field will be included in an attachment to the written DIMP plan along with a complete list of questions answered during the SHRIMP process. Where past data is requested by SHRIMP, a minimum of the previous 5 years' data is requested, however if more than 5 years' data is readily available the user is encouraged to use that data as well.

In addition, during the Risk Ranking Validation step, the user should consider any additional factors that may affect the probability and/or consequences of a failure of a particular section of distribution piping but that were not asked about by SHRIMP. Examples could include pipe located near hospitals, schools, nursing homes or other difficult to evacuate facilities; environmental factors such as soil corrosivity; and more. During the Risk Ranking Validation step, any additional knowledge considered by the user to change the relative risk ranking of any section should be described in the text box provided by SHRIMP. This description will be written into the written DIMP Plan in the Risk Ranking section.

(3) If any of the design, construction or environmental factors requested by SHRIMP are not readily available the user should answer "I don't know." SHRIMP will then offer pre-written text describing how the user will gain that information over time through normal activities conducted on the pipeline. The user can accept SHRIMP's plan or enter their own description of how that knowledge will be gained. The SHRIMP text or the user's text will be included in the written DIMP plan.

(4) A process by which the IM program will be reviewed periodically and refined and improved as needed using SHRIMP is under development. This procedure will require the user to revisit each question answered in SHRIMP and either confirm the answer provided is still accurate or update the information. SHRIMP will generate a log of differences between the old plan to the new plan. SHRIMP will save a copy of the old plan for 10 years. The user is also encouraged to download the new and old plans for their records.

(5) SHRIMP includes an attachment that is the implementation plan. This attachment summarizes all the actions required to follow the DIMP plan, including capture and retention of data on any new pipeline installed. Since each user may have a unique recordkeeping system SHRIMP cannot advise the best way to track this data and instead provides a text box for the user to describe how these records will be captured and retained.

- b. Identify threats

**The Rule:** The operator must consider the following categories of threats to each gas distribution pipeline: Corrosion, natural forces, excavation damage, other outside force damage, material, weld or joint failure (including compression coupling), equipment failure, incorrect operation, and other concerns that could threaten the integrity of its pipeline. An operator must consider reasonably available information to identify existing and potential threats. Sources of data may include, but are not limited to, incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, and excavation damage experience.

**The Procedure:** SHRIMP uses an interview process to identify threats. The user must go through interviews for each of the eight threats listed above. In many cases there are two or more subthreat interviews within each threat interview. For example, the corrosion threat interview includes separate interviews for external, internal and atmospheric corrosion, and the external corrosion interview includes further separate interviews for different materials of construction (bare/coated, protected/unprotected steel, cast/wrought iron, etc.). These interviews ask for reasonably available information to identify existing and potential threats. All of the sources of data listed in the rule are directly asked for by SHRIMP except for continuing surveillance – continuing surveillance is the periodic review of other inspection and maintenance data to determine the continued serviceability of the pipe. If prior continuing surveillance reviews resulted in additional inspections or maintenance, the results of those actions should be entered into SHRIMP where SHRIMP asks for the results of such inspection and maintenance, therefore indirectly SHRIMP considers continuing surveillance records.

c. Evaluate and rank risk

**The Rule:** An operator must evaluate the risks associated with its distribution pipeline. In this evaluation, the operator must determine the relative importance of each threat and estimate and rank the risks posed to its pipeline. This evaluation must consider each applicable current and potential threat, the likelihood of failure associated with each threat, and the potential consequences of such a failure. An operator may subdivide its pipeline into regions with similar characteristics (e.g., contiguous areas within a distribution pipeline consisting of mains, services and other appurtenances; areas with common materials or environmental factors), and for which similar actions likely would be effective in reducing risk.

**The Procedure:** The SHRIMP Advisory Group developed a risk ranking model that assigns a numeric weighting to answers provided by the user. The risk ranking model is described in an attachment to this document.

Subdividing is not required by SHRIMP but encouraged where answers to SHRIMP threat assessment questions are different for different parts of the system. Many of the questions asked by SHRIMP during the threat assessment process are intended to assess the likelihood and consequences of a failure due to the threat being assessed. SHRIMP also asks questions to help determine if certain regions of the pipeline have similar characteristics and for which similar actions would be effective in reducing risk. If actual or potential threats identified during the threat assessment process are concentrated in certain areas, the user is encouraged to subdivide the system for that threat, separating the areas that have an actual or potential threat from those areas that don't. Subsections can be geographic, by material, by type of equipment (for equipment threat), by excavator crews or contractors (for excavation threat) or any other way of subdividing that makes sense for the user's situation.

If the user decides to subsection for any threat those subsections continue through the risk-ranking, implementing additional measures and performance measures steps. The system may be subdivided differently for each threat, since it is unlikely that an area at risk for one threat (e.g. external corrosion) would also be entirely at risk from another threat (e.g. natural forces).

d. Identify and implement measures to address risks

**The Rule:** Determine and implement measures designed to reduce the risks from failure of its gas distribution pipeline. These measures must include an effective leak management program (unless all leaks are repaired when found).

**The Procedure:** SHRIMP offers the user at least one option to reduce the risk from failure for each threat except "Other." In the risk ranking screen, clicking on "A/A's" brings up a list of potential additional/accelerated actions ("A/A Actions") that the SHRIMP Advisors have determined could be effective

in addressing the actual or potential threat. Some A/A Actions may be listed first because answers provided by the user during the threat assessment process suggests these A/A Actions are likely to be effective, whereas other A/A Actions that aren't expected to be effective are listed separately.

The user can select one or more of the A/A Actions included in SHRIMP, which will result in pre-written text being inserted into the "Implement Measures" section of written DIMP plan for the particular subsection of the system and threat. If the user has a better idea, or has already implemented action addressing this threat, the user should create a user-defined A/A Action and select that A/A Action for this threat and subsection. What the user writes when defining the A/A Action will be written into the written DIMP plan.

For some threats SHRIMP will recommend that the user initiate some A/A Action to reduce risk. For most threats the SHRIMP advisors could not agree on any relative risk score or combination of threat interview answers that should automatically require the user to specify an A/A Action. It is therefore up to the user to use his/her best judgment as to which threat-segments merit additional actions to reduce risk. The DIMP rule does not presume that every operator needs to implement additional measures.

If a user elects to include additional measures to reduce risk for any of the threats and/or subdivisions of the distribution system, SHRIMP will offer one or more options for performance measures specific to that threat and subdivision. The user may select pre-written text offered by SHRIMP or substitute a user-defined performance measure. The user is required to select at least one threat and subdivision-specific performance measure for every additional action selected in the previous step.

At the end of the SHRIMP process, SHRIMP displays a list of action items, including mandatory performance measures [(i) through (v) in the next section] and any threat-specific additional measures the operator determines are needed to evaluate the effectiveness of the operator's IM program in controlling each identified threat. The user is asked to describe in a text box how each action will be implemented and that information is included in the Implementation Plan included as an attachment to the written DIMP plan.

e. Measure performance, monitor results and evaluate effectiveness

**The Rule:** Develop and monitor performance measures from an established baseline to evaluate the effectiveness of its IM program. An operator must consider the results of its performance monitoring in periodically re-evaluating the threats and risks. These performance measures must include the following:

- i. Number of hazardous leaks either eliminated or repaired as required by Sec. 192.703(c) of this subchapter (or total number of leaks if all leaks are repaired when found), categorized by cause;
- ii. Number of excavation damages;
- iii. Number of excavation tickets (receipt of information by the underground facility operator from the notification center);
- iv. Total number of leaks either eliminated or repaired, categorized by cause;
- v. Number of hazardous leaks either eliminated or repaired as required by Sec. 192.703(c) (or total number of leaks if all leaks are repaired when found), categorized by material; and
- vi. Any additional measures the operator determines are needed to evaluate the effectiveness of the operator's IM program in controlling each identified threat.

**The Procedure:** The written plan created using SHRIMP includes a section stating that the operator will keep records necessary to report performance measures.(i) through (v). These performance measures must be captured and recorded outside of SHRIMP – SHRIMP does not currently include a recordkeeping or performance measure tracking mechanism, although those enhancements are contemplated in future upgrades.

Where a performance measure requires data that has not previously been collected and retained by the operator, the baseline for such performance measures will be the first year such data is collected and retained. Where the operator does have past data for any performance measure, the user must establish a baseline based

on that historical data. The baseline should be included in the implementation plan text for that performance measure.

At the end of the SHRIMP process, SHRIMP displays a list of action items, including mandatory performance measures (i) through (v) above and any threat-specific additional measures the operator determines are needed to evaluate the effectiveness of the operator's IM program in controlling each identified threat. The user is asked to describe in a text box how each action will be implemented and that information is included in the Implementation Plan included as an attachment to the written DIMP plan.

f. Periodic Evaluation and Improvement

**The Rule:** An operator must re-evaluate threats and risks on its entire pipeline and consider the relevance of threats in one location to other areas. Each operator must determine the appropriate period for conducting complete program evaluations based on the complexity of its system and changes in factors affecting the risk of failure. An operator must conduct a complete program re-evaluation at least every five years. The operator must consider the results of the performance monitoring in these evaluations.

**The Procedure:** The SIF is currently working on a procedure to use SHRIMP to automate the re-evaluation process. SHRIMP includes in the written plan a requirement for periodic complete program re-evaluations at least once every 5 years and more often if certain conditions are met. The user should consider additional events that might trigger a complete program re-evaluation.

A re-evaluation using SHRIMP is essentially revisiting each SHRIMP interview screen to verify the answer is still valid or updating information as necessary. The risk ranking screen must be reviewed to ensure it is still accurate. The user must review each of the 5 mandatory performance measures described above and any threat-specific performance measures included in the written plan and compare results to the baseline [Note: Where a performance measure requires data that has not previously been collected and retained by the operator, the baseline for such performance measures will be the first year such data is collected and retained.] Particular attention should be given to the threat-specific performance measures that measure the effectiveness of specific A/A Actions. If one or more of these performance measures indicates that the A/A Action is not effective, the user should consider modifying the A/A Action and/or implementing additional A/A Actions.

g. Report results

**The Rule:** Report, on an annual basis, the four measures listed in paragraphs (e)(1)(i) through (e)(1)(iv) of this section, as part of the annual report required by Sec. 191.11. An operator also must report the four measures to the state pipeline safety authority if a state exercises jurisdiction over the operator's pipeline.

**The Procedure:** The SHRIMP written DIMP Plan includes a Section on reporting results, listing procedures for reporting to both the federal and state pipeline safety agencies. Currently data to report these performance measures must be collected and retained outside of SHRIMP, however the APGA Security and Integrity Foundation (SIF) may modify SHRIMP to enable it to retain and submit these performance measures as well as mechanical fitting failure data and other data required by Distribution Annual Report Form 7100.1-1.

## 11.3.2. Relative Risk Model

The centerpiece of the Simple, Handy, Risk-based Integrity Management Plan (SHRIMP) is the risk ranking model. SHRIMP uses an index model in which numeric scores are assigned based on answers provided by the user to questions asked by SHRIMP. The index model was developed by the APGA Security and Integrity Foundation (SIF) with guidance by an advisory group comprised of industry and federal and state pipeline safety regulators.

Risk is the product of the probability of a failure times the consequences of a failure. The SHRIMP relative risk model considers both the probability and consequences of a failure for each of the eight threats. The equation is as follows:

**Table 11.25.**

Relative Score	Risk = Probability Score x Consequence Score x Leak History x Incident Probability
	(Normalized to 1 - 10)
	(1.0 - 1.5)
	Factor (1 + % of Lks)
	Factor (1.0 or 1.25)

Each of the four components that go into the relative risk score are described in the following sections.

**Probability Score** is the sum of points assigned by answers to threat interview questions. Each segment receives a relative probability score for each threat based on the answers to a series of questions. The probability questions are based on the GPTC DIMP guidance, as modified and added to by the SIF SHRIMP Advisors. The weighting given to each possible answer are based on the knowledge and experience of the SHRIMP Development Team and the SHRIMP Advisors.

**Table 11.26. Probability Scores**

Threat	Subthreat category	Maximum Score	Minimum Score	Incident Probability Factor
Natural Forces	No subthreats	19	0	1
Other Outside Forces	No subthreats	12	0	1.0
Excavation Damage	Grouping by 39 concentration of damages or tickets	39	0	1.25
	Grouping by operator crew or operator contractor damage	34	0	1.25
	Grouping by Third Party Damage	31	0	1.25
	Blasting	15	0	1.25
Corrosion	External Corrosion	16	1	1
	Internal Corrosion	30	1	1
	Atmospheric Corrosion	25	1	1
Incorrect Operations	Failure to Follow Procedures	5	1	1.25
	Inadequate Procedures	5	1	1.25
	Operator Qualification	5	1	1.25
	Drug & Alcohol	5	1	1.25
Equipment	No subthreats	5	1	1
Material, Welds or Joints	No subthreats	5	1	1
Other	No subthreats	None (User assigns rank)		1

Because there are different numbers of questions for each threat and subthreat, the maximum possible score for each threat and subthreat are different, therefore the probability score for each threat-segment is normalized to a scale of 1 - 10 using this equation:

$$\text{Normalized probability score} = 1 + (9 \times (\text{subthreat score} - \text{subthreat minimum score}) / (\text{subthreat maximum score} - \text{subthreat minimum score}))$$

For example, if a segment received a score of 9 for external corrosion the normalized probability score would be  $1 + (9 \times (9-1)) / (16-1) = 1 + 9 \times 8/15 = 5.8$

### Incident Probability Factor

The normalized probability factor described above is useful to rank various sections by the probability of a failure occurring within each of the eight threats, but SHRIMP also must rank sections across the eight threats. Failures due to some threats are more likely to cause death, injury or significant property loss than other threats. DOT Distribution Annual and Incident Report data shown below provide an indication of how likely it is that a failure (e.g. leak) due to one of the 8 threats will result in death, injury or significant property loss.

**Table 11.27. Incident Probability Factor**

Reported Incidents and Failures 2005-2007	Cause of Failures	# of Incidents	# of Failures	Incidents/1000 Failures	Normalized to Corrosion
Corrosion		6	293,933	0.02	1
Excavation Damage		73	338,666	0.22	11
Incorrect Operations		8	30,145	0.27	13
Material, Weld or Joint Failure		8	147,384	0.05	3
Equipment Failure		6	140,442	0.04	2
Natural Force Damage		22	77,229	0.28	14
Other Outside Force Damage		39	37,426	1.04	51
All Other Causes *		NA	NA	NA	

\* Excluding Fire First Incidents

The results of this analysis find that failures due to three threats (corrosion, material failure and equipment failure) are least likely to result in reportable incidents, that failures due to excavation damage, incorrect operations and natural force damage are moderately likely to result in reportable incidents and that other outside force damage failures are most likely to result in reportable incidents.

The advisors agreed to assign an Incident Probability Factor of 1.0 (no increase in relative risk score) for Corrosion, Materials/Welds, Equipment, and Other Outside Force Threats where it is relatively unlikely a failure will result in a reportable incident. For Excavation, Incorrect Operations, and Natural Force Threats where it is relatively more likely that a failure will result in a reportable incident the advisors agreed on an Incident Probability Factor of 1.25 (e.g. a 25% increase in relative risk score for these threats).

Further investigation of the "other outside force" category revealed that virtually all the incidents involved vehicles striking above ground facilities, usually meter sets. The SHRIMP advisors agreed with the PHMSA Phase I report conclusions that there was not enough information to conclude that vehicular damage could have been anticipated at the location of these incidents or whether meter protection existed, therefore no additional weighting is provided for this threat. SHRIMP does, however, include assessment of vehicle damage in the threat assessment and offer additional/accelerated actions if vehicular damage is found to be a significant threat.

If the user sections the system by geographic area, the **Consequence Score** is determined by points assigned based answers to threat interview questions as follows:

**Table 11.28. Consequence Score (Geographic Area Sections)**

<b>Question</b>	<b>Possible Answers</b>	<b>Weighting</b>
CSQ-1 Are the pressure and/or diameter of this section greater than or about the same as the system as a whole?	Substantially greater	0.2
	Somewhat greater	0.1
	About the same	0
CSQ-2 Is this section predominantly located in business districts or outside business districts (as those are defined for leak survey)?	Within Business Districts	0.15
	Outside Business Districts	0
CSQ-3 How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure?	Less than one (1) hour	0
	Between one (1) and two (2) hours	0.025
	More than two (2) hours	0.05
CSQ-4 What would be the impact on the utility and its customers if this section were to fail?	Low	0
	Moderate	0.05
	High	0.1

The base consequence factor is 1.0

1. Greater pressure and/or diameter can increase the consequence factor by up to 20% (1.0 to 1.2)
2. Sections predominantly within business districts get an additional 15% increase in the consequence factor
3. The time to respond to a failure results in an increase in consequence factor of up to 5% (1.0 to 1.05)
4. The significance of the facility can result in an increase in consequence factor of up to 10% (1.0 to 1.1)

These weightings are based on the knowledge of the subject matter experts on the SHRIMP Advisory Group. These increases are added together to calculate the consequence factor for the section. If all four questions were answered so that maximum scores were assigned, the consequences factor would be 1.50 (1.2 + 1.15 + 1.05 + 1.1). The overall relative risk score would be increased by 50%.

If all four questions are answered so the minimum scores are assigned, then the consequence factor will be 1.0 and the relative risk score would be unchanged by this factor.

If the user does not create subsections for a threat, then these consequence questions are not asked.

For the threats shown below where the geography based threat questions do not apply the following threat specific consequence questions are asked:

**Table 11.29. Consequence Score (Non-Geographic Area Sections)**

<b>Question</b>	<b>Possible Answers</b>	<b>Weighting</b>
CSQ-EXC1 Have the (crews/contractors/excavators) identified for this section caused damage that resulted in a reportable incident?	Yes	0.3

	<b>Question</b>	<b>Possible Answers</b>	<b>Weighting</b>
		No	0
CSQ-EXC2	Considering disruption of service and cost to return the system to service, how serious are the damages caused by the (crews/contractors/excavators) identified for this section when compared to all other excavation caused damages?	More serious	0.3
		Less serious	0
		About the same	0.1
CSQ-GEN1	What would be the potential consequences (injuries and/or property loss) if a failure were to occur because of this problem?	High likelihood of serious injury and/or property loss	0.5
		Moderate likelihood of injury and/or property loss.	0.25
		Not likely to result in injury and/or property loss.	0
EQIPCSQ-1	Is the size/capacity of the equipment substantially greater or lesser than other equipment in the system as a whole?	Substantially greater	0.2
		Somewhat greater	0.1
		About the same	0
EQIPCSQ-2	Does the equipment primarily affect the system located in the business district?	Within Business Districts	0.15
		Outside Business Districts	0
EQIPCSQ-3	How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure?	Less than one (1) hour	0
		Between one (1) and two (2) hours	0.025
		More than two (2) hours	0.05
EQIPCSQ-4	What would be the impact on the utility and its customers if this equipment were to fail?	Low	0
		Moderate	0.05
		High	0.1

### **Leak Cause Factor**

While most leaks are repaired without incident, the SHRIMP advisors felt that the users integrity management plan should consider the relative percentage of leaks by cause.

The Leak Cause Factor equals 1 + the percentage of leaks associated with threat to the total number of leaks for the system.

If the number of total leaks over a five year period are less than 50, the national average is used rather than the user's leak history data because with fewer than 50 leak repairs the relative percentages of leaks by cause may be skewed by a handful of leak repairs that are not representative of the system. The national average is shown below, taken from leak repair data reported to PHMSA by all distribution operators on Annual Report Form 7100.1-1..

**Table 11.30. Reported Cause Of Failures (2005-2009)**

<b>Threat</b>	<b>Failures</b>	<b>Percent</b>	<b>Leak History Factor</b>
Corrosion	399,378	26	1.26
Excavation Damage	161,079	11	1.11
Incorrect Operations	38,416	3	1.03
Material, Weld or Joint Failure	155,255	10	1.10
Equipment Malfunction	326,793	21	1.21
Natural Force Damage	82,565	5	1.05
Other Outside Force Damage	40,529	3	1.03
All Other Causes	329,401	21	NA *
Totals	1,533,416	100	

\* Since the threat category "Other" is not assigned a relative risk score by SHRIMP the leak history factor is not used for that threat.

# **Chapter 12. REFORMAT TEMPLATE Heading 1**

This chapter is used by the word reformatting macros.

