CITY OF COALINGA
The Sunny Side of the Valley

September 24, 2019

Dustin Hubbard
Director, Western Region
Pipeline and Hazardous Materials Safety Adm
12300 West Dakota Ave, Suite 110
Lakewood, CO 80228

Via Email w/Confirmation
dustin.hubbard@dot.gov

Re: Notice of Amendment CPF 5-2019-0014M

Dear Mr. Hubbard:

This is in response to your letter dated March 18, 2019, regarding revisions to Coalinga's operations and maintenance (O&M) plan. The City of Coalinga has incorporated the changes requested in its O&M Plan and is otherwise complying as follows.

The following numbers correspond to the items in your letter.

1. Excess Flow Valves (EFV): See the expanded section on page 23. It now includes language regarding multifamily residences and procedures for informing customers of their rights to request EFV's.

2. Emergency Plan, Review Employee Activities: See the expanded section on page 14, "Review Following Gas System Emergency." This section outlines the process by which employee activities shall be reviewed following a gas system emergency.

3. Testing of New or Replacement Lines: See the expanded section on pages 16 and 17. The section includes testing of new and replacement lines.

4. Valve Maintenance: See the expanded language on page 24. The language now states that an inoperable valve shall be replaced as soon as practicably possible.

5. Inspection of Exposed Pipe: See the language on page 19. The language states that an exposed pipe shall be further inspected under certain observed conditions.

6. Cathodic Protection: See the expanded section on pages 17 through 19. The language has been expanded to include a process to address voltage (IR) drops. The language also specifies that inspection of rectifiers shall not exceed 2 ½ month intervals.

Please let us know if you have any other requests related to this Notice of Amendment.

With Regard,

Sean Brewer
Public Works and Utilities Director (Interim)

City of Coalinga

155 West Durian Street
Coalinga, CA

Natural Gas Distribution System

Operations & Maintenance Manual

Date Last Modified: **September 18, 2019**
Public Works Director: **Sean Brewer (Interim)**
Public Works Supervisor: **Eric DeLeon**

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APPENDICES

I. Introduction

This manual has been prepared by the City of Coalinga to establish operations and maintenance procedures as required by the U.S. Department of Transportation.

All references in this document are to Title 49, Transportation, Code of Federal Regulations. For example, 49 CFR §192.601 may be abbreviated as §192.601.

The Operations Sections of this manual are written to conform to the requirements of §192.601 (Subpart L).

The Maintenance Sections of this manual are written to conform to the requirements §192.701 (Subpart M).

The Public Awareness Plan has been made a separate document as of July 2018 to conform to the requirements of §192.616 and American Petroleum Institute's (API) Recommended Practice (RP) 1162 (Subpart L).

Coalinga's Operator Qualification Plan, pursuant to §192.801 (Subpart N), is maintained separately. It has been developed to be consistent with this Operations and Maintenance manual.

II. Recurring Event Schedule

The following table relates to both Operation & Maintenance and Operator Qualifications. It is used as a reminder for scheduling purposes and on file with the Public Works Supervisor and the Public Works Office at City Hall. Activities may not occur exactly in the months specified, but shall occur in such a manner to comply with federal and state requirements.

Last Updated: September 18, 2018	
Recurrence Schedule	**Event**
Annual	Annual Gas Report to be sent to DOT by March 15th
Annual	Outside contract testing of rectifiers
Bi-Annual	Test natural gas system odorization levels
Bi-Annual	Conduct distribution system pressure tests
Annual	Maintenance of gas distribution system control valves
Annual	Review and update natural gas Operator Qualifications Manual
Annual	Review and update employee and outside contractor qualifications
Bi-Annual	Conduct natural gas public education awareness activities as specified in Public Awareness Plan
Bi-Annual	Inspect exposed pipe beside footbridge by Amandako
Annual	Review and update natural gas Operations and Maintenance Manual
Annual	Hold liaison meeting including police, fire, and public works
Annual	Leak Detection Survey
Annual	Employees recertified for pipe fusion
Annual	Cathodic Protection and Rectifier Testing
Annual	Update system maps, if necessary
Annual	Review work done by personnel to determine the effectiveness of the procedures used in normal operations and maintenance. Modify procedures, as necessary, if deficiencies are found.

III. Required Reporting, Including Failure Investigations

Annual Reports. Each year, prior to March 15th, Coalinga shall file an Annual Report for its Gas Distribution System (Form RSPA F 7100.1-1) with both the federal and state government. An example of the form is included in Appendix 1.