## **REFORMAT TEMPLATE Sub Heading 1**

### **12.1. REFORMAT TEMPLATE Heading 2**

#### **REFORMAT TEMPLATE Sub Heading 2**

##### **12.1.1. REFORMAT TEMPLATE Heading 3**

###### **REFORMAT TEMPLATE Sub Heading 3**

###### **REFORMAT TEMPLATE Heading 4**

###### **REFORMAT TEMPLATE Sub Heading 4**

###### **REFORMAT TEMPLATE Heading 5**

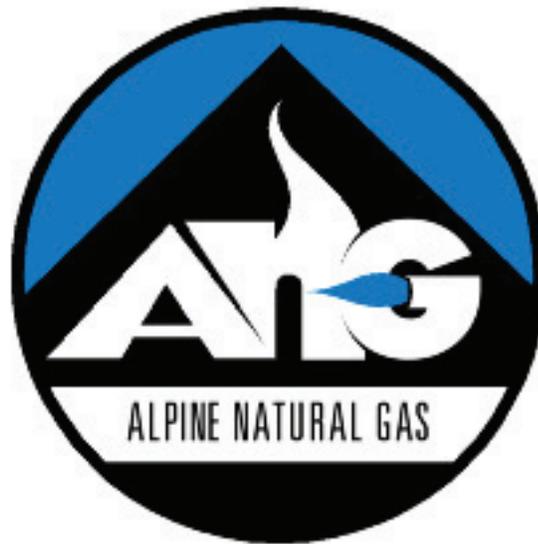
###### **REFORMAT TEMPLATE Sub Heading 5**

# **Alpine Natural Gas**

## Appendix C

### Pipeline Operator Qualification Plan

# OPERATOR QUALIFICATION PLAN



**Effective Date**  
**March 17, 2004**

**Review/Revision Date: April 25, 2013**

## Table of Contents

<b>Part One: Purpose and Scope .....</b>	<b>2</b>
<b>Part Two: Employee Responsibilities.....</b>	<b>3</b>
<b>Part Three: Identification of Covered Tasks.....</b>	<b>4</b>
<b>Part Four: Evaluation method.....</b>	<b>5</b>
<b>Part Five: Identification of persons performing covered tasks .....</b>	<b>5</b>
<b>Part Six: Re-evaluation of a person’s qualifications .....</b>	<b>6</b>
<b>Form OQ-1 – Re-Qualification for cause or poor Task Performance .....</b>	<b>7</b>
<b>Part Seven: Qualification of contractor employees to perform covered tasks .....</b>	<b>7</b>
<b>Part Eight: Operations and Maintenance Employees.....</b>	<b>9</b>
<b>Part Nine: Incorporation by reference of operator qualification plans of companies with which ANG has mutual assistance plans. ....</b>	<b>10</b>
<b>Part Ten: Plan review for Assessment of Improvement.....</b>	<b>10</b>
<b>Attachment A-1: Identified Covered Tasks, KSA’s Required for Qualification, and Identified Re-evaluation Intervals .....</b>	<b>12</b>
<b>Attachment A-2: Covered Tasks and Identified Abnormal Operating Conditions (AOC’s).....</b>	<b>12</b>
<b>Attachment B: Qualification and Evaluation Incorporated by Covered Task .....</b>	<b>25</b>
<b>Attachment C: Evaluation Methods Incorporated by Reference.....</b>	<b>30</b>
<b>Attachment D: Incorporation by Reference of Qualification Requirements of Companies for Performing Certain Covered Tasks in Emergencies...63</b>	<b>63</b>
<b>Attachment E: Annual Administrator’s Plan Review.....</b>	<b>64</b>
<b>Attachment F: Contractor OQ Plan .....</b>	<b>65</b>

## Part One: Purpose and Scope

### 1.1 Scope

This Operator Qualification Plan (OQ Plan) prescribes requirements for evaluating the qualifications of all persons performing certain operating and maintenance tasks listed in this OQ Plan on Alpine Natural Gas Operating Co. No. One, LLC, hereinafter referred to as ANG, natural gas pipeline system. It is adopted to comply with minimum pipeline safety regulations at 49 CFR Part 192, Subpart N.

No company employee, employee of a contractor or any other person may perform any covered task identified in this Plan unless the requirements of this Plan have been satisfied. It is our responsibility to 1) ensure that all our employees and employees of our contractors are qualified in accordance with this Plan and 2) to maintain adequate records to document these qualifications.

In addition to qualifications for covered tasks, this Plan may include qualification, training and/or testing that is not required or regulated under 49 CFR 192 Subpart N. These qualification requirements are included here for the convenience of ANG in order to consolidate all qualification requirements into one plan. **Pursuant to determinations made during the rulemaking process, these non-regulated training and evaluation procedures, voluntarily added to this Plan by ANG, are NOT subject to review or enforcement by federal or state regulators under 49 CFR 192 Subpart N.**<sup>1</sup>

### 1.2 Purpose

The purpose of this Plan is to ensure safe and efficient natural gas service by:

- Establishing objective criteria of required qualifications for all persons performing safety-sensitive operations and maintenance tasks on ANG's gas piping system,
- Ensuring through evaluation that each person performing safety sensitive tasks on ANG's pipeline system is able to perform these tasks and recognize and respond appropriately to abnormal operating conditions they may encounter, and
- Maintaining necessary records to administer this Plan.

### 1.3 Definitions

Unless another meaning is specifically indicated, when used in this plan:

1. *Abnormal operating condition* means a condition identified by ANG that may indicate a malfunction of a component or deviation from normal operations that may result in a condition exceeding design limits or hazard(s) to persons, property, or the environment.
2. *Covered task* means any task that:
  - Is performed on a pipeline facility;
  - Is an operations or maintenance task;
  - Is performed as a requirement of 49 CFR Part 192; and
  - Could affect the operation or integrity of the pipeline.
3. *Evaluation* means a process, established and documented by ANG, to determine an individual's ability to perform a covered task by any of the following: written examination; oral examination; work performance history review; observation during (a) performance on the job, (b) on the job training, (c) simulations; or other forms of assessment.

<sup>1</sup>"The operator may expand any of the seven required elements and add additional elements to their program but will only be held accountable to meet the requirements of this Subpart." 63 Fed Reg 57275

4. *Operator* means ANG.
5. *Person* means any individual, firm, joint venture, partnership, corporation, association, State, municipality, cooperative association, or joint stock association, and including any trustee, receiver, assignee, or personal representative thereof.
6. *Pipe* means any pipe or tubing used in the transportation of gas, including pipe-type holders.
7. *Pipeline* means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.
8. *Pipeline facility* means new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.
9. *Qualified* means that an individual has been evaluated and can (a) perform assigned covered tasks and (b) recognize and react to abnormal operating conditions.

## **Part Two: Employee Responsibilities**

### **2.1 Plan Administration**

The ANG Manager is designated as Plan Administrator and is responsible for the total administration of this Plan:

Plan administration includes: maintenance of the complete OQ Plan, including material incorporated by reference; distribution of up-to-date copies of the Plan to appropriate personnel; making the Plan available for inspection by authorized agents of regulatory agencies; ensuring that all milestones, periodic evaluation intervals, etc. are conducted as specified in this Plan; notifying all company employees in advance of the date that an employee's current qualification will expire; scheduling evaluations; recording the results of evaluations; maintaining a current list of qualified employees; monitoring federal and state regulations that affect this Plan; and such other activities as are necessary to carry out the scope and purpose of this Plan.

### **2.2 General Employee Responsibilities**

All employees are expected to be aware that covered tasks (listed in Attachment A to this Plan) may only be performed by persons qualified under this Plan. Any employee observing any of these covered tasks being performed on ANG's pipeline facilities by a non-qualified person must immediately report this condition to the Plan Administrator, in addition to any specific responsibilities listed below.

#### **EXCEPTION:**

A non-qualified person(s) may perform a covered task if that person(s) is directed and observed by an individual that is qualified under this Plan to perform that covered task. For the purpose of this Plan, directed and observed means that the qualified person is at the site where the covered task is being performed by the person(s) not qualified for this task and is closely watching each step of the work to ensure it is performed correctly. It is not sufficient that the qualified person be in the general vicinity, but not observing each step of the task. One qualified person may direct and observe more than one non-qualified person at one time performing one or more covered tasks, however the number of non-qualified persons watched by one qualified person should be kept to a minimum consistent with the ability of the qualified person to observe and direct the performance of the covered task(s).

## **2.3 Specific Responsibilities**

- 2.3.1 The Plan Administrator is responsible to ensure that all contracts for the performance of operations and maintenance tasks on company facilities incorporate the list of covered tasks in Attachment A and stipulate that no contractor employee may perform any of these tasks unless the contractor has first provided the company with evidence that these employees are qualified in accordance with the requirements of this Plan. See Part Seven of this Plan for more details on contractor qualification.
- 2.3.2 Construction Inspectors are responsible to ensure that on all the job sites for which they are responsible that ANG and contractor personnel are aware of those tasks in Attachment A for which qualification is required and that non-qualified persons may not perform these tasks unless directed and observed by a qualified person. Work must be immediately stopped on any job where it is discovered that non-qualified workers are performing covered tasks listed in Attachment A unless that person is directed and observed by a person who is qualified for that task. Routine inspection procedures should include review the qualifications of personnel.
- 2.3.3 Supervisors are responsible to ensure that their subordinates are aware of the current list of covered tasks in Attachment A and that they are not to perform these tasks unless they possess current qualifications from the company to perform these tasks or are directed and observed by a qualified person. Supervisors should obtain an up-to-date list of the qualifications of their subordinates from the Plan Administrator.

Supervisors are to immediately report to the Plan Administrator if they have reason to believe that any of their subordinates are no longer qualified. Reasons to believe a person is no longer qualified may include observations of errors made by that employee while performing a task or other reasons.

## **Part Three: Identification of Covered Tasks**

### **3.1 Responsibility**

The Plan Administrator is responsible for maintaining an up-to-date listing of covered tasks and must approve modifications or additions to the covered task list. The rationale for any changes to the covered task list shall be recorded by the Plan Administrator.

### **3.2 Identifying covered tasks**

Covered tasks include those tasks that:

- Are performed on a pipeline facility;
- Are an operations or maintenance task;
- Are performed as a requirement of 49 CFR Part 192; and
- Could affect the operation or integrity of the pipeline.

Tasks that have been evaluated against the four-part tests are listed in Attachment A to this Plan. The Plan Administrator shall apply the four-part test to determine whether any new activities not addressed in Attachment A are or are not covered tasks when performed on ANG facilities.

### **3.3 Records**

The current list of covered tasks is shown as Attachment A to this Plan.

## **Part Four: Evaluation method**

### **4.1 Responsibility**

Initial and subsequent evaluation methods for qualification to perform covered tasks listed in Attachment A are Knowledge based online computer training presentations with written examinations (Attachment D), and Skills and Abilities evaluations listed in Attachment B. Records of completed evaluations are the responsibility of Plan Administrator.

### **4.2 Specified evaluation methods**

The required evaluation(s) for each covered task shall be maintained by the Plan Administrator and are identified as the Knowledge based classroom or computer module presentation (with written examinations) listed in Attachment B. Alpine has adopted Mid West Energy Association (MEA) Operator Qualification program or equivalent program procedures. This program covers the knowledge, skill, and abilities requirements set forth in the rules and regulations.

### **4.3 Re-evaluation intervals**

ANG has chosen to establish re-evaluation in 48 month interval not to exceed 51 months for each qualified task generally via courses from MEA's "Energy U". ANG may evaluate more frequently especially complex, infrequently-performed, safety-critical knowledge and skill elements of a task than the simple, frequently-performed aspects of the same task.

- The complexity of the knowledge and/or skills being evaluated (i.e. the "learning objective"); greater complexity requires more frequent re-evaluation, The frequency with which the learning objective will be applied by the person being qualified during the course of his/her work for ANG; greater frequency requires less frequent re-evaluation, and Re-evaluation intervals for evaluations for MEA Energy U training program of 48 months is appropriately evaluated yearly.

### **4.4 Work Performance History Review**

Work performance history may be used as a supplement for overall evaluation.

## **Part Five: Identification of persons performing covered tasks**

### **5.1 Responsibility**

The Plan Administrator is responsible for identifying those employees who perform covered tasks during the course of their work on ANG's system and shall schedule each employee for evaluation of his/her qualifications to perform each covered task. Evaluation shall be done using one of the evaluation methods identified in Part Four of this Plan. The Plan Administrator shall maintain records of persons and the covered tasks they are qualified to perform.

### **5.2 Recordkeeping**

The Plan Administrator shall maintain the following minimum records

- Identification of qualified individual(s)
- Identification of the covered task(s) each individual is qualified to perform;
- Date(s) of current qualification; and
- Qualification method(s).

The Plan Administrator shall also maintain records of all actions performed as requirements of this OQ Plan:

- Processes for identification of covered tasks,

- Evaluation records
- Investigations of incidents
- Re-evaluation on reasonable suspicion
- Communication of changes

### **5.3 Record Retention**

All records required by this Plan must be retained for 5 years after the record is no longer required to document the qualification of any person to perform a covered task. An evaluation record may be discarded five years after:

- A person ceases to perform a covered task on ANG's system, or
- A person has successfully retaken the evaluation

## **Part Six: Re-evaluation of a person's qualifications**

### **6.1 Responsibility**

The Plan Administrator is responsible for tracking the expiration dates of the qualifications for each company employee and notifying the employee before any required evaluation will expire. The Plan Administrator is responsible for scheduling re-evaluation activities prior to the expiration date of qualifications for each employee.

#### **6.1.1 Re-evaluation upon reason to believe that the individual is no longer qualified**

Each employee is responsible for notifying the Plan Administrator whenever he/she has reason to believe that any person working on the ANG system is no longer qualified to perform a covered task. Reasons may include, but are not limited to, observation that an employee or employee of a contractor is improperly performing a task, observable loss of motor skills or other reasons that indicate a person may no longer be able to perform a task. The Plan Administrator shall investigate and require re-evaluation in the covered task. **Form OQ-1** shall be completed for each task and person for which work performance has been documented as poor or the subject employee has been found to be involved in a reportable incident per 49 CFR §191.3. The results of the investigation shall be recorded and maintained for 5 years.

#### **6.1.2 Re-evaluation of persons implicated in a reportable incident**

Investigation of reportable incidents<sup>2</sup> shall include assessment of whether any person's performance of a covered task may have caused or contributed to the severity of the incident. If the Plan Administrator determines that an ANG employee's or contractor employee's performance of a covered task contributed to a reportable incident, qualifications related to the incident shall be re-evaluated. The results of the investigation shall be recorded using **Form OQ-1** and maintained for 5 years.

#### **6.1.3 Communication of changes in procedures, equipment, regulations, etc.**

The Plan Administrator shall monitor changes in regulations, procedures, technology, new equipment, etc. that may affect the performance of a covered task and shall determine if these changes are so substantial as to require re-evaluation of the qualifications of each person qualified to perform each covered task affected by the change. The Plan Administrator shall determine whether the evaluation method(s) must be changed as a result of the changes.

<sup>2</sup> Reportable incidents are any accident involving a release of gas that results in a death, injury requiring hospitalization or property loss exceeding \$50,000

## 6.2 Re-evaluation

As soon as possible after determining that re-evaluation is necessary under section 6.1 of this Plan, the Plan Administrator shall schedule a re-evaluation of qualifications. Until such re-evaluation is successfully completed, the affected person shall be considered non-qualified for any task that requires successful completion of the evaluation(s) in question and may not perform the covered task unless directed and observed by a person who is qualified to perform the covered task. The person may, however, continue to be qualified for other covered tasks that do not require the evaluation(s) in question. All re-evaluation records shall be documented and maintained by the Plan Administrator.

Last Name:	First Name:	ID #:
Task:		

## Form OQ-1 – Re-Qualification for cause or poor Task Performance

This form is to be used to re-qualify persons to perform covered task based on involvement related to a reportable incident per 49 CFR §191.3, or demonstrated poor work performance.

### *Results of records review*

	Yes	No	N/A
<u>Review performance reviews for past 5 years.</u> Do these include statements about how this person performs this task? If yes, describe on a separate page and attach to this form. Attach copies if possible.			
<u>Implicated in accidents/poor performance.</u> Has this person been cited for poor performance of this task or ever been implicated in an accident or near-miss caused by performance of this task? If yes, describe on a separate page and attach to this form. Attach copies if possible.			
<u>Evidence of prior training or certification.</u> Are there records that this person attended and successfully completed training programs directly related to this task? Attended seminars? Does the person possess certification in relevant skills (e.g. NACE certification)? Attach copies of relevant records			

Reviewer(s):

Date: \_\_\_/\_\_\_/\_\_\_

## Part Seven: Qualification of contractor employees to perform covered tasks

### 7.1 Responsibility

ANG is responsible for assuring that contractor employees and employees of their subcontractors are qualified if they are to perform covered tasks on ANG's piping system.

## **7.2 Evaluation of contractor employees**

Contractors and other non-Alpine (ANG) employees who perform covered tasks on ANG facilities must be qualified including recognition of AOC's, if they perform any of the covered tasks listed in Attachment A.

Qualification may be accomplished by any one of the following:

- a) ANG may evaluate the contractor employees using the evaluations required of ANG employees performing the same task(s) listed in Attachment B, or
- b) Contractors and other non-ANG employees who perform covered tasks on ANG facilities included in Attachment A may provide evidence that all contract personnel have completed evaluations equivalent to those listed in Attachment B for the covered tasks they will perform, ANG has reviewed and adopted the evaluation methods used by contractors as approved methods for qualifying contractors or as an accepted equivalent alternative method to that found in Attachment B, or
- 3) ANG has reviewed and adopted certain 3<sup>rd</sup> party certification/qualification programs as accepted evaluation methods for certain covered tasks. Contractor personnel possessing current qualifications from these 3<sup>rd</sup> parties may be accepted by ANG as evidence of qualification.

Contractor or 3<sup>rd</sup> party OQ Plans when accepted are placed as an attachment in ANG's OQ Plan.

## **7.3 Notification of substandard performance of a covered task by a contractor**

The Plan Administrator should be notified immediately if any ANG employee has reason to suspect that a contractor employee is not qualified to perform a covered task. Such reason could include, but is not limited to, observation of significant failure to follow procedures. In cases where a 3<sup>rd</sup> party has qualified the contractor employee, the Plan Administrator should also notify the 3<sup>rd</sup> party qualification agency. ANG may decide to either discontinue allowing the subject contractor employee from performing covered tasks on ANG facilities, or re-qualify the contractor employee according to the provisions set out in section 6.2.

## Part Eight: Operations and Maintenance Employees

### 8.1 Identification

<u>Employee Name</u>	<u>Employee Job Title</u>	<u>Employee Hire Date</u>	<u>Last Re-Qual. Date</u>
LARRY OLIVEIRA	GAS OPERATIONS SUPRV.	9-04-2001	Jan-2012
MATT HELM	GAS OPERATIONS	3-28-2007	Jan-2012

## **Part Nine: Incorporation by reference of operator qualification plans of companies with which ANG has mutual assistance plans.**

In the event of major natural disasters or other emergencies, ANG may utilize employees of other gas companies to restore natural gas service to ANG customers. These individuals may be required to perform certain covered tasks on ANG's facilities. In order to allow this mutual assistance to occur without violating 49 CFR 192 Subpart N, ANG has incorporated by reference in Attachment C to this Plan the qualification requirements of companies whose employees ANG might utilize for certain covered tasks.

### **9.1 Responsibility**

The Plan Administrator is responsible to identify covered tasks in Attachment A of this Plan that ANG might utilize borrowed employees to perform under mutual assistance arrangements. The Plan Administrator shall also identify companies with whom ANG would be likely to rely upon for emergency assistance and request a copy of the qualification requirements these companies have established for these covered tasks. These qualification requirements, found in Attachment C of this Plan have been evaluated and are incorporated by reference into this Plan as acceptable alternative methods of qualification for the covered tasks listed.

In the event ANG is offered and accepts assistance from a company through California Utilities Emergency Association specifically listed in Attachment D, the Plan Administrator shall obtain and incorporate the qualification requirements of that company into Attachment D as soon as possible.

## **Part Ten: Plan review for Assessment of Improvement**

ANG will perform an annual review of the Operator Qualification Plan including covered tasks listed in Attachment A, skills and abilities evaluations listed in Attachment B, knowledge based classroom presentations and associated written examinations listed in Attachment D, as well as re-evaluation intervals listed in Attachment E. This review will include an assessment for improvement of any and all segments of the OQ Plan. The Plan Administrator will maintain a copy of the results of this review including all decisions to delete, add, and revise the subject plan segments as well as the particular rationale for such modification(s).

The above annual OQ plan review does not constitute major plan changes. If the plan is revised in such a way that the changes to the plan are deemed major then, notification to the CPUC will be provided of the new substantially changed plan.

# Attachment A-1: Covered Tasks and CFR §

CT. 1.	NO TASK
CT. 2.	NO TASK
CT. 3.	NO TASK
CT. 4.	NO TASK
CT. 5.	NO TASK
CT. 6.	§192.465 Measuring pipe-to-soil potential
CT. 7.	§192.481 Inspecting for atmospheric corrosion
CT. 8.	§192.459 Inspecting the condition of exposed pipe or pipe coating
CT. 9.	§192.455 Installing/replacing an anode on an existing line
CT. 10.	§192.477 Visually inspecting for internal corrosion)
CT. 11.	§192.469, 471 Install/replace a corrosion test station on a pipeline
CT. 12.	§192.487 Repair coating on existing steel mains and service lines
CT. 13.	§192.615 Investigating leak/odor complaints on company piping
CT. 14.	§192.614 Locating and marking lines
CT. 15.	§192.614 Inspection of 3 <sup>rd</sup> party excavations for damage prevention
CT. 16.	§192.805 Directing and observing a non-qualified person to perform a covered task
CT. 17.	§192.619 Controlling and monitoring gas pressures and flows
CT. 18.	§192.605 Repair distribution line leaks
CT. 19.	§192.273 Mechanically joining pipe other than by welding during maintenance
CT. 20.	§192.309 Repair a non-leaking damaged pipe
CT. 21.	NO TASK
CT. 22.	§192.325, 327 Excavating a pipeline for maintenance
CT. 23.	§192.629 Purging air from a pipeline
CT. 24.	NO TASK
CT. 25.	§192.511, 513 Performing a pressure test on existing pipe
CT. 26.	§192.511, 513 Pressure testing piping after repairs
CT. 27.	§192.619, 621 Starting, Stopping or controlling gas flow
CT. 28.	§192.739 Inspect and test pressure regulator stations,
CT. 29.	NO TASK
CT. 30.	§192.741 Field interpretation of pressure recording charts/gauges
CT. 31.	§192.741 Change/repair pressure recording devices/gauges at pressure reg stations
CT. 32.	§192.625 Monitor natural gas Odorization levels
CT. 33.	NO TASK
CT. 34.	§192.727 Abandonment or deactivation of facilities
CT. 35.	§192.627 Tapping of pipelines under pressure
CT. 36.	§192.723 Conducting gas leakage surveys
CT. 37.	§192.721 Facility patrolling
CT. 38.	§192.747 Inspect, repair and maintain emergency valves
CT. 39.	§192.281,283 Joining plastic pipe for maintenance
CT. 40.	§192.287 Inspection of plastic pipe fusion joint after maintenance
CT. 41.	§192.321 Replacing a section of existing tracer wire
CT. 42.	NO TASK

## Attachment A-2: Covered Tasks and Identified Abnormal Operating Conditions (AOC's)

NOTE: ABNORMAL OPERATING CONDITIONS, (AOC's), THAT ARE UNDERLINED AND FOLLOWED BY AN ASTERISK, (\*), ARE CONSIDERED TO BE TASK SPECIFIC. RECOGNITION OF AND REACTION TO, THESE AOC's ARE ALSO EVALUATION ELEMENTS LISTED ON THE SPECIFIC COVERED TASK EVALUATIONS IN ATTACHMENT B.

### CORROSION CONTROL - COVERED TASKS

#### CT. 6. §192.465 Measuring pipe-to-soil potential (B,C,D,O)

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Stray current on pipeline \*  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

#### CT. 7. §192.481 Inspecting for atmospheric corrosion (B,C,D,O)

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

#### CT. 8. §192.459 Inspecting the condition of exposed pipe or pipe coating (B,C,D,O)

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

## **CORROSION CONTROL - COVERED TASKS (cont'd.)**

### **CT. 9. §192.455, Installing/replacing an anode on an existing line (B,C,D,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

### **CT. 10. §192.477 Visually inspecting for internal corrosion (B,C,D,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Water or other liquids in the pipeline \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

### **CT. 11. §192.469, 471 Install/replace a corrosion test station on a pipeline (B,C,D,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

## **CORROSION CONTROL - COVERED TASKS (cont'd.)**

### **CT. 12. §192.487 Repair coating on existing steel mains and service lines (B,C,D,O,Q,S,U,V)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

## **CUSTOMER SERVICE - COVERED TASKS**

### **CT. 13. §192.615 Investigating leak/odor complaints on company piping (B,C,D,E,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Under pressure condition (including no gas)  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **DAMAGE PREVENTION - COVERED TASKS**

### **CT. 14. §192.614 Locating and marking lines (B,C,D,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **DAMAGE PREVENTION - COVERED TASKS (cont'd.)**

### **CT. 15. §192.614 Inspection of 3<sup>rd</sup> party excavations for damage prevention (B,C,D,E,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

## **OPERATIONS/ADMINISTRATION – COVERED TASKS**

### **CT. 16. §192.805 Directing and observing a non-qualified person to perform a covered task (B,C,D,O)**

#### Identified AOC list:

This task is listed for reference purposes only. Knowledge, Skills and Abilities would be the same as for the task being observed and directed.

## **GAS CONTROL - COVERED TASKS**

### **CT. 17. §192.619 Controlling and monitoring gas pressures and flows (B,C,D,E,O,M)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Under odorization  
Under pressure condition (including no gas)  
Unplanned shutoff of service to one or more customers  
Alarm conditions  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **LEAK REPAIR – COVERED TASKS**

### **CT. 18. §192.605 Repair distribution line leaks (A,B,C,D,E,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

## **MAINTENANCE – COVERED TASKS**

### **CT. 19. §192.277 Mechanically joining pipe other than plastic during maintenance (A,B,C,D,E,O)**

#### Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

**MAINTENANCE – COVERED TASKS (cont'd.)**

**CT. 20. §192.309 Repair a non-leaking damaged pipe (A, B,C,D,E,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint

Damaged pipe \*

Severe corrosion on a pipeline \*

Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings \*

**CT. 21. §192.325, 327 Backfilling a trench after maintenance (B,C,D,O) (cont'd.)**

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 22. §192.325, 327 Excavating a pipeline for maintenance (B,C,D,O)**

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**MAINTENANCE – COVERED TASKS (cont’d.)**

**CT. 23. §192.629 Purging air from a pipeline (A, B,C,D,E,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 24. §192.629 Purging gas from a pipeline (A, B,C,D,E,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Water or other liquids in the pipeline \*  
Odor complaint  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**(NOTE: Covered Tasks 23. and 24. can be combined)**

MAINTENANCE – COVERED TASKS (cont'd.)

**CT. 25. §192.511, 513 Performing a pressure test on existing pipe (A, B,C,D,E,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 26. §192.511, 513 Pressure testing piping after repairs (A, B,C,D,E,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 27. §192.619, 621 Starting, Stopping or controlling gas flow (B,C,D,E,O)**

Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

MEASUREMENT AND REGULATION – COVERED TASKS

**CT. 28. §192.739 Inspect and test pressure regulator stations (A, B,C,D,E,O,M)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Under pressure condition (including no gas)  
Unplanned shutoff of service to one or more customers  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction \*

**CT. 30. §192.741 Field interpretation of pressure recording charts/gauges (A, B,C,D,E,O,M)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Over pressure condition (MAOP exceeded)  
Under pressure condition (including no gas)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 31. §192.741 Change/repair pressure recording devices/gauges at pressure regulating/metering stations (A, B,C,D,E,O,M)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Over pressure condition (MAOP exceeded)  
Under pressure condition (including no gas)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **ODORIZATION - COVERED TASKS**

### **CT. 32. §192.625 Monitor natural gas odorization levels (B,C,D,E,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Under odorization  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **OPERATIONS – COVERED TASKS**

### **CT. 34. §192.727 Abandonment or deactivation of facilities (A, B,C,D,O)**

#### Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Water or other liquids in the pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

### **CT. 35. §192.627 Tapping of pipelines under pressure (A, B,C,D,E,O)**

#### Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Water or other liquids in the pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **PATROLLING AND INSPECTION - COVERED TASKS**

### **CT. 36. §192.723 Conducting gas leakage surveys (B,C,D,E,O)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **PATROLLING AND INSPECTION - COVERED TASKS (cont'd.)**

### **CT. 37. §192.721 Facility patrolling (B,C,D,E,O,M)**

#### Identified AOC list:

Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Gas blowing from a pressure relief valve  
Odor complaint  
Damaged pipe \*  
Severe corrosion on a pipeline \*  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

## **EMERGENCY VALVE - COVERED TASKS**

### **CT. 38 §192.747 Inspect, repair and maintain emergency valves (A, B,C,D,E,O)**

#### Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)  
Unplanned shutoff of service to one or more customers  
Odor complaint  
Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**PLASTIC PIPE – COVERED TASKS**

**CT. 39. §192.281,283 Joining plastic pipe for maintenance (A, B,C,D,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint

Damaged pipe \*

Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**PLASTIC PIPE – COVERED TASKS (cont'd.)**

**CT. 40. §192.287 Inspection of plastic pipe fusion joint after maintenance (A, B,C,D,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint

Damaged pipe

Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**CT. 41. §192.321 Replacing a section of existing tracer wire (A, B,C,D,O)**

Identified AOC list:

Low oxygen atmosphere  
Flammable gas atmosphere  
Blowing/escaping gas/grade one leak  
Fire on a pipeline  
Odor complaint

Damaged pipe \*

Unintended movement or abnormal loading of a pipeline  
Material defect or physical damage that impairs facility serviceability  
Conditions requiring shutdown or MAOP reduction

**NOTES:**

1. Covered tasks designated with “A” are assumed to involve inspection or work in underground vaults or trenches.
2. Covered tasks designated with “M” involve complete surveys of all customers and should include recognition of gas blowing from relief valves on service regulators.
3. Covered tasks designated with “B,C,D & O” include the following AOC’s and are assumed basic requirements for all field maintenance and operating personnel.
  - B Flammable gas atmosphere
  - C Blowing/escaping gas/grade one leak
  - D Fire on a pipeline
  - O Odor complaint
4. Many covered tasks are designated with “E”, *Inoperation/failure of any pipeline component (valve, regulator, relief valve, alarm, sensor, etc.)*, due to its broad scope (“any” pipeline component).
5. The covered task under **OPERATIONS/ADMINISTRATION – COVERED TASKS** includes ALL covered tasks.
6. All covered tasks are by definition “O&M” tasks, therefore all persons performing covered tasks must be able to recognize and react to:

Unintended movement or abnormal loading of a pipeline  
A leak on a pipeline that constitutes an emergency  
Material defect or physical damage impairs the serviceability of a facility  
Conditions requiring shutdown or MAOP reduction  
Unacceptable pipe-to-soil readings

## Attachment B: Evaluation Methods Incorporated by Reference

The following evaluation methods have been reviewed by ANG and determined to be acceptable for qualification in the tasks indicated: for Knowledge, Skill and Ability qualification. Alpine has adopted NCCR Qualified field evaluations or equivalent for performance review.

ANG Covered Task	Description of Task	Task Category	Knowledge based:	
			Classroom, <u>ENERGY U</u> <u>COURSE</u> (Online Computer Training Re-Computer Training Re-Interval)	Performance- Skill assessment by Qualified Evaluator Re-Evaluation (in months)
C.T.1	No Task	Un-Designated		
C.T.2	No Task	Un-Designated		
C.T.3	No Task	Un-Designated		
C.T.4	No Task	Un-Designated		
C.T.5	No Task	Un-Designated		
C.T.6	Measuring pipe-to-soil potential	CORROSION CONTROL	192-0512	48
C.T.7	Inspecting for atmospheric corrosion	CORROSION CONTROL	192-0401	48
C.T.8	Inspecting the condition of exposed pipe or pipe coating	CORROSION CONTROL	192-0505	48
C.T.9	Installing/replacing an anode on an existing line	CORROSION CONTROL	192-0503	48
C.T.10	Visually inspecting for internal corrosion)	CORROSION CONTROL	192-0401	48

C.T. 11	\$192,469,471	Install/replace a corrosion test station on a pipeline	CORROSION CONTROL	192-0501	48	48
C.T. 12	\$192,487	Repair coating on existing steel mains and service lines	CORROSION CONTROL	192-0402	48	48
C.T. 13	\$192,615	Investigating leak/odor complaints on company piping	CUSTOMER SERVICE	192-1202,1203 & 2011	48	48
C.T. 14	\$192,614	Locating and marking lines	DAMAGE PREVENTION	192-0801	48	48
C.T. 15	\$192,614	Inspection of 3 <sup>rd</sup> party excavations for damage prevention	DAMAGE PREVENTION	192-803,4	48	48
C.T. 16	\$192,805	Directing and observing a non-qualified person to perform a covered task	OPERATIONS/ ADMINISTRATION	192-0701	48	48
C.T. 17	\$192,619	Controlling and monitoring gas pressures and flows	GAS CONTROL	192-1434, 1435 & 1436	48	48
C.T. 18	\$192,605	Repair distribution line leaks	LEAK REPAIR	192-1408, 192-1002, 1003, 1004 & 1006	48	48

		Mechanically joining pipe other than by welding during maintenance	MAINTENANCE	192-1005	
C.T. 19	§192.273, 283				48
C.T. 20	§192.309	Repair a non-leaking damaged pipe	MAINTENANCE	192-1002, 3,4 & 6 192-1405 & 8	48
C.T. 21		NO TASK	Un-Designated		
C.T. 22	§192.325,327	Excavating a pipeline for maintenance	MAINTENANCE	192-0804 1431, 1405 & 8	48
C.T. 23	§192.629	purging air from a pipeline	MAINTENANCE	192-1418	48
C.T. 24		NO TASK	Un-Designated		
C.T. 25	§192.511,513	Performing a pressure test on existing pipe	MAINTENANCE	192-0702 1803	48
C.T. 26	§192.511,513	Pressure testing piping after repairs	MAINTENANCE	192-0702 1803	48
C.T. 27	§192.619,621	Starting, Stopping or controlling gas flow	MAINTENANCE	192-1414 2705	48
C.T. 28	§192.739	Inspect and test pressure regulator stations	MEASUREMENT & REGULATION	192-1434 192-1802,3	48
C.T. 29		NO TASK	Un-Designated		
C.T. 30	§192.741	Field interpretation of pressure recording charts/gauges	MEASUREMENT & REGULATION	192-1803	48

	Change/repair pressure recording devices/gauges at pressure recording stations	MEASUREMENT & REGULATION	192-1803	
C.T. 31	\$192.741		48	48
C.T.32	\$192.625	Monitor natural gas Odorization levels	192-1501	48
C.T.33		NO TASK		
C.T. 34	\$192.727	Abandonment or deactivation of facilities	192-1401	48
C.T. 35	\$192.627	Tapping of pipelines under pressure	192-2011	48
		Conducting gas leakage surveys	192-1426	48
C.T. 36	\$192.723		192-1201	48
C.T. 37	\$192.721	Facility patrolling	1202, 1203	48
C.T. 38	\$192.747	Inspect, repair and maintain emergency valves	192-2011	48
		Joining plastic pipe for maintenance	192-0901	48
C.T. 39	\$192.281,283		192-1427	48
C.T. 40	\$192.287	Inspection of plastic pipe fusion joint after maintenance	192-2010	48
		Replacing a section of existing tracer wire	192-1411 & 1422	48
C.T. 41	\$192.321		192-1411	48
			192-0803	48
			192-0701	48
			192-0801	48

## Attachment C: Evaluation Methods Incorporated by Reference

The following Direct Observation Field Evaluations have been reviewed and adopted by ANG and determined to be acceptable for qualification of associated tasks: (refer to pages 26-49).

Alpine has also adopted NCCR Qualified field evaluations or equivalent for performance review.

### E.1.

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Read gas System Pipeline Drawings and Maps</b>		
<b>Evaluation Location (Circle One):</b>	<b>On-the-job      Classroom or office</b>	<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

### ***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Locates proper map/drawing for interpretation.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Recognizes operating pressure.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Recognizes piping nominal diameter and material type.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Recognizes valve nominal size and type.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Able to use map legend to identify other facilities (e.g. stopple fittings, regulator stations, gate stations, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Recognize facility transition between dissimilar materials (e.g. plastic to metallic).	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: Able to recognize town boundaries and water, street, highway, rail crossings.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

### E.2.

Last Name:	First Name:	ID #:
Evaluated by:		Date:

<b>Ability to Measure Voltage, Current, and Resistance</b>		
<b>Evaluation Location (Circle One):</b> <b>office</b>	<b>On-the-job</b>	<b>Classroom or</b>
		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	S	U
Item 1: Hardware preparation: Select proper test instrument to measure volts, amperes, and ohms. Select proper test lead set to do measurements.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Hardware hook-up: Demonstrate the attachment of the test leads to the meter so that readings can be taken. Demonstrate that proper range settings are selected for the readings being taken.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Take voltage readings with the meter: Demonstrate that the voltmeter is on the correct range. Demonstrate with test leads that a correct voltage can be obtained. Demonstrate that the correct polarity can be obtained when reading the meter.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Take a resistance reading: Demonstrate that the ohm-meter is on the correct range. Demonstrate, by connecting the test leads that an ohms reading can be taken.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Take a current reading: Demonstrate that the ammeter is on the correct range. Demonstrate that a current can be measured.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.6.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Perform Pipe-to-Soil Readings</b>		
<b>Evaluation Location (Circle One):      On-the-job      Classroom or office</b>		<b>Page 1 of 2</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Hardware preparation: Select proper meter, test leads, and reference electrode. Select proper paperwork and maps to identify structure to be surveyed.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Locate and identify structure: Locate and identify correct test station, and correct test station terminal to read.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Set-up instrument: Demonstrate ability to connect test leads and reference electrode to meter in order to obtain correct reading with correct polarity. Demonstrate ability to select proper meter range and make a good electrical connection to test station terminal.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Read pipe-to-soil potential: Demonstrate correct contact to electrolyte by reference electrode. Demonstrate that reference electrode is placed to minimize "IR drop" and the effects of interfering voltage gradients. Demonstrate meter reading, after allowing reading to stabilize.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Record the reading(s): Record the pipe-to-soil reading on the company forms with accuracy adhering to company standards.	<input type="checkbox"/>	<input type="checkbox"/>

Notes: Since pipe-to-soil reading values that are out of criteria have been identified as an Abnormal Operating Condition (AOC), a firm knowledge of what constitutes a qualified reading is very important. Adhere to company standards, and sound engineering principles when qualifying a reading.

Regularly scheduled calibration of high impedance voltmeters, and proper cleaning and maintenance of reference electrodes is a critical 'first Item' in preparing corrosion control instrumentation. Properly tested and maintained test lead sets will add to the accuracy of pipe-to-soil readings.

Evaluator's Comments (Use back and/or attach additional pages if necessary):

## Ability to Perform Pipe-to-Soil Readings (cont'd.)

### Task Specific Abnormal Operating Conditions (AOC's):

#### Stray current on a pipeline

How would you recognize stray current on a pipeline? (select one answer)

- Static electricity in the soil.
- Unusually high pipe-to-soil readings
- Unusually low pipe-to-soil readings
- Inability to obtain a pipe-to-soil reading

What should to do if there is stray current on the pipeline? (select one answer)

- Install a new anode
- Trace the stray current source
- Record the pipe-to-soil reading regardless of the level

#### Unacceptable pipe-to-soil potentials

What is considered an unacceptable pipe-to-soil potential ? (select one answer)

- Greater than  $-.850\text{ V}$
- Less than  $-.850\text{ V}$
- Inability to obtain a pipe-to-soil potential

How should you react to an unacceptable pipe-to-soil potential ? (select one answer)

- Record the pipe-to-soil reading regardless of the level
- Notify the Superintendent or Manager
- Change batteries in the voltmeter

**E.7.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Recognize Atmospheric Corrosion</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Recognize normal rust (above grade) as surface oxidation	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Recognize local pitting (above grade) as atmospheric corrosion	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Recognize general pitting (above grade) as atmospheric corrosion	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Record all atmospheric corrosion patrolling efforts	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Report actual or potential atmospheric corrosion to company officials	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.8.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Attach Wire to Pipe by Exothermic Welding Procedure</b>		
<b>Evaluation Location (Circle One):</b>		<b>Page 1 of 1</b>
<b>On-the-job</b>	<b>Classroom or office</b>	

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Ensure that the work area is free of gas or does not contain a combustible atmosphere.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Determine proper location to perform exothermic weld of wire to main.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Demonstrate proper coating removal, main surface and wire preparation prior to performing exothermic weld.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Select proper exothermic weld charge cartridge for type of main material.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Demonstrate proper exothermic weld procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Test exothermic weld for strength after cooling.	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: After proper cooling time, wrap exothermic weld area using company approved pipe coating repair materials.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.9.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Install and Test a Galvanic Anode</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 3</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

**Demonstration of abilities**

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Hardware preparation: Selection of proper hand and/or power tools inclusive of thermite welding equipment and wire spicing tools. Selection of proper electrical test equipment inclusive of reference electrode. Selection of proper safety equipment inclusive of safety goggles and gloves.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Anodes and related parts: Selection of proper size and type of galvanic anode(s). Selection of extra wire, hook-up boxes or test stations, if required.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Placement of the anode(s): Demonstrate the ability to place the galvanic anode(s) correctly in relation to the structure. Demonstrate that proper backfill procedures were adhered to inclusive of adding moisture to the backfill as required to activate the anode.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Connection to the structure: Demonstrate the ability to clean and prepare structure for thermite welding. Demonstrate the ability to attach the wire or cable to the structure to be protected using a thermite welder inclusive of all safety equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Testing the installation: Demonstrate the ability to test the current output of the anode(s). Demonstrate the ability to test the pipe-to-soil potential of the structure with the anode(s) installed.	<input type="checkbox"/>	<input type="checkbox"/>

<p>Item 6: Record the readings:  Record the pipe-to-soil reading on the company forms with accuracy adhering to company standards.  Record the location of the anode(s) on company forms/maps with accuracy adhering to company standards.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Item 7: Repair coating at anode attachment point:  Demonstrate repairing the coating where the anode(s) were connected to the structure.</p>	<input type="checkbox"/>	<input type="checkbox"/>

**Ability to Install and Test a Galvanic Anode (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's)**

**Severe corrosion on a pipeline**

Describe a severe corrosion condition on a pipeline. (select one answer)

- Damaged coating
- $\geq 10\%$  of metallic wall thickness gone
- Pipeline needs paint

How would you react to a severe corrosion condition on a pipeline? (select one answer)

- Alert the Superintendent or Manager.
- Recoat the pipeline
- Install a new anode

**Unacceptable pipe-to-soil potentials**

What is considered an unacceptable pipe-to-soil potential ? (select one answer)

- Greater than  $-0.850\text{ V}$
- Less than  $-0.850\text{ V}$
- Inability to obtain a pipe-to-soil potential

**Ability to Install and Test a Galvanic Anode (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)**

**Unacceptable pipe-to-soil potentials (cont'd.)**

How should you react to an unacceptable pipe-to-soil potential ? (select one answer)

- Record the pipe-to-soil reading regardless of the level
- Notify the Superintendent or Manager
- Change batteries in the voltmeter

**Damaged pipe**

What is considered a damaged pipe? (select one answer)

- Bare shinny metal
- Damage to pipe from outside forces
- Blackened piping surface

How would you recognize damaged pipe? (select one answer)

- Pipe-to-soil potential readings
- Visual inspection
- Rusty pipe surface

How would you react to discovering damaged pipe? (select one answer)

- Paint the pipe
- Notify the Superintendent or Manager
- Notify the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.10.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Prepare a Pipeline for Coating Application</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 3</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
<b>Item 1: Hardware preparation:</b> Select proper hand and power tools for cleaning the pipeline. Select sheet plastic to collect old coating in ditch if applicable. Select proper containers to collect old coating if applicable. Select adequate protective clothing and safety equipment including: (e.g. face shield, safety goggles, respirators, dust masks, hearing protection, gloves, etc).	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 2: Removal of old coating if applicable:</b> Utilize plastic sheet to line ditch in work area if applicable. Demonstrate removal of old coating with hand or power tools without damaging the pipeline. Utilize containers to collect old coating if applicable.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 3: Cleaning the pipe surface:</b> Demonstrate cleaning the pipeline, to the specification applicable to the coating to be applied, utilizing required safety equipment.	<input type="checkbox"/>	<input type="checkbox"/>

Notes: Depending on the coating to be applied, cleaning the pipeline can vary from hand brushing to "Near White" sand blasting. Refer to company standards or follow recommendations of the manufacturer who supplies the coating system.

**Ability to Prepare a Pipeline for Coating Application (cont'd.)**

## **Task Specific Abnormal Operating Conditions (AOC's)**

### **Severe corrosion on a pipeline**

Describe a severe corrosion condition on a pipeline. (select one answer)

- Damaged coating
- $\geq 10\%$  of metallic wall thickness gone
- Pipeline needs paint

How would you react to a severe corrosion condition on a pipeline? (select one answer)

- Alert the Superintendent or Manager.
- Recoat the pipeline
- Install a new anode

### **Unacceptable pipe-to-soil potentials**

What is considered an unacceptable pipe-to-soil potential ? (select one answer)

- Greater than  $-0.850\text{ V}$
- Less than  $-0.850\text{ V}$
- Inability to obtain a pipe-to-soil potential

How should you react to an unacceptable pipe-to-soil potential ? (select one answer)

- Record the pipe-to-soil reading regardless of the level
- Notify the Superintendent or Manager
- Change batteries in the voltmeter

## **Ability to Prepare a Pipeline for Coating Application (cont'd.)**

## Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)

### Damaged pipe

What is considered a damaged pipe? (select one answer)

- Bare shiny metal
- Damage to pipe from outside forces
- Blackened piping surface

How would you recognize damaged pipe? (select one answer)

- Pipe-to-soil potential readings
- Visual inspection
- Rusty pipe surface

How would you react to discovering damaged pipe? (select one answer)

- Paint the pipe
- Notify the Superintendent or Manager
- Notify the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.11.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Apply Tape Coatings</b>		
<b>Evaluation Location (Circle One):</b>		<b>Page 1 of 1</b>
<b>On-the-job</b>	<b>Classroom or office</b>	

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
<b>Item 1: Hardware preparation:</b> Selects proper hand and power tools for cleaning the pipeline. Selects sheet plastic to collect old coating in ditch if applicable. Selects proper containers to collect old coating if applicable. Selects adequate protective clothing and safety equipment (e.g. face shield, safety goggles, respirators, dust masks, hearing protection, gloves, etc).	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 2: Removal of old coating if applicable:</b> Utilizes plastic sheet to line ditch in work area, if required by company Removes old coating without damaging the pipeline. Utilizes containers to collect old coating if required by company	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 3: Cleaning the pipe surface:</b> Cleans the pipeline to the specification applicable to the coating to be applied	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 4: Materials selection:</b> Selects tape coating system to apply. Selects tape rolls of proper width for the intended job. Selects primer designated for the tape being used. Selects proper cover tape.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 5: Application of coating system:</b> Applies the primer to the pipeline at the approved coverage rate. Allows time for the primer to “tack”. Applies the tape to the pipe without wrinkles, gaps or other deficiencies. Applies tape with proper tension. Applies cover tape to strengthen the tape system (optional).	<input type="checkbox"/>	<input type="checkbox"/>
<b>Item 6: Inspection of coating system:</b> Inspects the coating system for defects. Repairs any holidays found.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator’s Comments (Use back and/or attach additional pages if necessary):

**E.12.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Use Pipe Locating Equipment and Mark Lines</b>		
<b>Evaluation Location (Circle One):</b>		<b>Page 1 of 1</b>
<b>On-the-job</b>	<b>Classroom or office</b>	

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Pre-use equipment checks Checks battery, cables, clamps, etc. Performs tests per manufacturer's procedures, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Properly connects the leads to the pipeline or tracer wire.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Operates equipment in accordance with manufacturer's procedures. Recognizes indications of signal bleed over, ghost conductor and air coupling. Recognizes indications of broken tracer wire, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Marks location of pipeline using proper color paint, flags, stakes, etc. Marks locations where pipelines change direction. Checks for differences between marked lines and pipeline maps.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Records results of line locating on proper forms.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.13.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Purge Small Pipelines</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 2</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

**Demonstration of abilities**

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Eliminates sources of ignition	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Ensures that the area above the pipe where gas will vent is safe (no air intakes, windows, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Opens the valve to purge air out as rapidly as possible (Takes care not to trip excess flow valve, if present)	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Closes the valve when gas odor is detected (CGI Reading, etc.)	<input type="checkbox"/>	<input type="checkbox"/>

Note: This checklist is intended to evaluate the ability of individuals to perform minor purging procedures in which control of gas flow and pressures are not critical, such as purging air from short lengths of small diameter pipelines.

**Ability to Purge Small Pipelines****Task Specific Abnormal Operating Conditions (AOC's)****Water or other liquids in the pipeline**

Under what conditions would water or other liquids in the pipeline be recognized? (select the best answer)

- During tapping/stopping procedures
- During purging procedures
- During pipe repair procedures
- All of the above

**Ability to Purge Small Pipelines (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)**

**Water or other liquids in the pipeline (cont'd.)**

How should you react to water or other liquids in the pipeline?

- Clean up the water or liquids
- Notify the Superintendent or Manager
- Notify the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.14.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Control Gas Flow While Purging</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 2</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Installs and properly reads pressure gauge(s)	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Maintains adequate upstream pressure	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Monitors vented gas pressure and/or gas-air mixture (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>

Note: This checklist evaluates abilities required for large purging procedures that are complex but not requiring the use of inert gas.

**Task Specific Abnormal Operating Conditions (AOC's)****Conditions requiring shutdown or MAOP reduction**

What conditions could require shutdown or MAOP reduction? (select one answer)

- Water or other liquids in the pipeline
- A leak, fire, overpressure condition or physical damage to the pipeline
- Unacceptable pipe-to-soil potential

**Ability to Control Gas Flow While Purging (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)**

**Conditions requiring shutdown or MAOP reduction (cont'd.)**

How would you recognize that conditions requiring shutdown or MAOP reduction exist?  
(select the best answer)

- Excessive pressure on gauges
- Odorant Smell, Noise, Visual observation
- Dead vegetation near pipelines

What should you do if you discover conditions requiring shutdown or MAOP reduction?  
(select one answer)

- Continue to purge the pipeline
- Advise the Superintendent or Manager.
- Call the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.15.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Use a Combustible Gas Indicator (CGI) and Infrared Spectrometer (DP-IR)</b>		
<b>Evaluation Location (Circle One):      On-the-job      Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

<u>CGI</u>	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Pre-use setup: Conducts daily operation check (e.g. voltage, air-tightness, calibration).	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Use of the CGI Places probe properly. Recognizes LEL and % Gas scales.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Able to read correct LEL and % Gas.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

<u>DP-IR</u>	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Pre-use setup: Turns unit on, can recognize Low Battery, navigate User Menu and Conducts Self-test and Calibration	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Use of the DP-IR	<input type="checkbox"/>	<input type="checkbox"/>
Has ability to recharge battery Recognizes LEL and % Gas scales and can Zero out background level. Places probe properly, including bar hole probe		
Demonstrates ability to select mode of operation	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates ability to adjust alarm level thresholds	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates ability to perform filter maintenance	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Can recognize abnormal equipment operation and identify probable cause for and perform associated corrective step:		
Loss of Sensitivity	<input type="checkbox"/>	<input type="checkbox"/>
Excessive false alarming	<input type="checkbox"/>	<input type="checkbox"/>
Flow error	<input type="checkbox"/>	<input type="checkbox"/>
Very slow to purge out	<input type="checkbox"/>	<input type="checkbox"/>
Self test fails multiple times	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Able to read correct LEL and % Gas.	<input type="checkbox"/>	<input type="checkbox"/>

**E.16.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Conduct a Leakage Survey Utilizing Available Openings and Determine Leak Sources</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Identifies available openings(over and inside manhole covers, catch basins, sewer openings, telephone duct openings, fire/traffic signal boxes, curblines/pavement/sidewalk cracks, basement/foundation cracks, vaults and other available surface openings.).	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Sketches mains and service lines in survey area including available openings and other surveyed structures listed in Item 1.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Determines leak source using survey data according to company procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Understands when a barhole leak survey is necessary in order to assist in determining the leak sources.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Utilizes vegetative survey analysis as a supplement to instrument survey.	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Able to conduct effective survey with wind, rain, ice/snow surface sealing conditions.	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: Prepares leak investigation/survey reports, diagrams and forms.	<input type="checkbox"/>	<input type="checkbox"/>

Notes: Employee should be familiar with proper operation of specific leakage survey equipment.

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.17.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Conduct a Barhole Leak Investigation</b>		
<b>Evaluation Location (Circle One):    On-the-job    Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Able to make a barhole through various pavement and soil types in proper locations relative to main and service lines.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Follows company standards for spacing and depth of barholes.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Inserts hose or probe tube into barholes at proper depth.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Recording of barhole test readings on diagram.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Determines approximate leak location.	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Properly prepares leak reports and forms.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.18.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Perform Leak Classification (Grading)</b>		
<b>Evaluation Location (Circle One):    On-the-job    Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Recognizes Class 1 leaks: Leak inside building Leak at building perimeter (outside) Company policies for Grade 1 leaks Any leak which can be seen, heard or felt	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Understands reaction to a Class 1 leak: Make area safe protecting life and property first Records company required information and schedule leak for immediate repair	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Recognize Class 2 and Class 3 leaks: Leak on exposed company piping and appurtenances Company policies for Grade 2 leak Any Class 3 leak which may migrate under ground frost conditions	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: React to Class 2 and Class 3 leak: Record company required information	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.20.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Inspect a Pressure Regulator Station</b>		
<b>Evaluation Location (Circle One):    On-the-job    Classroom or office</b>		<b>Page 1 of 2</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Demonstrate proper pressure/flow control using a pilot loaded regulator assembly: Properly start-up regulator. Properly adjust outlet set pressure.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Demonstrate proper regulator bypass techniques for maintenance purposes, (as deemed necessary): Properly demonstrate valve closure and opening sequence to ensure that system MAOP is not exceeded. Properly demonstrate valve closure and opening sequence to ensure that regulator station is put back in service while ensuring that system MAOP is not exceeded.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Demonstrate ability to properly monitor pressure.	<input type="checkbox"/>	<input type="checkbox"/>

**Ability to Inspect a Pressure Regulator Station**

**Task Specific Abnormal Operating Conditions (AOC's)**

**Conditions requiring shutdown or MAOP reduction**

What conditions could require shutdown or MAOP reduction? (select one answer)

- Water or other liquids in the pipeline
- A leak, fire, overpressure condition or physical damage to the pipeline
- Unacceptable pipe-to-soil potential

**Ability to Inspect a Pressure Regulator Station (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)**

**Conditions requiring shutdown or MAOP reduction (cont'd.)**

How would you recognize that conditions requiring shutdown or MAOP reduction exist?  
(select the best answer)

- Excessive pressure on gauges
- Odorant Smell, Noise, Visual observation
- Dead vegetation near pipelines

What should you do if you discover conditions requiring shutdown or MAOP reduction?  
(select one answer)

- Set the regulator station to normal operating conditions
- Advise the Superintendent or Manager.
- Call the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.21.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Control Pressure on a Manually-Operated Pressure Regulator Bypass</b>		
<b>Evaluation Location (Circle One):     On-the-job     Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

**Demonstration of abilities**

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Demonstrate proper regulator bypass techniques for maintenance purposes: Installs pressure gauge (or manometer) to monitor downstream pressure. Operates valves to control downstream pressure.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Understands how to recognize and react to overpressure (e.g. gauge or manometer pressure exceeds MAOP).	<input type="checkbox"/>	<input type="checkbox"/>

**Task Specific Abnormal Operating Conditions (AOC's)****Conditions requiring shutdown or MAOP reduction**

What conditions could require shutdown or MAOP reduction? (select one answer)

- Water or other liquids in the pipeline
- A leak, fire, overpressure condition or physical damage to the pipeline
- Unacceptable pipe-to-soil potential

What should you do if you discover conditions requiring shutdown or MAOP reduction?  
(select one answer)

- Set the regulator station to normal operating conditions
- Advise the Superintendent or Manager.
- Call the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.22.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Use and Inspect Pressure Gauges</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Ensure recording charts/gauges are operating properly.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Select appropriate chart for chart device clock duration.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Accurately read and record charts/gauges.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Install locking device(s) on pressure recording device enclosures, if applicable. Install locking device(s) on gauge inlet valves(s), if applicable)	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.24.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Use Odorant Testing Equipment</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Able to recognize the smell of the odorant.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Checks odor detection instrument for proper operation.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Connects odor detection instrument to test points.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Interprets initial odor detection instrument reading ( % gas).	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Interprets odor detection instrument reading at 0.7% gas-in-air as “weak”, “moderate” or “strong” using odor detection instrument and olfactory senses.	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Records odor detection instrument readings on appropriate form(s).	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: Alerts company officials whenever an odor detection instrument reading is insufficient or absent.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator’s Comments (Use back and/or attach additional pages if necessary):

**E.25.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Follow Manufacturer's Procedures to Maintain a Valve</b>		
<b>Evaluation Location (Circle One):      On-the-job      Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Inspects valve for mechanical damage and leaks (bonnet, packing, flanges, fittings, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: If possible, operates valve through a complete cycle. Where operating conditions do not permit full cycling, partially cycles valve by hand to ensure it is not seized.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: If valve is inoperable, repairs according to Manufacturer's instructions (or replace).	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Reports all valve maintenance on the designated form.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Verifies that the valve is returned to normal operating condition.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.28.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Backfill a Trench Following Maintenance</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Operates backfill tools/equipment according to company standards.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Follows company standards for selection and placement of padding material.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Selects backfill spoil material that is free of rocks and other debris.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Follows company standards for placement of backfill ( proper thickness of lifts, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Adheres to proper soil compaction requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Protects and supports gas facilities during backfill procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Note: This evaluation is applicable to both plastic and steel gas facilities where backfilling is required. This evaluation is also applicable to hand tools as well as motorized machinery.

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.29.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Excavate a Pipeline for Maintenance</b>		
<b>Evaluation Location (Circle One):</b>	<b>On-the-job</b>	<b>Classroom or office</b>
		<b>Page 1 of 2</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

**Demonstration of abilities**

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Obtains required utility locates prior to commencement of work.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Operates excavation tools/equipment according to company standards.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Carefully exposes pipeline while protecting against facility damage.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Uses hand operated excavation tools within eighteen inches of utility facilities.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Protects and supports gas facilities during excavation procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Note: This evaluation is applicable to both plastic and steel gas facilities where excavation for maintenance is required.

**Task Specific Abnormal Operating Conditions (AOC's)****Unacceptable pipe-to-soil potentials**

What is considered an unacceptable pipe-to-soil potential ? (select one answer)

- Greater than -.850 V
- Less than -.850 V
- Inability to obtain a pipe-to-soil potential

How should you react to an unacceptable pipe-to-soil potential ? (select one answer)

- Record the pipe-to-soil reading regardless of the level
- Notify the Superintendent or Manager
- Change batteries in the voltmeter

**Ability to Excavate a Pipeline for Maintenance (cont'd.)**

**Task Specific Abnormal Operating Conditions (AOC's) (cont'd.)**

**Damaged pipe**

What is considered a damaged pipe? (select one answer)

- Bare shiny metal
- Damage to pipe from outside forces
- Blackened piping surface

How would you recognize damaged pipe? (select one answer)

- Pipe-to-soil potential readings
- Visual inspection
- Rusty pipe surface

How would you react to discovering damaged pipe? (select one answer)

- Paint the pipe
- Notify the Superintendent or Manager
- Notify the Fire Department

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.30.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Splice Tracer Wire and Recoat with Insulation</b>		
<b>Evaluation Location (Circle One):</b>		<b>Page 1 of 1</b>
<b>On-the-job</b>		<b>Classroom or office</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Locates damaged tracer wire	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Removes any remaining wire that is damaged	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Cuts adequate length of replacement tracer wire (same material, gauge and insulation)	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Cuts back adequate length of wire insulation (original and replacement wire ends)	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Installs wire splice assemblies (wire nuts, grease inserts, wire connectors, split bolts)	<input type="checkbox"/>	<input type="checkbox"/>
Item 6: Properly wraps splice with adequate overlap past each splice area using acceptable electrically non-conductive tape or mastic & tape system	<input type="checkbox"/>	<input type="checkbox"/>
Item 7: Installs wire at proper depth according to company standards.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.31.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Properly Perform a Plastic Pipe Squeeze-Off</b>		
<b>Evaluation Location (Circle One):</b> <b>On-the-job</b> <b>Classroom or office</b>		<b>Page 1 of 1</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Selects proper squeeze-off tool regarding main/service diameter and pressure regime	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Properly eliminates static electrical potential on blowing plastic piping using company approved materials and standards	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Demonstrates plastic squeeze-off (manual or hydraulic) utilizing proper squeeze bars, stop settings	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Adheres to company separation standards regarding squeeze-off near fusion joints	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Performs company approved marking of squeeze-off area prior to trench backfilling	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

**E.33.**

Last Name:	First Name:	ID #:
Evaluated by:		Date:
<b>Ability to Hot-Tap Small Plastic Mains Using a Service Tee</b>		
<b>Evaluation Location (Circle One):</b>		<b>Page 1 of 1</b>
<b>On-the-job</b>		<b>Classroom or office</b>

This form is to be used to evaluate the listed ability required for one or more covered tasks.

***Demonstration of abilities***

The evaluator must observe the individual perform the following actions and indicate in the space provided whether each item was performed correctly. Provide comments on the back of this form for all items that are judged to be not acceptable.

	<b>Sat.</b>	<b>Unsat.</b>
Item 1: Selects proper hex tool and ratchet assembly for tapping service tee.	<input type="checkbox"/>	<input type="checkbox"/>
Item 2: Follows company standards for elimination of a gaseous atmosphere prior to tapping.	<input type="checkbox"/>	<input type="checkbox"/>
Item 3: Properly places hex tool into top of tapping tee.	<input type="checkbox"/>	<input type="checkbox"/>
Item 4: Completes hot-tap through tapping tee without damaging/perforating bottom side of main.	<input type="checkbox"/>	<input type="checkbox"/>
Item 5: Replaces tapping tee cap ensuring a gas tight connection using appropriate leakage detection solution.	<input type="checkbox"/>	<input type="checkbox"/>

Evaluator's Comments (Use back and/or attach additional pages if necessary):

## Attachment D:

### Incorporation by Reference of Qualification Requirements of Companies for Performing Certain Covered Tasks in Emergencies

ANG has identified the following companies upon whom it might call for emergency assistance. ANG has reviewed the evaluation methods used by these companies to qualify persons in the following tasks and has determined that these qualification requirements are acceptable alternative methods for evaluating qualifications to perform these tasks on ANG's piping system:

<b>Covered Tasks:</b>	<b>Company Name:</b>
Investigating leak/odor complaints on company piping	Heath Consultants, Inc. (no longer use on regular basis, ANG Employees perform leak survey's
Mutual Assistance	California Utilities Emergency Association  Assists Alpine in securing mutual assistance where the Plan administer determines in time of a disaster that Alpine requires assistance.
Purging air from a pipeline	PG&E

# Attachment E

## Annual Plan Review

Plan Administrator, Michael Lamond

Date: \_\_\_\_\_

**Review of Covered Tasks listed in Attachment A**

Observations/comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Review skills and abilities evaluations of covered tasks**

Observations/comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Written Exam assessment**

Observations/comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Assess need to change evaluation intervals**

Observations/comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**List of Plan Segments; Deleted, Added or Revised.**

Observations/comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Attachment F**  
**(Associated with Alpine's Covered Task 36)**  
**Contracted Leak Surveyor OQ-Plan**  
**Heath Consultants**

<b>OPERATOR QUALIFICATION PROGRAM</b>	Heath Consultants Inc. Training Department
Current Version 4/25/2008	

**Purpose:**

The purpose of this plan outlines the process Heath Consultants Incorporated (heretofore referred to as the "company") utilizes to comply with 49 CFR 192 "Operator Qualification" (OQ Rule). The effective date of this written plan is April 27, 2001.

**Contents:**

1. Definitions
2. Identification of covered tasks – 49 CFR 192.805(a)
3. Evaluations – 49 CFR 192.805(b)
4. Non-qualified individuals – 49 CFR 192.805(c)
5. Evaluations following incidents – 49 CFR 192.805(d)
6. Evaluations related to performance – 49 CFR 192.805(e)
7. Communication of changes – 49 CFR 192.805(f)
8. Evaluation intervals – 49 CFR 192.805(g)
9. Record Keeping – 49 CFR 192.807
10. Implementation – 49 CFR 192

**1. Definitions**

- 1.1. **Abnormal operating conditions** – defined in 49 CFR 192.803 as a condition that indicates 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 or the environment.
- 1.2. **Evaluation** – defined in 49 CFR 192.803 as a process established by the company to determine an individual's ability to performed a covered task by any of the following methods:
  - 1.2.1. Written examination
  - 1.2.2. Oral examination
  - 1.2.3. Work performance history review
  - 1.2.4. Direct observation during the job
  - 1.2.5. Performance on the job
  - 1.2.6. On the job training
  - 1.2.7. Simulations
  - 1.2.8. Other forms of assessment
- 1.3. **Integrity** – the pipelines ability to operate safely and to withstand stresses imposed during operations.

- 1.4. **Qualified** – defined in 49 CFR 192.803 as an individual who has been evaluated and can perform assigned covered tasks and can recognize and react to abnormal operating conditions encountered on the job.
- 1.5. **Transitional** – qualification completed by October 28, 2002 of individuals who have been performing a covered task on a regular basis prior to August 27, 1999 (and have continued to do so).
- 1.6. **Pipeline facility** – defined in 49 CFR 192.3 as new and existing pipeline, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.
- 1.7. **Covered task** – defined in 49 CFR 192.803(a) as an activity identified by the company as meeting all of the following:  
(**Four – part rule**) New Construction is not a covered task.
  - 1.7.1. The activity is performed on the pipeline facility.
  - 1.7.2. Is an operations and maintenance task.
  - 1.7.3. Is performed as a requirement of 49 CFR 192.
  - 1.7.4. Affects the operation or integrity of the pipeline.

## 2. **Identification of covered tasks** – 49 CFR 192.805(a)

- 2.1. This program includes a list of performed covered task(s) identified by the company using criteria set forth in the OQ Rule and as shown in 1.7 above. Regulatory Agencies and Operators, the company provides service for, can request amendments to the list. (Amendment 1) An OQ Coordinator may be assigned to maintain and/or amend identified covered tasks and/or the program.

## 3. **Evaluations** – 49 CFR 192.805(b)

- 3.1. Company personnel currently performing “covered tasks” on the Implementation Date of the OQ Rule (August 27, 1999) qualify under “Transitional” clause or “Work History” **Note:** “Work History” will not be used as the sole evaluation method after October 28, 2002.
- 3.2. Any person not previously qualified shall qualify according to guidelines set forth in the company’s training and development programs. The program(s) involving “covered tasks” includes at least one method of evaluation described in the OQ Rule and as shown in 1.2 above.
- 3.3. Evaluation methods and evaluators include management designated internal personnel and materials, approved outside resources, and Operators we provide service for; along with Regulatory Agencies’ recommendations.

## 4. **Non-Qualified Individuals** – 49 CFR 192.805(c)

- 4.1. Non-Qualified individuals can perform covered tasks only under direct supervision of a qualified person(s) of the company or operator. The qualified person assumes responsibility, ensuring safe performance of covered task: including being in position to take **immediate** corrective action if necessary. Qualified individuals will not exceed a span of control for more than three non-qualified individuals.

## 5. **Evaluations Following Incidents** – 49 CFR 192.805(d)

- 5.1. If determined by the company, Operator or Regulatory Agency, qualified person(s) contributed to an incident involving a covered task, the company ensures involved person(s) will no longer perform covered tasks without direct supervision until evaluated and deemed qualified by company and or Operator.
- 5.2. If company or Operator reasonably deems person(s) is no longer qualified to perform covered task, identified person(s) may no longer perform covered task without direct supervision until evaluated and qualified by company and or Operator.

## **6. Evaluations Related to Performance – 49 CFR 192.805(e)**

- 6.1. The company or Operator requires an individual to be evaluated if there is reason to believe that the individual is no longer qualified to perform a covered task. This could occur if the individual displays unsatisfactory performance of the task or there is any reason to believe the individual can no longer perform the covered task in a qualified manner.
- 6.2. If the company or Operator has reason to believe that an individual is no longer qualified to perform a task due to unsatisfactory performance or any other reason, the individual's status will be revised to non-qualified, and will be restricted from independently performing the covered task until evaluated and qualified in accordance to 1.2 above.
- 6.3. The company will be responsible for determining if an individual is no longer qualified to perform a covered task due to unsatisfactory performance or other reasons and will ensure that the individual is evaluated and qualified before resuming performance of the covered task. Evaluation methods and evaluators include management designated internal personnel and materials, approved outside resources, and Operators we provide service for: along with Regulatory Agencies' recommendations.

## **7. Communication of Changes – 49 CFR 192.805(f)**

- 7.1. The company realizes the constant changes in the industry impacting the performance of covered tasks. These changes shall be communicated to the qualified personnel in the most efficient and effective manner available to the company. Channels of communication include, but are not limited to: redesign of internal program(s) and material including evaluation if necessary, written bulletins, tailgate meetings, electronic generated notices, emails, amendments to the OQ Plan, and/or recommendations from Regulatory Agencies or Operators.

## **8. Evaluation Intervals – 49 CFR 192.805(g)**

- 8.1. All personnel performing covered tasks and participating in the company's quality program shall subsequently re-qualify no later than the end of the third calendar year since their last recorded qualification. The evaluation shall include at least one of the methods described in 1.2 above. Any person(s) who has not performed a specific covered task during a rolling twelve month period, must qualify before performing specific task; evaluation to include at least one method indicated in 1.2 above.

## **9. Record Keeping – 49 CFR 192.807**

- 9.1. The company will provide documentation of qualified personnel including identification of the person, covered task qualified to perform, date of qualification and method of evaluation.
- 9.2. The company shall maintain these records for no less than a five-year period following the last qualification date of each person, including person(s) leaving the company.
- 9.3. This information is available to Regulatory Agencies and Operators having a vested interest.
- 9.4. The current method of maintaining records are electronic data and hard copy: at corporate headquarters, regional locations or as provided by outsourced vendors. Programs and locations may change as technology improves.

## **10. Implementation – 49 CFR 192**

- 10.1. The company complies with the dates and requirements stated in the OQ Rule. (Work History cutoff date, August 27, 1999: Effective date of the rule, October 26, 1999; Publication date of written plan, April 27, 2001; Date after which all persons performing covered tasks are qualified under this plan, October 28, 2002.)

## Heath Consultants Covered Task List

### 1. Leak Survey

- 1.1. Perform leakage surveys: Transmission lines – 49 CFR 192.706
- 1.2. Perform leakage surveys: Distribution lines – 49 CFR 192.723

### 2. Patrolling

- 2.1. Patrolling transmission lines – 49 CFR 192.705
- 2.2. Patrolling distribution lines – 49 CFR 192.721

### 3. Line Locating

- 3.1. Locate and temporarily mark buried pipelines in an excavation area – 49 CFR 192.614(c)(5)
- 3.2. Standby for prevention of damage to pipelines – 49 CFR 192.614(c)(6)

### 4. Corrosion Control

- 4.1. Monitor/test for cathodic protection – 49 CFR 192.465(a)
- 4.2. Monitor/test for atmospheric corrosion – 49 CFR 192.481

### 5. Valve Maintenance

- 5.1. Operate valve to discontinue service to a customer – 49 CFR 192.727(d)
- 5.2. Inspect/maintain distribution valves – 49 CFR 192.747

### 6. Customer Service

- 6.1 Atmospheric corrosion monitoring: Internal/External-above ground structures – 49 CFR 192 Subpart I – Requirements for Corrosion Control.
- 6.2 Emergency response and restoration – 49 CFR 192.615
- 6.3 Customer pressure regulating, limiting and relief devices O&M: Residential, small commercial, large commercial and industrial – 49 CFR 192.619, 49 CFR 192.621, 49 CFR 192.623

### 7. Meter Reading

- 7.1 Atmospheric corrosion monitoring: Internal/External-above ground structures – 49 CFR 192 Subpart I – Requirements for Corrosion Control.
- 7.2 Emergency response and restoration – 49 CFR 192.615
- 7.3 Prevention of accidental ignition – 49 CFR 192.751
- 7.4 Meter Set – Repair, Rebuild or Replace – 49 CFR 192.739, 49 CFR 192.741, 49 CFR 192.743, 49 CFR 192.747

# **Alpine Natural Gas**

## Appendix D

### Employee Safety Manual

The purpose of this Employee Safety Manual (ESM) is to augment the policies and procedures in the Operations, Maintenance and Emergencies Plan and the Injury Illness and Prevention Plan (IIPP) not replace any steps or precautions within our operations policies. Requiring that basic safety principles are practiced at all times helps affirm Alpine Natural Gas' number one priority is Safety.

### **ANG Employee SAFETY Responsibilities**

Learn the safe way to do your job before you start.

Think safety and Act safely at all times.

Obey safety rules and regulations - they are for your protection.

Wear proper clothing and protective equipment.

Conduct yourself properly at all times; horseplay is prohibited.

Operate only the equipment you are trained and authorized to use.

Inspect tools and equipment for safe conditions before starting work.

Advise your supervisor promptly of any unsafe condition or practice.

Report any injury immediately to your supervisor and complete proper forms.

Support the safety program, take an active part in the program and encourage fellow employees to work safely.

## **FIELD SAFETY INSTRUCTIONS**

The following rules are provided to help you do your job safely. Since it is not possible to include specific instructions for every operation, common sense must be used as a guiding factor.

### **General**

1. All employees must be instructed regarding hazards and necessary precautions required for the job assigned.
2. First aid kits shall be available and maintained on all job sites and vehicles.
3. A listing of emergency services such as hospitals and ambulances shall be posted in all ANG vehicles and at each job site.
4. At least one person, trained in basic first aid procedures will be posted to each job site.
5. A copy of OSHA's "Safety and Health Protection on the Job" poster shall be posted or available and shall be read by all new employees.
6. All injuries shall be reported promptly to the foreman or supervisor.
7. Tailgate safety meetings shall be held weekly.
8. All employees are to study, understand and observe the specific rules that apply to their job assignment.
9. Fresh potable drinking water shall be provided on all job sites.
10. Drinking of any intoxicating beverages, or working while under the influence of drugs or intoxicating beverages, will not be permitted under any circumstances.
11. The ANG supervisor shall insist on all employees observing every rule, regulation and order as is necessary to insure a safe working environment. The supervisor will take all actions necessary to immediately correct any unsafe condition or conduct.
12. No employee shall enter manholes, vaults or other confined spaces where gas can be present without first testing the ambient air conditions with the appropriate testing devices. If required, ventilation-augmentation equipment will be used before a worker is allowed to enter or work in any confined space when gas can be present.
13. Buddy Rule - No ANG employee shall enter a manhole, vault or other confined spaces where there is a possibility of gas being present unless a second ANG employee is standing by to assist in case of emergency.  
This rule applies even after testing and/or ventilation mitigation measures have been implemented.

## **VEHICLES**

Company Vehicles are only to be driven by employees authorized to do so.

Abide by all traffic laws including rules pertaining to the use of safety restraints and telephones.

Use extra caution whenever pulling a trailer.

No smoking in vehicles.

Vehicles and on-board tools and equipment shall be kept clean, secure and orderly.

## **HOUSEKEEPING**

Tools, equipment, vehicles and working areas shall be kept clean and orderly.

Keep the job site well illuminated.

Barricade openings, excavations and hazard areas.

Use traffic cones any time a ANG vehicle is stopped for the purpose of performing an inspection or maintenance or meter reading task.

Do not block traffic lanes or fire lanes.

## **FIRE PREVENTION**

All employees are required to know the locations of fire equipment and its correct use. The refueling of any vehicle or equipment is not permitted while the engine is running.

Flammable liquids shall be used only in approved metal safety containers.

Never use an air hose for pressurizing a gas drum in order to empty its contents.

A fire extinguisher shall be available at each job site. In a multi-story building, at least one fire extinguisher (ABC type) shall be located adjacent to the stairway at each floor level.

A multi-purpose dry chemical fire extinguisher (ABC type) shall be used unless otherwise approved by the ANG safety officer.

## **PERSONAL PROTECTIVE DEVICES**

Prior to exposure to any hazardous substance, employees shall be informed by the immediate supervisor of any health hazards by means of labels and other forms of warning such as MSDS sheets (Material Safety Data Sheets) and employee training.

Appropriate clothing, given then work being done, shall be worn at all times. For construction work, this usually means long sleeved shirts and full length trousers to help protect against scrapes, cuts and burns. Tank tops, shorts and tennis shoes are not appropriate.

Approved hard hats must be worn by all employees and visitors on the job site at all times.

Eye protection is required whenever there is exposure to flying objects, materials or chemicals.

Employees shall be required to wear hearing protectors when subjected to sound levels exceeding those listed in the General Industry Safety Orders. For example, if job site noise prevents hearing normal conversation - ear protection is needed. It is absolutely required when operating pneumatic tools and equipment.

Gloves shall be worn whenever the job involves possible exposure to cuts or abrasions or exposure to chemicals.

Foot protection shall be required for employees exposed to hot surfaces, injurious substances, falling objects, crushing or penetrating equipment or activities. For example, foot protectors or safety toe footwear must be worn when operating a jack hammer, tamper or clay spade.

Use respiratory protective devices when spray painting a MSA or pipe and when applying protective coating to a pipe.

Use the protective equipment provided and always leave the maintenance facility with the protective equipment you need for the days tasks. If the required protective equipment is not available at the job site;

Be sure each utility truck has the assigned safety bag on board and is properly stocked.

## **GAS APPLIANCE SAFETY**

ANG will provide re-light service for hot water heaters and other gas appliances on request this general information can also be provided to customers.

### **All Gas Appliances**

- Do not store flammable materials — mops, brooms, laundry, newspapers — near gas appliances.
- Do not store combustible materials — paints, solvents, gasoline — in the same room or near your appliances.
- Make sure a flexible gas line connection is installed connecting the gas house line (the gas pipe connecting your appliances to the gas meter) to the appliance to reduce the likelihood of damage if movement should occur.
- You should have an appliance gas shutoff valve installed at each gas appliance that lets you turn off the gas to that appliance only if there is a gas leak, or if the appliance needs to be replaced or serviced.

## Ranges



- When lighting any match-lit burners or ovens, always light the match before turning on the gas. If the flame goes out, turn off the burner and let the gas disperse before relighting.
- Clean away any grease, oil or debris from the area around burners to help prevent fires.
- Never use water to put out a grease fire. Use baking soda, or if a fire is in a pan, smother the flames with a lid. A fire extinguisher in the kitchen is also recommended.

Move any flammable objects — towels, curtains, calendars — away from range burners and other hot surfaces.

## Ovens



- Never use your oven for domestic heating. This misuse of your oven puts you at risk of burns from hot surfaces and shortens the life of oven parts and controls. Use only heaters that are designed for domestic heating and follow the manufacturer's operating instructions.

## Water Heaters



- Make sure water heaters is securely anchored to a wall. This will help prevent the heater from shifting and possibly falling in an earthquake.
- If the water heater is on an elevated platform, make sure the platform is sturdy enough to withstand the weight of the water heater and movement during an earthquake.
- A temperature of 120 degrees F is adequate for most household uses with minimal danger of scalding and maximum energy efficiency. Dishwashers require a temperature of 140 degrees F for proper disinfection and cleaning. Most dishwashers preheat the water to the proper temperature; if not, lowering the water-heating temperature is not recommended
- Do not store flammable materials — mops, brooms, laundry, newspapers — near your water heater.
- Do not store combustible materials — paints, solvents, gasoline — in the same room or near your water heater.

## Furnaces



- A furnace should be serviced once a year to help maximize its life and performance. Follow the instructions in the owner's manual, or call a qualified professional.
- Has the furnace been checked for fire hazards such as a damaged firebox and any dislodged, clogged, rusted or damaged vents?
- Clean or replace furnace filters regularly, or after each month of heavy usage.
- Replace the blower door cover after checking the filter.
- Securely fasten the door that covers the pilot light and burner area.
- Do not store combustible materials — paints, solvents, gasoline — in the same room or near your furnace.
- Do not store flammable materials mops, brooms, laundry, newspapers — near a furnace.
- Air-supply vents must be clear of obstructions. Furnaces need a constant supply of fresh air to run efficiently and safely.
- Unvented heaters are not recommended and should only be used in well-ventilated rooms. Always operate heaters according to the manufacturer's instructions.

## **HAND AND POWER TOOLS**

All hand tools and power tools must be maintained, stored and handled so that they are kept in a safe operating condition. Inspection of each tool should be made before use.

Electric power tools must be grounded, the ground conductor must be checked frequently.

Check all power tool electric cords and extension cords for cuts and abrasions. Do not use any electric powered tool or extension cord if the electric cord is damaged; even if the cord has been taped!

Hammers, picks, shovels etc. with split or defective handles or loose heads should never be used.

Pneumatic tools must have positive locks on hoses and attachments.

## **COMPRESSED AIR AND GAS CYLINDERS**

Compressed air is very dangerous and careless use can cause severe injury or death. Always observe the following rules:

Do not use the air nozzle to clean hands or clothes.

Close the control valve before turning on the air compressor.

Turn the air off at the control valve before changing tools.

Never kink the supply hose to stop the flow of air.

Make certain air hose and couplings are in safe working condition before starting the air compressor.

Always wear protective eye gear.

Horse play with compressed air can be fatal!

Release pressure on the system before removing or adjusting any compressor part.

Do not remove or alter safety devices.

Be sure that the compressor has an approved safety valve at the source of the air supply to reduce pressure if the hose fails.

Oxygen cylinders shall never be stored near combustible material especially oil and grease, near fuel gas cylinders or near carbide or acetylene unless separated by a suitable wall.

All gas cylinders must be capped when not in use.

All gas cylinders must be stored in an upright position with caps on.

Do not transport any type of gas cylinder without removing the gauges and capping the cylinder. Always secure the gas cylinder to the vehicle bed before moving the vehicle.

## **WELDING AND CUTTING**

Wear clothing which will protect all of your body from the rays of the arc and from sparks and hot metal.

See that sufficient ventilation is provided, or wear an airline type respirator when welding in confined spaces.

Be sure your hood is in place before striking an arc and at all times while welding. Wear hardened filter lens goggles under the hood or shield.

Prior to commencing operations thoroughly inspect the area to make sure that there are no combustible materials nearby. Keep fire extinguishers on hand on all welding jobs.

Always put rod subs in a container. If they are thrown loosely around, they present a slipping hazard.

Use fully insulated electrode holder. Do not dip hot electrode holders in water for cooling purposes.

Before welding or cutting on any drum or container which has contained gasoline, oils or other flammable materials, make sure that proper cleaning methods have been used.

Frames of all electric welding machines operated from power circuits should be effectively grounded with No. 8 gauge wire or better.

Shut off welding machine when not in use for long periods of time or if moving a machine a significant distance.

The tee wrench should be attached to the equipment so that it is always available for quick turn off in the event of an emergency.

Valve protecting caps should always be in place when cylinder is not in use.

When raising or lowering cylinders, use suitable slings, boats, cradles or platforms. Do not lift with electric powered machines.

Do not allow grease, oil or other solvents to accumulate on or come in contact with the cylinder gauges.

Keep cylinders away from sources of heat. If stored in buildings, keep away from highly combustible materials, stoves, radiators etc. Cylinders of oxygen should not be stored close to cylinders of acetylene or other fueled gases.

Compressed gas cylinders are to be upright at all times.

check oxygen and acetylene hose lines before use and check cylinders for valve leaks.

Back-flow check valves shall be mounted on the torch, on the hoses or in the regulator outlet for both fuel gas and oxygen.

## **GARAGE AND REPAIR SHOPS**

Garages and repair shops should be well ventilated to guard against carbon monoxide gas from running engines. If the shop is not well ventilated, the vehicle should be driven outside as soon as the engine is started.

Gasoline should not be used for cleaning purposes. Stoddard solvents or other high flash point solvents should be used for cleaning purposes.

Rags, waste or trash should not be allowed to accumulate anywhere except in fireproof containers designed for that specific purpose.

Aisles or open spaces should be kept free of tools and parts.

Eye protection should be worn at all times when operating a grinding wheel and the wheel should be inspected for cracks before starting.

Tires should be inflated in a restraining device which will contain flying parts should a blow off occur.

Grease pits will be covered or guarded with a chain or rail guards when not in use.

## **LOCATING UNDERGROUND UTILITIES BEFORE EXCAVATING**

Always locate buried utilities and other structures before digging.

ANG is responsible for all damage to underground facilities.

Prior to excavating, all known owners of underground facilities in the area shall be notified by calling the USA (UNDERGROUND SERVICE ALERT) North at 811 or 800-227-2600, The USA call before you dig shall be posted in all ANG buildings and in or on all ANG vehicles.

Check the entire job site for visual signs of substructures. This includes such items as manholes, water meter boxes, ditch lines, pavement patches, previous location markers, pipe risers and the absence of utility poles which indicates the presence of underground electric and phone cables.

Check the entire job site by "sweeping" back and forth with a pipe locator to verify both known sub service structures and to pick up any unknown sub service structures.

Expose substructures by hand after locations are made.

Be careful that no holes or cuts are knocked into the substructure by scraping or hammering. If damage occurs, the utility must be notified under all circumstances. No trench or excavation may be closed until the utility, whose structure was damaged, has

inspected, repaired and approved the closing of the trench or excavation.

Be aware of possible joint use trenches - power, telephone, cable TV, gas.

## **EXCAVATING AND TRENCHING**

Before starting any excavation, obtain all available information on existing utilities.

All employees will wear a safety vest and helmet when working in a trench and or around heavy equipment to assist the operator in providing a safe working environment.

The walls and faces of all excavations, which expose a worker to danger from moving ground, shall be effectively guarded by a means of shoring, sloping of the ground, benching or an alternative method as provided in the Construction Safety Orders.

All excavations over 5 feet in depth shall be protected by means of shoring, sloping or benching prior to entry.

Prior to working in an excavation, make a daily inspection for evidence of possible cave ins or slides, check for changing ground conditions, particularly after a rainfall, check all shoring or sloping as the work progresses.

Be extra alert when excavating near older excavations.

Excavated material shall in no case be placed closer than 2 feet from the edge of the excavation.

Excavations, trenches etc. 4 feet or more in depth shall be provided with a ladder for access. The ladder must protrude above the top of the trench by at least 3 feet.

Pipe and other materials strung along the trench must be positioned so they cannot roll into the excavation.

## **TRAFFIC CONTROL**

Where work sites encroach upon public streets or highways, a system of traffic control, in conformation with the "Manual of Traffic Control", published by the State Department of Transportation, shall be required.

Specifications for the size and design of signs, lights and devices shall be those that are described in the "Manual of Traffic Control".

Barricades shall be erected to detour vehicles and people from hazardous areas.

Place signs to warn of hazardous conditions.

Safety Vests are to be worn when working in or around a roadway.

## **FLAGGING (SIGNALING)**

Flag workers shall be trained in the proper fundamentals of flagging and signaling traffic before being assigned as a flagger.

The flagger must be protected and the motorist forewarned of his or her presence by the use of advance warning signs and cones.

Use cones before the flagman's position to mark traffic lanes.

The use of orange vests, jackets or shirts shall be required for all flaggers. ANG requires that all field personnel wear orange vests on the job site.

During hours of darkness, the flagger shall be outfitted with a reflectorized garment and the flagger's station shall be illuminated.

To Stop Traffic, the flagger shall face the traffic and hold the stop paddle in a vertical position at arm's length.

When it is safe for the traffic to proceed, the flagger shall stand parallel to the traffic movement, and with the slow paddle held in a vertical position at arm's length.

Flags should be a minimum of 18" x 18" in size and orange in color.

Flagmen shall not be used to direct traffic intersections that are signalized.

## **HEAVY EQUIPMENT**

Machines should be maintained in good working order. All vital parts such as motors, chassis, blades, blade holders, tacks, drives, hydraulic and pneumatic mechanisms and transmissions should be thoroughly inspected before starting any job.

Before starting a job, the operator should be given detailed instructions regarding the work to be done.

Before using the starter motor the operator should check to make sure that all operating controls are in the neutral position.

Machines should be operated at speeds and in a manner consistent with conditions on the particular job site.

At no time should a piece of equipment be left unattended while the motor is running, especially if the machine is on an inclined surface or on loose material.

If possible, equipment should be driven entirely off the road at night. When a portion of the machine projects into the road, it should be adequately marked with red lights or flares. Red flags should be used in the day time.

Personnel should stop motors and refrain from smoking during any refueling operations.

The operator should keep deck plates or step on equipment free from grease, oil and mud.

## **PIPE HANDLING SAFETY**

Check conditions of pipe reels, pallets and trailer. Each coil shall be marked or coded to show:

- a. Name or trademark of manufacturer & note P.E. Pipe ASTM 2513.
- b. Date, length and size received.

Watch for overhead obstructions when pipe is raised or lowered.

Do not go under pipe being loaded, lifted or stacked.

Be sure you do not get between the pipe and any equipment.

Stand clear when pipe is rolling.

Always insure pipe is balanced in the sling, rack, stand or reel.

Pipe shall be piled, stacked or racked in a manner designed to prevent it from tipping, falling, collapsing, rolling or spreading. Racks, bins, planks, sleepers, bars, stops, blocks or sheets shall be used to make the pipe stable.

All P.E. Pipe shall be stored in in such a manner to protect against over-exposure to UV radiation and heat.

Observe pipe conditions for any gouges or imperfections if found notify supervisor.

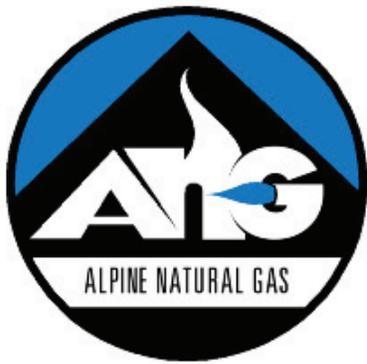
## **INJURY AND ACCIDENT REPORTS**

All injuries and all cases of damage to property must be reported to your immediate supervisor.

Do not attempt medical treatment for any non-employee injuries beyond first aid treatment and an immediate call for aid.

Obtain names and address of any non-employee involved in an accident and obtain names, phone number and address of witnesses.

Complete appropriate ANG reporting form.



“Not forsaking safety for  
Profit!”

Our #1 goal here at Alpine  
Natural Gas, is to run a  
safe, reliable Natural Gas  
Distribution Company, for  
the public, customers, and  
employees!

---

Employee Signature

Date

# **Alpine Natural Gas**

## **Appendix E**

### **Gas Pipe Fusion Manual and other Material Reference Guide**

**ALPINE NATURAL GAS**  
**Polyethylene (PE) Gas Pipe Fusion Manual and Reference Guide**

**Training Procedures, Certification and Manufacturer Instructions**  
**Revised 12/15/10**

(For new Installations or Replacement Installations of main or service PE gas lines. Alpine uses exclusively PE pipe manufactured by US Poly medium density PE 2406.)

Alpine has accepted the manufacturer procedures, tests and instructions for pipe and fittings within this training manual as an addendum to Alpine’s Operations and Equipment Manual (OEM). By adopting these joining and fusion procedures and instructions to qualify its service employees in: butt, saddle and tapping Tee, Electrofusion, “stab” couplers and mechanical bolt on Tees pursuant to DOT Regulations § 192.281, § 192.283 and § 192.285 and similar regulations from the Office of Pipeline Safety (OPS).

**TABLE OF CONTENTS**

<b><u>SUBJECT</u></b>	<b><u>PAGE NUMBER</u></b>
<b>Heat Fusion Tools and Equipment</b>	<b>2-4</b>
<b>Manual Butt Fusion, Saddle Fusion &amp; Tapping Tee Procedure</b>	<b>4-10</b>
<b>Automated Butt Fusion Procedure</b>	<b>10</b>
<b>Electro Fusion Procedure</b>	<b>10</b>
<b>Main Installation Procedures</b>	<b>11-12</b>
<b>Service Installation Procedures</b>	<b>12-13</b>
<b>Additional Topics</b>	<b>13</b>
<b>Squeeze Off</b>	<b>13-14</b>
<b>Permasert</b>	<b>15</b>
<b>Excess Flow Valve</b>	<b>15</b>
<b>Mechanical “Bolt On” Tees</b>	<b>15</b>
<b>Polyethylene Valves- Natural Gas Mains</b>	
<b>Polyethylene Gas Pipe Fusion Evaluation Forms</b>	<b>15-17</b>
<b>Polyethylene Gas Pipe Fusion Certification-Qualification Forms</b>	<b>18-24</b>

## A) HEAT FUSION TOOLS and EQUIPMENT

### 1) BUTT FUSION

*NOTE: The manufacturer's operating instructions must be adhered to insure acceptable fusions. These instructions accompany this manual.*

#### I) Heating Iron.

The heating irons are NOT EXPLOSION PROOF and shall not be used in any area with gas present while still connected to a power source.

An electrically resistive coil in the heating iron maintains the temperature at a level sufficient for fusion. The irons operate on 110 volts A.C. with Fusion Machines power requirements ranging from 1200 watts McElroy No. 14 to 1750 watts McElroy No. 28 Auto Mac.

Teflon coated faces are utilized on both sides of the iron. Extreme care must be exercised to avoid scratching the faces; only cotton cloths should be used for cleaning. The faces are either an integral part of the iron or are detachable and must be recoated when scratched.

A dial type thermometer is placed next to the handle. The iron temperature can be adjusted by changing the calibration set screw.

#### II) Butt Fusion Machine

The butt fusion machine consists of mobile and stationary alignment clamps that hold the pipe ends during the fusion process. These clamps transfer the force and associated pressure required to fuse the pipe. In addition to the following procedure, USPoly also has tested and endorses TR-41, the generic fusion procedure that is available from PPI at [www.plasticpipe.org](http://www.plasticpipe.org).

*WARNING – Understand and follow all equipment manufacturer's recommendations and guidelines.*

Alpine routinely uses, for butt fusion four models of **McElroy Fusion Machines**:

##### A. PIPE JOINING

Mini Mc	¾" PE pipe fusions.
2CU	2" PE pipe fusions. ,
"Pitbull" No. 14	4" PE pipe fusions.

##### B. SADDLE FUSION

2LC	2" PE saddle type pipe fusions.
-----	---------------------------------

#### III) Alignment Clamp Inserts

Two sizes of inserts are supplied for the 4" machines (2" and 3" IPS). Alpine does, not currently, or in the past used larger Fusion Machines like the McElroy No. 28 machine which also has two inserts (4" and 6" IPS).

#### **IV) Facer**

Either manual or electrical facers are provided for the butt fusion machines. The electrical facers are NOT EXPLOSION PROOF and shall not be used in any area with gas present.

## **2) ELECTRO FUSION**

*NOTE: The manufacturer's operating instructions must be adhered to insure acceptable fusions.*

Alpine uses the **Kerotest, "Innogaz Electrofusion Systems". Danielle model.**

### **I) Universal Control Box**

This unit controls the fusion process. It processes information received from the optical wand that is used to determine the fitting manufacturer and appropriate fusion times. It also stores fusion related information, which can be downloaded for record information.

### **II) Optical Wand**

This device reads the uniform product code UPC sticker on the fitting.

### **III) Couplings-** Alpine currently uses the Friatec Electrofusion Couplings and fittings.

A resistant wire embedded in the coupling provides the energy required for fusion.

a) Alignment Clamps. Only required for 2" and larger sizes. These devices align and immobilize the pipe ends and coupling during the fusion and cool down periods.

b) Pipe Scrapers.

Three types of scrapers are used to remove oxidation and contaminants from the outside pipe wall prior to electro fusion coupling installation. A paint scraper may be used on 1/2" and 1" CTS sizes only. Virax type or interior anchored pipe scraper can be used on 1/2"CTS - 6"IPS sizes. Additionally, full encirclement Scrapers can be used on 2" - 8" pipe sizes.

### **IV) Tapping Tees-** Alpine does not electrofuse Saddles and Tapping Tees

## **3) MISCELLANEOUS TOOLS**

- I) **Pipe Cutters**
  - a) "Plier" type cutters for use on 1/2" CTS - 2" IPS sizes.
  - b) A guillotine type cutter shall be used on 3" and larger sizes.
- II) **Pipe Squeeze Off Tools**
  - a) Manual squeeze off tools are provided for 1/2" CTS - 2" IPS sizes. These tools are equipped with stops for each pipe size that prevent over squeezing of the pipe.
  - b) Hydraulic squeeze off tools are necessary for the larger pipe sizes, 3" - 8". These tools are also equipped with stops for each pipe size.
- III) **Pyrometer**

The pyrometer is used to check the surface temperature of the heating irons. It consists of a hand held display unit and an attached surface probe.
- IV) **Application tool**

Hexed head and Ratchet used for Tapping Tees
- V) **Appropriate size saddle heater adaptors**
- VI) **60 grit emery cloth and Clean non-synthetic cloth**
- VII) **Torque Wrench (standard)**

For Saddle Fusion Tapping procedure

## B) MANUAL BUTT FUSION PROCEDURES

### I) FUSION FOR PIPE JOINING

- 1) Energize the heating iron. Once the heater has reached maximum temperature, generator cycles off, check the thermometer for  $500^{\circ} \pm 25^{\circ}\text{F}$ .

At the start of each day, the reading of the dial thermometer shall be checked against the surface temperature by use of the pyrometer and the heating iron calibration set screw adjusted accordingly (manual machines only).

Note: DO NOT adjust the heating iron for the AutoMac 26 unit as it is regulated (controlled by the microprocessor this, however, a model we do not use)

- 2) Install the proper size alignment clamp inserts if required.
- 3) Inspect the pipe and/or fitting ends and cut off any damaged or flattened portions.
- 4) Clean each pipe/fitting end with a clean cotton cloth and place them in the alignment clamps. Pipe ends should overlap the alignment clamps by approximately 1/2".

(Continued)

- 5) Place the manual or the motorized facer on the guide rods and bring the pipe ends in contact with it. Turn the manual facer in the direction of the arrow or turn the motorized facing unit on and apply light force on the carriage lever to advance the pipe ends. The motorized facer speed will increase when the pipe has bottomed out.
- 6) Retract the carriage lever and remove the facer. Discard the strips of material from the pipe ends taking care not to touch the clean surfaces. Check the discarded strips to insure that a continuous length from the entire diameter has been removed.
- 7) Check alignment of the pipe ends and adjust for high-low if necessary. If an adjustment is made or a visible gap exists between the pipe ends, repeat the procedures from Step 4.
- 8) Wipe heater with a non-synthetic clean dry cloth and place it on the guide rod(s) and bring the pipe ends into contact with it. Maintain a light force on the carriage until a small melt bead forms around the entire circumference of both pipe ends. Relax the force on the carriage but keep both pipe ends in contact with the heater and start the melt time cycle. Refer to Table 1 for proper melt times.
- 9) After the melt time has been observed snap the carriage back (open) and quickly remove the heater being careful not to hit the melt.
- 10) Inspect the pipe ends for complete melt. Bring the pipe ends together quickly, DO NOT SLAM, applying only enough pressure to form a double roll back bead. The proper bead thicknesses are shown in Table 1. Over-pressuring the melt will cause the bead to overlap itself resulting in a subquality fusion due to displacement of the melt to the OD and ID of the joint leaving a cold ring in the center. Under pressuring can result in inadequate fusion due to insufficient contact pressure in the melt area.
- 11) Maintain the pressure exerted on the fusion area for one minute for 1/2"-4" sizes and for three minutes for 6". Relaxing the pressure prior to expiration of the cooling time can result in porous fusion joints.
- 12) Allow the joint to cool for additional three to four minutes (see Table 1) prior to removal from the alignment clamps. The pipe can now be handled with care. Complete cooling requires approximately twenty minutes.
- 13) Check the melt bead for uniformity and size. If the joint exhibits poor characteristics, determine the cause, make the necessary corrections, cut out the suspect joint, and repeat the procedure from Step 4.
- 14) Clean the heater faces with a clean cotton cloth. DO NOT use synthetic cloths or metal implements.

#### **TABLE 5: Manual Butt Fusion Parameters**

(Us Poly UAC 2000 PE 2406 Technical and Installation Guide)

Pipe Size	Melt Bead Size	Heating Time at 440° (seconds)	Heating Time at 500° (seconds)	Hold Time (seconds)	Cooling Time (minutes)
3/4" IPS	1/16"	16-19	10-12	40	10
1" IPS	1/16"	18-22	12-14	40	10
2" IPS	1/16"-1/8"	40-48	16-19	60	20
3" IPS	1/8"	50-60	20-24	75	20
4" IPS	1/8"	55-66	24-29	90	20
6" IPS	3/16"	90-108	40-48	180	30

## II) SADDLE FUSION AND TAPPING TEES

An application tool must be used when making saddle fusion joints. Application tools should perform the following functions:

The tool must be able to straighten, round and support the main during the heating, joining and holding steps. The saddle area of the fitting must be uniformly supported when heating, joining and cooling.

The tool should allow good alignment of the fitting saddle with the main when heating, joining and cooling. It should place the fitting on the center line of the main.

The opening/closing mechanism used must be fast enough to prevent undue melt cooling.

Joining pressure should be sufficient to roll the melt bead back all around the base of the fitting. It should be capable of maintaining constant pressure during cooling.

### Procedures

1. Clean main with clean cloth. Secure application tool to main according to manufacturer's instructions. Ensure it is centered over location where fitting will be fused.
2. Install correct heater adaptors on heating tool and set heater adaptor face temperature to 500°F(±10°F).
3. Insert fitting in application unit and place fitting base on pipe. When proper alignment is obtained, secure fitting tightly in unit.
4. Retract the fitting from the main and roughen the pipe and fitting surfaces to be fused with 60 grit emery cloth. Wipe residue from fusion area with a clean, non-synthetic cloth.

5. Place heating tool on main centered under fitting. Position fitting against heating tool. Apply force shown in Table 7 during heating cycle. The heating tool may be rocked slightly, about 2°, so that it can seek its own alignment on the main, but it should not be allowed to slide between the fitting and the main. Note that the timed heating cycles in Table 7 are guidelines for obtaining the appropriate melt beads. Weather conditions may require longer or shorter heating cycle times. The key to selecting the heating cycle time is obtaining a complete melt pattern on the main and fitting. Note: Consult tool manufacturer for recommended machine settings to achieve forces shown in Table 7. Attach Torgue wrench to McElroy 2LC and apply appropriate downward Heating Force pressure (lbf).
6. Heating cycle begins after pipe and fitting are seated firmly against heating tool. Heat for time shown in Table 7 or until Melt Bead Width shown in Table 8 is visible on crown of pipe.

**TABLE 7**  
**Saddle Fusion Time Cycle Guidelines**  
 (Us Poly UAC 2000 PE 2406 Technical and Installation Guide)

Fitting	Size Pipe	Time Cycle <sup>1</sup> (sec.) Heating	Heating Force (lbf)		Cooling Force (lbf) Fusion/	Time Cycle (sec.) Holding
Tapping Tees and Service Saddles	1-1/4"	40 (ftg.)	60-80		40-90	60
		25 (pipe) <sup>2</sup>				
	2" - 8"	40	60-80		40-90	60
	12"	40 (ftg.)	60-80		40-90	60
		55 (pipe) <sup>3</sup>				
High	2"	40-50	120-140		60-80	120
Volume	3"	70-80	120-140		80-100	120
Service	4"	70-80	120-140		90-120	180
Punch	6"	80-90	120-140		90-120	180
Tees	8"	80-100	120-140		120-140	180
Branch	2" x 2"	45-50	120-140		60-80	120
Saddles	3" x 2"	70-80	120-140		80-100	120
Rectangular Base	4" x 2"	70-80	120-140		90-120	180
	6" x 2"	80-90	120-140		90-120	180
	8" x 2"	80-100	120-140		120-140	180
	3" x 3"	60-70	180-190		80-100	120
	4" x 3"	60-70	180-190		80-100	120
	4" x 4"	110-120 <sup>4</sup>	295-305		120-140	210
	6" x 4"	180-190 <sup>4</sup>	180-190		120-140	210

6. Smartly remove the fitting from the heating tool and heating tool from the main, insuring no melt has stuck to the Adaptors. Make sure the heater adaptor corners do not dig into the pipe wall.
7. Quickly inspect both melt patterns before fusing the fitting to the main. If the patterns are complete, press the fitting on the main very quickly (within 3 seconds) with firm pressure

until a Final Bead Width of the size in Table 8 is developed around the entire base of the fitting. If either pattern is incomplete, fuse the fitting onto the main and cut off the outlet or stack to prevent its use. Abandon the fitting and begin another fusion at a new location.

8. Hold pressure on the fitting for the time Shown in Table 7. Allow an additional 3 minutes for cooling prior to removing the application unit.
9. Inspect the fusion to be sure that melt has squeezed out completely around the edge of the saddle base. Check to be certain that the saddle fitting is entirely within the pipe melt pattern. Properly made tapping tee and branch saddle fusions are shown in Figure 3 and 4, respectively. Only accept joints meeting these requirements. Never allow a questionable joint to be installed.
10. For tapping tees and service saddles, allow an additional 15 minutes cooling before pressure testing and tapping. For branch saddles, allow an additional 30 minutes.

**Cold Weather Considerations (Below 55°F)**

- Carefully remove (by light tapping or scraping) the ice and frost from the fusion areas and the areas to be clamped. Otherwise, ice will melt when exposed to the heating tool and spot chill the polyethylene. This could cause incomplete fusion.
- Shield the heating tool and fusion area from the wind, snow and freezing rain.
- Ensure heater adaptor faces maintain a temperature of 500°F(±10°F)
- The length of cycle necessary to obtain a complete melt pattern will depend not only on the outdoor temperature, but also on wind conditions, pipe contraction and operator technique. The heating cycle times shown in Table 7 should be used as a starting point for determining the exact heating cycle time for the particular installation conditions.

Determining the exact heating cycle time can be accomplished by making a test melt pattern on a piece of cold scrap pipe. If the initial melt pattern is incomplete, try a 5 second longer cycle on another cold piece of scrap pipe. Continue this process until a complete and uniform melt pattern is obtained on the fitting and pipe. Avoid cycles in excess of that required to achieve a good melt pattern.

**TABLE 8**  
**Bead Width Guidelines- Cold Weather**  
 (Us Poly UAC 2000 PE 2406 Technical and Installation Guide)

Pipe Size	Melt Bead Width	Final Bead Width
1-1/4"	1/32"	1/16"
2"	1/16"	1/8"
3" and larger	1/8"	larger than 1/8"

**III) Tapping Procedures**

### **A. Tapping Tee (Type 1)**

Slip the protective sleeve over the service line and then fuse the line to the outlet. Tighten the cap and pressure test for leaks around the saddle and outlet fusions. If a leak occurs, release pressure, cut off the outlet or stack and abandon the tee. If it passes the pressure test, release the pressure in preparation for tapping.

Remove cap. It is important to keep both the cap and seal areas free of dirt.

Insert the hex shank of the tap tool<sup>1</sup> all the way into the hex socket portion of the punch. Using the special tap tool, together with a suitable socket drive ratchet wrench, turn down at a steady rate until the main is tapped.

For 4" or smaller mains, tapping is complete when the tool center mark is flush with the top of the stack.

For 6" and 8" mains, tapping is complete when the tool center marks is  $\frac{1}{2}$ " below the top of the stack (i.e., 7 additional turns).

**CAUTION:** turning the punch down appreciably beyond either of the above mentioned stop points could result in dropping the punch into the main. If used for 1-1/4" main tapping, additional turndown could result in the punch contacting the wall on the opposite side.

When tapping is complete, raise the punch back up until the top of the punch is flush with the top of the stick. It should never extend above the top of the stack. It should never extend above the top of the stack. Some minor gas leak-by may occur through the stack internal threads between the time of the tap and cap sealing.

Replace cap and tighten. Turn cap down until the bumps at the base of the cap just contact the body rib as shown in Figure 5. This should be done by hand, never use a wrench. Some resistance to turning may be felt several turns prior to the cap reaching the rib. This is normal; the o-ring seal is being compressed. Further tightening beyond the bumps contacting the rib will not improve sealing performance but may cause unnecessary stress on the fitting. Running the punch back into the tap hole will provide effective flow control, but not necessarily a bubble-tight shut-off.

### **B. Tapping Tee (Type II)**

1. Slip the protective sleeve over the service line and then fuse the line to the outlet. Tighten the cap and pressure test for leaks around the saddle and outlet fusions. If a leak occurs, release pressure, cut off the outlet or stack and abandon the tee. If it passes the pressure test, release the pressure in preparation for tapping.
2. Remove cap. It is important to keep both the cap and seal areas free of dirt.
3. Insert the hex shank of the tap tool<sup>2</sup> all the way into the hex socket portion of the punch. Using the tap tool, turn the punch down until the appropriate tool mark (dependent on pipe size) is flush with the top of the stack.

For 10" SDR 13.5 and 12" SDR 13.5 mains, tapping is complete when the 8" mark is  $\frac{1}{4}$ " below the top of the stack (i.e., 4 additional turns).

**CAUTION:** Turning the punch down appreciably beyond the above mentioned tool marks could result in dropping the punch into the main.

4. Raise the punch until the top of the punch is flush with the top of the stack. It should never extend above the top of the stack. Gas leak-by may occur through the stack internal threads between the time of the tap and cap sealing.
5. Replace cap and tighten. Turn cap down by hand until base of cap just contacts shoulder on body. Some resistance to turning may be felt a couple turns prior to the cap reaching its final position. This is normal; the o-ring seal is being compressed. Excessive tightening does not improve sealing performance but may cause unnecessary stress on the fitting.

### **C. Service Saddle and Branch Saddle**

- Once the service saddle or branch saddle fitting has been fused to the main, it is ready to be tapped. Be certain that the tapping tool used has the following features:
- A Cutter of an appropriate size so that it will not damage the inside of the fitting.
- Built-in stops to prevent damage to the inner wall of the main opposite to the hole cut in the pipe.
- Coupon retention.
- Safety chain for hot taps.
- Pressure test valve for hot taps.

When there is no pressure in the main, tapping is accomplished with a cold tapping tool. If there is pressure in the main, tapping is accomplished with a hot tapping tool. Consult your USPoly Company representative for information on the procedures for the use of these hot and cold tapping tools and their availability

### **C) AUTOMATED BUTT FUSION PROCEDURES**

Follow the appropriate manufacturer's procedures when producing butt fusion with automatic equipment. (eg. Is the Auto Mac No. 26 that Alpine does not currently use)

### **D) ELECTRO FUSION PROCEDURES**

NOTES: See the Universal Control Box Manufacturer's literature for fusion information. The manufacturer's literature must be adhered to insure acceptable fusions. In the event that the supply voltage varies outside of the stated limits the fusion cycle will be interrupted. A new cycle can be started after a ten-minute cool down period has been observed. The fusion system will automatically adjust the duration of the cycle to compensate for the previously aborted attempt. A maximum of three attempts may be tried. If the tapping tee has already been tapped, NO retries are allowed.

## **E) MAIN INSTALLATION PROCEDURES**

### **1) DIRECT BURIAL**

- I) Excavate 34" plus pipe diameter deep trench.
- II) Make sure trench bottom is level and free of sharp objects, rocks or other materials that may damage pipe.
- III) Shade trench with 4" min. sand bed and level sand as needed.
- IV) Install a #14 gauge copper tracer wire adjacent to pipe.
- V) Install pipe in trench and snake it. Observe pipe during installation for scratches, gouges or others defects. Avoid dragging pipe over rough surfaces and scratching it.
- VI) Pressure test pipe with 95 psig air for 24 hours.
- VII) Backfill to top of pipe with sand and haunch the sides.
- VIII) Backfill trench with 12" lifts of material and or slurry and compact to 95% compaction.
- IX) Purge pipe.

### **2) INSERTION**

- I) Two methods may be used to identify possible obstructions in the casing pipe to be inserted: - Video inspection of the existing pipe -Pulling of a proof piece of similar diameter pipe through the section to be inserted and inspection of it for damage. All obstruction must be removed prior to insertion of a gas main.
- II) Deburr casing ends, run mechanical brush, and use compressed air to blow debris out of casing. Install a suitable casing cable protector on the casing end to protect the pipe coating from damage.
- III) Attach a #14 gauge copper tracer wire to existing steel pipe casing. If the casing is plastic attach the tracer to the new pipe.
- IV) Seal end of the pretested pipe to be inserted with an end cap. Insert the pretested pipe into existing casing taking care not to scrape it at the entrance. Pipe shall be extended at least two feet past the casing end and inspected for gouges and scratches. If damaged, replace the pipe and go back to Step I.
- V) Leak test pipe with 95 psig air applying water soap mixture to all joints and verify no leakage is present.
- VI) Purge pipe.

### **3) BORING –HYDRAULIC POWER-MOLE OR PNEUMATIC BORE TOOLS**

- I) Prospect/expose all existing underground utility services/facilities prior to boring. Additionally, all private sewer laterals must be potholed to determine exact vertical

- and horizontal position before boring.
- II) After establishing the pilot hole, a back reamer/compactor must be used. The back reamer/compactor must be a minimum 2 times larger than the nominal diameter of the pipe that will be pulled in.
  - III) A commercially available weak link must be used on the pull head to avoid damaging the pipe during pull in. Two types available are; a mesh wire grip or a mechanical screw grip.
  - IV) IV) Attached an end cap and tracer wire to the pipe prior to pull in.
  - V) Care must be taken to avoid scraping or gouging the pipe during pull in. Rollers shall be used at all bend points in the launching pit and every 15' along the pipe. **Pipe shall not be dragged on street surface.**
  - VI) After pull in, check continuity of tracer wire.
  - VII) Install service tees and bore in service lines.
  - VIII) Care must be exercised, when filling service and sewer pits, to insure proper backfill and support of installed pipe. Fill pits up to the top of pipe and hand tamp backfill around pipe haunch.

#### 4) Polyethylene Gas Valves

Polyethylene gas valves shall be manufactured by either Nordstrom Valve Inc., The gas valves shall be in compliance with the requirements of ANSI/AMSE B16.40 “Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems”, ASTM 1996 Section 8 “Plastics”, Volume 08.04 “Plastic Pipe and Building Products” D-2513, and DOT Part 192.145 “Valves”.

The valves shall be assembled so to operate smoothly and provide gas tight seal. Each valve’s stem shall be equipped with the weather seal(s) protecting inner parts from ground water and foreign debris intrusion. All polyethylene valves shall be supplied with the Butt End outlets.

The polyethylene portion of the valve shall be one piece molded medium density PE-2406 polyethylene manufactured from Performance Pipe Company Marlex TR-418 Resin, Rigidex PC 2040Y, or FINATHENE 3802Y. PE valves shall conform to the dimensions given in Table below.

Table: Dimensional Standards for Polyethylene Valves

VALVE SIZE	SDR	MIN. PORT DIA. *	MIN. STUB LENGTH *
2"	11	1.80"	2.00"
4"	13.5	3.60"	3.00"
6"	13.5	4.80"	3.50"
8"	13.5	6.30"	3.50"

## **F) SERVICE INSTALLATION PROCEDURES**

### **1) DIRECT BURIAL**

- I) Excavate 24" plus pipe diameter deep trench.
- II) Make sure trench bottom is level and free of sharp objects, rocks or others materials that may damage pipe.
- III) Install a #14 gauge copper tracer wire adjacent to pipe.
- IV) Install pipe in trench. Always "snake" the pipe in the trench bottom during installation (This insures that when the pipe contracts at lower temperatures it won't pull out from connections). Observe the pipe during installation for scratches, gouges or others defects.
- V) Attach ASR (Annnodeless Service Riser) or insert existing riser.
- V) Install tapping tee and connect service line to it, including installation of an excess flow valve.
- VI) Pressure test pipe with 95 psig air for 15 minutes and check all connections for leaks.
- VII) Tap main and purge pipe.
- VIII) Backfill pipe and replace the landscape in kind.

### **2) INSERTION**

- I) Deburr casing ends and use compressed air to blow debris out of casing. Install a suitable casing cable protector on the casing end to protect the pipe coating from damage.
- II) Attach a #14 gauge copper tracer wire to existing steel pipe casing. If the casing is plastic attach the tracer to the new pipe.
- III) Seal end of pipe to be inserted with an end cap. Insert pipe into existing casing taking care not to scrape it at the entrance. Pipe shall be extended at least two feet past the casing end and inspected for gouges and scratches. If damaged, replace the pipe and go back to Step I.
- V) Install tapping tee and connect service line to it. V) Pressure test pipe with 95 psig air for 15 minutes and check tapping tee for leaks.
- VI) Tap main and purge pipe.

### **3) BORE**

- I) Establish a service bore hole with a pneumatic or similar gopher type boring device.
- II) Verify depth at meter end of bore hole. If bore hole is less than 24" deep, restart procedure from Step I.
- III) Install an end cap and attach a #14 gauge tracer wire to service line. IV) Insert service line into bore hole.

- V) Attach an ASR to the meter end of service line.
- VI) Install a service tee and connect the service line to it.
- VII) Pressure test pipe with 95 psig air for 15 minutes and check tapping tee for leaks.
- VIII) Tap main and purge pipe.

**G) ADDITIONAL TOPICS**

**1) SQUEEZE OFF** *Warning- Understand and follow the equipment manufacturers recommendations and*

- I) Set the pipe stops to the appropriate diameter.
- II) Ground the squeeze machine and the pipe end.
- III) Take your time while squeezing the pipe, advance the squeeze a little bit each time and then allow the pipe to conform to the new set before continuing the process. Complete shut off may not be achieved in the larger sizes.
- IV) Perform the repair.
- V) Remove the squeezer, allowing for the pipe to expand in steps during the removal.

## SQUEEZE-OFF

WARNING – Understand and follow all equipment manufacturer’s recommendations and guidelines

Effective flow control is a basic requirement in gas distribution systems. This is accomplished in the UAC 2000 polyethylene piping system in two ways. The primary method of flow control should be those installed system valves that are available. Secondly, squeeze-off using suitable equipment can be used to control flow or isolate a section of pipe. Also, squeeze-off is frequently used to control flow for emergency repairs or during certain pipe line or branch extension operations.

This section describes equipment and explains proper procedures and precautions for effectively and safely squeezing off UAC 2000 pipe for flow control. The pressure rating of the pipe is retained if the recommended procedures and equipment are used.

### Tools

Squeeze units suitable for use on UAC 2000 pipe consist of steel bars and a mechanical or hydraulic means of forcing the bars together. These units are designed to squeeze UAC 2000 pipe until the inside surfaces meet. This adequately controls gas flow although a bubble tight seal is not always obtained. A positive locking mechanism should be available.

### Caution:

To assure flow control, yet prevent damage to the pipe, tools have mechanical stops to limit the minimum gap between the squeeze bars. Recommended minimum gaps between the squeeze bars for UAC 2000 pipe are based on the formula:

$$\text{Min.gap}=(2) (\text{max wall thickness}) \times (0.7)$$

In addition to observing the minimum gap distances between bars, the bars themselves should be rounded to prevent pipe damage.

The user also may want to consult the “Standard Guide for Squeeze-Off of Polyolefin Gas Pressure Pipe and Tubing.” Designation F1041, issued by the American Society for Testing and Materials (ASTM).

### Precautions for Squeeze-Off

Certain precautions should be taken to prevent damage to the squeeze tools or to UAC 2000 pipe during squeeze-off in recognition of the large forces required for flow control, particularly in large main sizes. Damage to the pipe from improper squeeze-off procedures may cause eventual failure.

- Make certain the pipe is centered and squared in the squeeze tool. It is important that the pipe be free to spread as it flattens. Failure to do so may prevent flow control or result in damage to the pipe or the tool.
- Locate the squeeze point at least three pipe diameters away from the nearest fitting or butt-fused joint. Failure to do so may result in damage to the fittings or joints.
- Squeeze-off UAC 2000 pipe only once in the same place. It is possible for scale or other metal particles contained within the gas flow to become trapped at the squeeze point. A second squeeze in the immediate area of the first could force these particles to penetrate into or through the pipe wall.
- Always use a squeeze tool with gap stops to limit the amount of squeeze and use the proper gap stops for the pipe size being squeezed. Using smaller gap stops or otherwise over squeezing the pipe may result in damage to the pipe or tool.
- A bubble tight flow control will not always be obtained through squeeze-off. If more complete flow control is required, a valve should be used or additional squeeze tools used in series to supplement each other.
- Close the squeeze tools until flow is controlled or until the gap stops make contact. Do not use extension levers or “cheater bars”, or otherwise abuse the tools in trying to effect a squeeze-off. Such abuse may overstress the tool and result in failure of the tool and release of the gas flow. Any damaged tool should be repaired or replaced before use for squeeze-off of UAC 2000 pipe.
- Squeeze UAC 2000 pipe slowly or use momentary pauses in the operation to allow for pipe relaxation and reduction in resistance to closure. This is particularly helpful in larger diameters or when the pipe becomes stiffer in cold weather.
- A release rate of 0.5 inches/minute or less is recommended by ASTM F 1041 based on a GRI/Battelle Study, Effect of Squeeze-Off Practices and Parameters on PE Gas pipe Damage”.

## Static Electricity

WARNING – Treat electrical tools as potential sources of ignition and follow standard safety procedures for working in explosive atmospheres. Emergency flow control situations requiring squeeze-off may involve working in the vicinity of flowing gas. The possibility and potential hazard of static electricity should be considered and the company standards on bell hole safety followed.

Because static electricity can build up on any non-conductor such as plastic pipe, there is a possibility of a spark discharge of sufficient energy to cause ignition if the proper air/gas mixture is present. It is also possible for repair crews to receive shocks even though ignition does not occur. Therefore, a study was made with a major gas utility to define the nature of static charge buildup on polyethylene pipe.

The results of that study indicated that: Potential for ignition is present if all three of the following conditions are present: (a) there is sufficient gas flow to cause extensive turbulence; (b) rust particles or other foreign particles are present in the gas; (c) the charge is present at a point where a combustible air/gas mixture is present.

During the study, voltages over 30,000 volts were generated, but no ignitions occurred. The location of the measured charge (on the inner wall of the pipe several inches from the opening) was such that there is some doubt that it is present at a point where the combustible air/gas mixture is also present. Although ignition was not obtained, it is clear that under certain conditions high static charges can be developed and static discharge is a possible ignition source.

Some utilities have taken precautions to dissipate the charge and minimize the possibility of an ignition and maximize the personal safety of the crew. The objective is to provide a path to ground for any static charge. These precautions have included:

- Before personnel are permitted in the bell hole, a fine water spray is applied over the entire area including all exposed pipe and dirt.
- The pipe is kept wet during the squeeze-off procedure until squeeze-off is complete.
- A wet rag is applied to the pipe surface to provide dissipation of static charge to ground.
- In freezing weather, a 50/50 solution of antifreeze and water is sometimes necessary.

Twelfth Plastic Fuel Gas Pipe Proceedings, pp. 228-242 (1991)

## **2) MAIN REPAIRS**

Control the gas flow by closing valves or by installing pipe squeezers. Depending on the cause, either install a clamp or cut out the damaged portion and install a short section of PE. If working on PE use two electro fusion couplings to make connections or butt fuse using pipe joining procedure.

## **3) SERVICE REPAIRS**

If the service pipe is PE and the failure is pull out related (either by a third party or temperature contraction) replace the entire line. With dig in situations, control the flow and use either of the approved fusion methods to repair the line.

## **H) PERMASERT**

**Elster Perfection Permasert® Non-Corrosive Mechanical Coupling** 1" X 3/4" and 2" Permasert couplings shall be installed with the Permasert V-Tool. Permasert V Tool and the couplers shall be used in accordance with the manufacturer's Installation Instructions by Elster Perfection.

## **I) EXCESS FLOW VALVE (EFV)**

**Lyco Excess Flow Valves** are used on all service line installations and are designed to shutoff flow of gas to the meter when the service line is punctured or severed. Sensing increased flow the valve will shut off or trip and will automatically reset once repair is made to line and the pressure has equalized. Follow manufacturer's installation instructions. EFV series must be appropriate for service length and customer's max. load.

- I) Install EFV with flow direction arrow pointing in direction of gas flow.
- II) Install EFV as close to gas main as practical.
- III) Fuse EFV housing with butt fusion technique to 3/4" PE service line.
- IV) Place ID tags that come with EFV around service line adjacent to the EFV.

## **J) MECHANICAL "BOLT ON" TEES**

**Elster Perfection Permalock® Tee** are used to connect 2' PE main pipe to a 3/4" service line. Follow the Installation Instructions from Elster Perfection.

- Clean surface of PE main
- Bolt on TEE
- Connect service line to Tee Tower outlet
- Test Tee/service assembly using standard leak test procedures
- Place Depth Tube on top of cutter assembly and thread downward using 5/16 hex wrench until it bottoms in the Tower.
- Thread Cutter upward (counterclockwise) until top of Cutter is flush with top of Tower. This will gasify the service.
- Install Cap on the Tower and hand tighten to Cap Stop.

(Cont)

**Continental Industries, Con-Stab fittings”Bolt –On Tees,**

Application, Connect a 2” or 4” Main to a 6 inch Main.

- Clean surface of PE main
- Bolt on TEE
- Connect service line to Tee Tower outlet
- Test Tee/service assembly using standard leak test procedures
- Place Depth Tube on top of cutter assembly and thread downward using 5/16 hex wrench until it bottoms in the Tower.
- Thread Cutter upward (counterclockwise) until top of Cutter is flush with top of Tower. This will gasify the service.
- Install Cap on the Tower and hand tighten to Cap Stop.

# ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 1)

## PIPE JOINING

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

\_\_\_\_\_ **BUTT FUSION MANUAL**

\_\_\_\_\_ **BUTT FUSION AUTOMATIC**

- Cleaned pipe around fusion zone.
- Verified heating iron temperature.
- Observed recommended melt bead prior to timing.
- Pipe end had square cut.
- Cleaned pipe end and outlet.
- Measured and marked pipe end.
- Scraped pipe and outlet end.
- Removed cuttings from interior of pipe.
- Cleaned fitting and scraped areas.
- Installed fitting properly.
- Complete pipe melt pattern
- No gaps or voids
- Melt bead rolled back to pipe.
- Alignment
- Complete facing.
- Immobilized pipe during fusion and cool down periods.
- Maintained pressure on fusion during recommended cool down period.
- Allowed joint to cool in machine for recommended period.

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

# ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 2)

## ELECTROFUSION

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

### **ELECTRO FUSION COUPLINGS**

- Pipe ends were cut square and even.
- Cleaned pipe inside and out.
- Measured and marked pipe ends.
- Scraped pipe ends.
- Took proper precautions to avoid contamination of pipe ends.
- Cleaned fitting and pipe ends with 96% or > Isopropyl Alcohol.
- Properly installed pipe in alignment tool.
- Centered fitting between marks.
- Connected control box to proper 110 volt A.C. power source in correct sequence.
- Verified the operation of sensor switches. (If Innogaz System)
- Had thorough understanding of operation sequence and warning light functions.
- Swiped fitting UPC with optical wand.
- Noted time that FUSION START BUTTON was depressed.
- Marked time of day on pipe at end of fusion.
- Removed leads from fitting 30 seconds or longer after fusion was over.
- Verified presence of plastic flow into both wells. (If Innogaz System)
- Allowed fitting to cool in secured position for recommended time.

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

# ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Evaluation Form 3)

## SADDLE FUSION AND TAPPING TEES

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Individual should be tested on all procedures he/she is to be certified under. (Unmarked boxes constitute failure in that type procedure)

### **SADDLE FUSION and TAPPING TEES**

- Cleaned pipe around fusion zone.
- Verified heating iron temperature.
- Observed recommended melt bead prior to timing.
- Pipe end had square cut.
- Cleaned pipe end and outlet.
- Measured and marked pipe end.
- Scraped pipe and outlet end.
- Removed cuttings from interior of pipe.
- Installed fitting properly.
- Followed proper saddle fusion procedure.
- Complete pipe melt pattern
- No gaps or voids
- Complete melt development around base of fitting
- Fitting placed in pipe melt pattern
- Immobilized pipe during fusion and cool down periods.
- Maintained pressure on fusion during recommended cool down period.
- Allowed joint to cool in machine for recommended period.
- Allowed fitting to cool in secured position for recommended time.
- Outlet Connection: Installed service line using 3/4" butt fusion technique

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

# ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures

(Fusion Certification Form 1)

## JOINT EVALUATION

Visual Examination (During and after assembly. Compare to Photograph or sample of acceptable joint.)

### Procedure/Joint Appearance

PROCEDURE		JOINT APPEARANCE		APPARENT CAUSE OF FAILURE
		PASS		
<b>BUTT FUSION-PIPE JOINING</b>				
<b>SADDLE FUSION-TAPPING</b>				
<b>ELECTRO FUSION</b>	<b>COUPLING</b>			
	<b>TAPPING</b>			

**FAIL**

## DEFORMATION TEST

- Specimen cut into longitudinal straps. (Joint should be free of voids or un-bonded areas on surface.)

## RECOMMENDATION:

Retest Required.      Yes \_\_\_\_\_ No \_\_\_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Electro Fusion Couplings
- Tapping Tees

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

**ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures**

(Fusion Certification Form 2)

**Joint Evaluation (Visual)**

PROCEDURE		JOINT APPEARANCE		APPARENT CAUSE OF FAILURE
		PASS		
BUTT FUSION-PIPE JOINING				
SADDLE FUSION-TAPPING				
ELECTRO FUSION	COUPLING			
	TAPPING			

**FAIL**

Inspector \_\_\_\_\_

Individual demonstrated the ability to follow the recommended procedures and produce acceptable fusion joints.

- Yes
  
- No

**RECOMMENDATION:**

Retest Required.      Yes \_\_\_\_\_ No \_\_\_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Couplings
- Tapping Tees

Authorized Observer/Tester \_\_\_\_\_ Date \_\_\_\_\_

**ALPINE NATURAL GAS: Polyethylene Gas Pipe Fusion Certification Procedures**

(Fusion Certification Form 3)

**Joint Evaluation (Deform joint by bending or compression.)**

PROCEDURE		JOINT APPEARANCE		APPARENT CAUSE OF FAILURE	FAIL
		PASS			
BUTT FUSION-PIPE JOINING					
SADDLE FUSION-TAPPING					
ELECTRO FUSION	COUPLING				
	TAPPING				

Inspector \_\_\_\_\_

Individual demonstrated the ability to follow the recommended procedures and produce acceptable fusion joints.

- Yes
  
- No

**RECOMMENDATION:**

Retest Required.    Yes \_\_\_    No \_\_\_

Certification Card Issued/Date \_\_\_\_\_

Re-Certification Card Issued/Date \_\_\_\_\_

Certified in the following application(s):

- Butt Fusion
- Couplings
- Tapping Tees

Authorized Observer/Tester \_\_\_\_\_

Date \_\_\_\_\_

# **Alpine Natural Gas**

## Appendix F

### Drug and Alcohol Plan



**ALPINE NATURAL GAS OPERATING  
COMPANY NO. ONE, LLC**

**ALCOHOL AND DRUG POLICY**

**Revised 6-22-2013**

## ALPINE NATURAL GAS

### ALCOHOL AND DRUG POLICY

The use of drugs and/or alcohol in the workplace may lead to the destruction of life and property. For this reason both the federal government and the State of California enacted the Drug-Free Workplace laws to assist contractors performing public works to establish and maintain a work environment that is free from the effects of drug use. We intend to do everything we can to make this goal a reality in our entire workplace. For that reason, we expect all employees to work alcohol and drug-free. This policy is intended to act in accordance with the Department of Transportation's (DOT) rule, 49 CFR Part 40 and within the guidelines set forth by the Pipeline and Hazardous Materials Safety Administration (PHMSA) DOT rule 49 CFR Part 199.

Persons who perform any or all of the following Pipeline Operator Qualified tasks on Alpine Natural Gas's distribution system:

1. Operations
2. Maintenance or
3. Emergency Response Functions

Are for the purposes of this policy "covered employees".

#### THE COMMITMENT

We recognize that alcohol and drug abuse may be a sign of chemical dependency and that substance abuse can be successfully treated with professional help. Seeking help is the first step toward recovery. We urge employees with possible alcohol or drug problems to seek voluntary counseling and treatment. You may seek help without your supervisor's knowledge or approval by calling the Employee Assistance Program San Joaquin County (209-468-6208). No employee will be disciplined or discriminated against for seeking help.

The effects and dangers of alcohol and drug use and abuse in the workplace;

The treatment and counseling resources that are available to employees and family members who need counseling or assistance;

The resources that may be available to assist employees and family members in obtaining counseling and treatment, including such things as insurance disability, benefits, disability or personal leaves of absence, etc.

Our alcohol and drug policy,

## EMPLOYEE RESPONSIBILITIES

You are responsible for following our safety rules, including the rules outlined in this Policy, and for observing the standards of behavior every employer has the right to expect of its employees.

You are responsible for seeking assistance, whether from or through Alpine Natural Gas or any other resource, before an alcohol or drug problem adversely affects your work performance or results in a violation of this policy. The time to seek help is BEFORE you get in "trouble," not AFTER.

You can also help coworkers who may be developing an alcohol or drug problem by calling it to their attention and urging them to deal with it. You can do that directly or by calling the problem to our attention. Your identity will be kept confidential. We will simply tell the coworker that others are concerned that he/she may be developing a problem that needs attention. Under the Federal Drug-Free Workplace Act, employees should report the use or possession of illegal or unauthorized drugs on the jobsite to their immediate supervisor.

An employee who is diagnosed as having a current alcohol or drug problem may be required to enter into and complete a treatment program (including any follow-up recommendations) approved by Alpine Natural Gas to maintain employment and may also be required to sign a "performance agreement." (Alpine Natural Gas participation if payment of the program cost will be limited to any available insurance coverage). Nothing herein shall be construed to limit Alpine Natural Gas' right to discipline or discharge an employee whose current use of drugs or alcohol makes him or her unable to perform his or her job duties, or cannot perform job duties in a manner which would not endanger his or her health or safety or the health or safety of others.

## ALCOHOL AND DRUG RULES

The following are very important rules. An employee who violates anyone of them: will be disciplined up to and including discharge. (The use of the word "Company" is in reference to Alpine Natural Gas)

1. **Alcohol.** Possessing, using, transferring, offering for sale, selling, or being under the influence of any intoxicating liquor while on Company property, Company time, Company jobsites (such as on customers' premises and projects), in any vehicle used on Company business, or in other circumstances (such as when representing the Company) we believe might adversely affect our operations, safety or reputation is prohibited. A three-day unpaid suspension will result for the first offense and termination for any second alcohol-related offense within any 12-month period. An employee whose blood alcohol content is .08% or more by blood or the equivalent mg per dl or more by urine will be deemed "under the influence." **IMPORTANT:** This rule prohibits the consumption of any intoxicating liquor within at least four (4) hours prior to reporting to work, or returning to work from breaks or meal periods.

2. **Drugs.** Possessing, using, transferring, offering, distributing, attempting to sell or obtain, manufacturing, or being under the influence of any illegal or unauthorized drug or substance (except medically prescribed drugs if possessed and used in compliance with this policy) while on Company property, Company jobsites, Company time (such as on customers' premises or projects), in any vehicle used on Company business, or in other circumstances (such as when representing the Company) we believe might adversely affect our operations, safety or reputation, is prohibited. A first offense generally will result in your termination. The term "illegal" drug will include all drugs listed on Schedule I or II of the Federal Controlled Substance Act. IMPORTANT: This rule prohibits simply having any such drugs (other than medically prescribed drugs possessed and used in compliance with this policy) or substances present in the body. An employee who tests positive at or above the accepted levels for the following substances at both the initial and confirmatory test, will also be deemed "under the influence":

SUBSTANCE	LEVEL
Amphetamines	___ ng/ml
Barbiturates	___ ng/ml
Benzodiazepines	___ ng/ml
Cocaine	___ ng/ml
Marijuana (THC)	___ ng/ml
Opiates	___ ng/ml
Propoxyphene	___ ng/ml

The company may modify these levels, in writing to you by referral to Subpart H of the Federal Highway Administration, Department of Transportation Regulations.

Legal Drugs/Prescriptions. We recognize that the use of any drug, legal or illegal, can adversely affect an employee's work performance and safety. We also recognize that misuse of legal prescriptions is a common form of drug abuse. Of course, there are many situations where employees can safely and efficiently perform their jobs while taking prescribed drugs. Our rules on prescription drugs are explained in paragraph 5 below.

Illegal Drugs. Illegal drugs and substances include drugs which are not legally obtainable, like marijuana, cocaine, amphetamines, designer drugs, "controlled substances," and drugs which are legally obtainable but have been obtained illegally (for example, using drugs prescribed for some one else).

3. **Drug Paraphernalia.** Possessing drug paraphernalia while on Company property, Company jobsites, Company time (such as on customers' premises), in any vehicle used on Company business, or in other circumstances (such as when representing the Company) we believe might adversely affect our operations, safety or reputation, is a factor that will be used to establish "reasonable

suspicion" when the Company is deciding whether to test for cause under this Policy. "Drug paraphernalia" means all equipment, products and material of any kind which are marketed, designed for use, or used in connection with anything from the; planting to the manufacturing, packaging, concealing or introducing into the body any illegal drug.

**4. Drug-Related Arrests/Convictions and Criminal Conduct.**

Failing to notify Alpine Natural Gas of citation, arrest or conviction under any criminal drug statute within five days of the event so we can review the circumstances to see whether a violation of this policy has occurred generally will result in your termination. (We are also required by federal and state law to report all work-related drug convictions to the federal government.)

Criminal conduct in any way connected with alcohol or drugs while on Company property, Company jobsites, Company time (such as on customers' premises), in any vehicle used on company business or in other circumstances (such as when representing the Company) we believe might adversely affect our operations, safety or reputation, generally will result in your termination.

**5. Legal Drugs/Prescription.** Failing to inform Alpine Natural Gas of the use of a medically prescribed drug that might affect, alter or impair behavior, motor function, or physical or mental ability to work prior to beginning work, generally will result in a three-day unpaid suspension. It is your responsibility to determine the potential effects of prescribed drugs so if you are not certain, ask your doctor or pharmacist to find out before starting work.

Failing to keep prescribed medicine in its original container or failing to have a copy of the prescription in your possession generally will result in a three-day unpaid suspension. The container or prescription must identify the drug, the date of the prescription, and the name of the prescribing physician.

**6. Duty to Cooperate/Truthfulness.** Any falsification, misrepresentation, or omission of information in company interviews or investigations, or on any records or forms connected with our alcohol and drug policy, generally will result in your termination.

Refusing or failing to cooperate in any investigation or interview, or in signing any forms or providing any information or requested blood or urine samples, generally will result in you termination.

### SEARCHES AND INSPECTIONS

We may conduct unannounced searches and inspections at jobsites, and of our property (desks, file cabinets, lockers, work areas, toolboxes, vehicles, etc.) in circumstances where we feel it is appropriate (for example, to check for missing property or prohibited

items like alcohol or drugs). Company property is made available for the employee's convenience. There is no expectation of privacy in using company property.

All searches generally will be in the presence of the employee and/or a witness. Failure to promptly and courteously permit such an investigation will result in possible termination.

## ALCOHOL AND DRUG TESTING

### Testing of Employees

Alcohol tests will be conducted through analysis of the employee's breath. Saliva tests may be used for the original screening test. Urine analysis will be the method of testing for drugs.

Pre-Employment Drug Test. Employees will be subject to urine analysis prior to employment, or transferring to a safety sensitive function. Alpine Natural Gas reserves the right to request an alcohol test.

Random Testing. These tests will be unannounced and conducted at various times throughout the year. They will be done using a scientifically valid method. Each covered employee will have an equal chance of being selected for these tests.

Absences of More than five Days. An employee who has been off work for more than five days and who has not retained his or her status as an employee, will be considered a new applicant for hire, and must once again pass the pre-employment drug and alcohol tests.

"Suspicion" Testing. When an employee is acting in an abnormal manner and the company has "reasonable suspicion" to believe that the employee is under the influence of controlled substances and/or alcohol, the company may require the employee to go to a medical clinic to provide a urine specimen for laboratory testing (or a blood test if alcohol use is suspected).

Reasonable suspicion means suspicion based on specific personal observations that the employer representative can describe or valid circumstantial evidence concerning the appearance, behavior, speech, or the breath odor of the employee. Suspicion is not reasonable, and thus not a basis for testing, if it is based solely on the observations and reports of third parties. The grounds for reasonable suspicion will be documented.

When an employee is asked to submit to drug and/or alcohol testing, he/she shall be informed of the reasons that he/she is being asked to submit to the test. As previously noted, refusal to submit to testing may constitute a presumption of intoxication and subject the employee to discipline up to and including discharge.

Factors that may lead to a reasonable suspicion sufficient to warrant testing include, but are not limited to, the following:

Observable symptoms of being under the influence of alcohol or drugs;

The odor of smell of alcohol or drugs on the employee's breath or clothes or in an area (such as in a vehicle or restroom) immediately controlled or occupied by the employee;

Unexplained significant deterioration in job performance;

Credible reports of drug or alcohol use in violation of this policy;

Employee admissions regarding drug or alcohol use;

Unexplained absences from normal work areas when we suspect drug or alcohol related activity;

Drug paraphernalia in the employee's possession or in an area (such as in a vehicle, desk or restroom) immediately controlled or occupied by the employee;

Employees who are indirectly involved in an accident;

Employees who are directly or indirectly involved in a "near miss" accident.

These are examples of situations in which we may require testing. In deciding whether to make such a request, we will take into account the facts and circumstances of each particular case.

Accident Testing. As part of "suspicion" testing, and employee directly involved in an accident may be required to be tested based upon this factor alone. We recognize that accidents can happen, so it is not our intent to automatically test everyone, but we are particularly concerned with situations which we feel resulted in bodily injure or property loss or damage where the employee(s) appears to have been directly responsible or negligent.

Project Testing. On inherently dangerous projects, we may test all employees on the entire project up to three times in any 12-month period without notice (in addition to any testing conducted under any other section of this policy). Employees absent during any testing will be required to be tested prior to returning to work.

Job Classification Testing. There may be inherently dangerous job classifications on construction projects that will necessitate the random testing of employees working within these classifications. In this situation, these job classifications will be identified on a project-by-project basis and employees on these projects will be notified that random testing will be conducted.

Customer and Government Imposed Testing Requirements. Some of our customers, and some types of government contracts, also impose various testing (and related) requirements on suppliers, contractors and subcontractors. Some federal and state laws and regulations also impose such testing and related requirements. Our employees are subject to the terms of these laws and regulation, and private contracts consistent with our policy stated herein.

Other Testing Rules. Violation of the following rules generally will result in your Termination:

Switching, diluting, adulterating, or in any way tampering with the requested sample(s) or otherwise attempting to manipulate the testing process: or

Refusing to consent to testing, to submit a sample, or to sign any required forms.

#### EFFECT OF POSITIVE TEST

Alcohol. In addition to any disciplinary action for a positive alcohol test, we may, at our sole discretion, refer an employee for assessment, counseling and/or referral to a treatment program. If assessment indicates a need for treatment, you may be required to enter into and complete a treatment program (including any follow-up recommendations) approved by the company to maintain employment. (Company participation in payment of the program costs will be limited to any available insurance coverage.) You will also be required to sign a "performance agreement." Failure to accept the referral, to enter into and complete an approved treatment program (including any follow-up recommendation), or to sign or live up to the commitments in a performance agreement generally will result in your termination.

Drugs. An employee who tests positive for drugs in violation of this policy should expect to be terminated. Our society tolerates alcohol as a lawful, but regulated substance; it does not do the same for most drugs. If, you are having problems with drugs the time to seek help is before it impacts the workplace. In those very rare situations where an employee is not terminated immediately for a positive drug test in violation of this policy, we will follow the some procedures outlined above thru positive alcohol tests.

Immediately following a positive test the employee will be removed from his/her duties for safety reasons. It is the discretion of Alpine Natural Gas to terminate or rehabilitate the employee. If rehabilitation is decided upon Alpine Natural Gas will follow the "Return-to-Duty" requirements found in the DOT's rule, 49 CFR, part 40 – Subpart O.

No matter the decision of Alpine Natural Gas the employee will be provided with a list of "Substance Abuse Professionals" available to the employee.

### APPEAL RIGHTS/RIGHT TO RETESTING

An employee who has been tested and fails, will be notified of the test results and be given further instructions at that time. Employees who pass the test will not be contacted. An employee who tests positive will have 10 days (from the day the employee receives the test results) to explain the result and/or request a retest (at our expense) of the same blood and/or urine specimen. The retest will be done by our laboratory. An employee who satisfactorily explains test results or whose "retest" does not indicate the presence of alcohol or drugs will be reimbursed for any lost wages (up to three regularly scheduled workdays).

### CONFIDENTIALITY

All test results will be maintained in a secure file other than the employee's personnel or medical file and will only be communicated on a business "need to know" basis.

### OTHER ISSUES

We recognize that situations will arise which are not specifically covered by this policy. For example, situations may arise involving employees who have been convicted, or pled "no contest" or forfeited bond and bail, of criminal alcohol or drug use or activity. (This includes employees who are under arrest for such charges and are out on bail or his or her own recognizance pending trial.) We will deal with them on a case-by-case basis taking into account such things as the nature of the situation or problem, the potential impact on coworkers, the employee's prior employment record and job assignments, and the potential impact on production, safety and customer or public perceptions of the Company.

### Acknowledgment

I, \_\_\_\_\_ acknowledge receiving and reading Alpine Natural Gas' Substance Abuse Policy and agree to abide by its terms. I understand that my employment is conditioned upon my full and complete compliance with this policy.

Date: \_\_\_\_\_

\_\_\_\_\_  
Employee Signature

**AGREEMENT TO SUBMIT TO DRUG AND/OR ALCOHOL TESTING**

I acknowledge that I have been requested to submit to drug and/or alcohol testing.

I understand that the testing is voluntary on my part, that I may refuse to submit, and that such refusal constitutes good cause for discipline up to and including termination.

I further understand, without waving any rights I may have to challenge the test or the test results, that the fact of a confirmed positive test result may be released to Alpine Natural Gas.

With full knowledge of the foregoing, I hereby agree to submit to drug and/or alcohol testing by Alpine Natural Gas selected medical clinics and/or laboratories.

\_\_\_\_\_  
Employee's Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Supervisor/Manager Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Witness Signature

Date: \_\_\_\_\_

**AUTHORIZATION FOR RELEASE OF MEDICAL INFORMATION**

I acknowledge that I have been requested by Alpine Natural Gas to submit to drug and/or alcohol testing to be administered by \_\_\_\_\_, a hospital, clinic and/or laboratory designated and chosen by Alpine Natural Gas, whose purpose and function is to determine whether I am able to perform by described job duties.

I hereby authorize the medical clinic and/or laboratory to disclose all pertinent medical information and all laboratory results to Alpine Natural Gas. The release by the hospital, clinic and/or laboratory of the information and results, and the utilization of the information and results by Alpine Natural Gas shall be for the limited purpose of providing Alpine Natural Gas an opportunity to evaluate the information and results and thereby determine whether I am fit to perform my job. The hospital, clinic and/or laboratory are only authorized to release the information and results for a period of up to and including 120 days from the date indicated below.

This information shall include laboratory, scientific substances and/or chemicals that are casual factors for my condition; diagnoses and prognosis as related to this drug and/or alcohol test.

I acknowledge that executing this authorization is voluntary and that I have the right to receive a copy of this authorization if I request one.

\_\_\_\_\_  
Employee's Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Supervisor/Manager Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Witness Signature

Date: \_\_\_\_\_

**REFUSAL TO SUBMIT TO DRUG AND/OR ALCOHOL TESTING**

I acknowledge that I have been requested to submit to drug and/or alcohol testing.

I understand that the testing is voluntary on my part, that I may refuse to submit, and that such refusal constitutes good cause for discipline up to and including termination.

With full knowledge of the foregoing, I hereby refuse to submit to drug and/or alcohol testing.

\_\_\_\_\_  
Employee's Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Supervisor/Manager Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Witness Signature

Date: \_\_\_\_\_