Incident and Safety-Related Condition Reports. Coalinga shall also file reports of safety-related conditions as required by §191.23. Examples of such conditions are:

- Unintended movement or abnormal loading by environmental cases, such as an earthquake, landslide, or flood, that impairs the serviceability of a pipeline
- Any malfunction or operating error that causes the pressure of a pipeline to rise above its maximum allowable operating pressure plus the build-up allowed for operation of pressure limiting or control devices.
- A leak in a pipeline that constitutes an emergency
- Any safety-related condition that could lead to an imminent hazard, for purposes other than abandonment. A 20 percent or more reduction in operating pressure or shutdown of operation of a pipeline

For Incident and Safety-Related reporting, filings shall be in writing within 5 working days (excluding Saturday, Sunday, or Federal Holidays) after the day a representative of Coalinga Gas Department first determines that a condition exists, but not later than 10 working days after the day a representative of Coalinga Gas Department discovers a condition. The filing shall be submitted in accordance with §191.25, on a form with the heading "Safety Related Conditions Report Form."

Failure Investigations and Incident Reports (§192.167).

The following procedures have been established for analyzing accidents and failures occurring in Coalinga's gas system for the purpose of determining the cause of the failure and minimizing the possibility of a reoccurrence.

All accidents and system failures shall be thoroughly investigated, including collecting samples of the failed facility or equipment for the purpose of laboratory examination, if deemed appropriate.

In addition, system failures that result in a gas leak meeting the criteria in §191.5(a) of the regulations, which are listed below, shall be reported to DOT, Pipeline Safety Division, as specified in §191.5 at the earliest practicable moment, by telephone at 800-424-8802.

- Caused a death or a personal injury requiring hospitalization
- Resulted in gas igniting
- Caused estimated damage to the property of the operators, or others, or both of a total of $50,000.00 or more
- Is deemed to be significant even though it did not meet the criteria above

Address Information for Submitting Reports.

Annual, Incident, and Safety-Related reports shall be sent within 30 days BOTH to:

The Information Resources Manager
Office of Pipeline Safety
Research and Special Programs Administration
U.S. Department of Transportation, Room 8417
400 Seventh Street SW
Washington, D.C. 20590

Attn: Natural Gas Reporting and Safety
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

In addition, a supplemental report shall be filed within 30 days of the initial report, amending as necessary findings to reflect updated information and new occurrences associated with safety-related incidents.

IV. Determination of Class Locations (§192.605 - 611)

The City of Coalinga is entirely Class 3 pursuant to §192.5.

Reasoning: Coalinga has no class location of more than 10 but fewer than 46 buildings (Class 2), and no four-story buildings (Class 4).

If a change in the class location of any section of pipeline is required due to a change in population density, operating pressure or for any other reason such change shall be made to ensure conformance with §192.609.

V. Damage Prevention Program (§192.614)

Coalinga has developed a Damage Prevention Program. The purpose of this program is to prevent damage to facilities by excavation activities. Excavators are persons involved in excavation, blasting, boring, tunneling, backfilling, removing above ground structures by either explosive or mechanical means, and any other earth moving operations.

Identification of Excavators and Notification. The Public Works Supervisor maintains a list of persons who are known to normally engage in excavation activities in Coalinga. This list shall be reviewed annually and revised when necessary to insure it is current. This list is attached and identified as Appendix 2. Excavators will be notified by letter on a frequency deemed necessary to make them aware of the damage prevention program.

Notification to the Public. Customers and the general public in the vicinity of the pipeline will be notified pursuant to the City's Public Awareness Plan.

Receiving and Recording Notification from Excavator. Each request for location of pipelines will be taken by USANORTH811 and made available to Public Works through USANORTH811's website. The information provided shall be the excavators name,

address if not on file, job site, date and time contacted and date and time of anticipated excavation. The excavator making the request will be told if there is a pipeline in the vicinity in which they intend to excavate. The date the field personnel locate and mark the pipeline will be recorded and a file maintained.

Temporary Marking and Inspection during Excavation. Temporary making devices shall consist of flags and paint, as necessary. Flags are marked "City of Coalinga." Paint and flag color indicate the following.

Yellow	Natural Gas
Blue	Water
Green	Sewer
Red	Electric
Purple	Reclaimed Water
Orange	Communication – CATV
White	Proposed Excavation

When there is reason to believe a pipeline could be damaged by excavation activities, the pipeline will be inspected as necessary to verify its integrity.

VI. Coalinga Natural Gas Emergency Procedure Plan (§192.615)

This section of Coalinga's natural gas Operation and Maintenance Manual is prepared to document procedures used by City of Coalinga personnel to respond to natural gas emergencies.

Distribution of Emergency Plan. These natural gas emergency procedures are distributed to each of the following individuals and organizations within City of Coalinga to facilitate coordination in the event of pipeline emergencies.

- Fire Department
- Police Department / 911 Dispatch
- Billing Office
- City Manager
- Mayor
- All public works employees

Liaison Activities. The City of Coalinga natural gas section of the public works department shall maintain liaison with fire, police, other public works sections, and publicly elected officials to:

- Learn the responsibility and resources of each city organization that may respond to a gas pipeline emergency;
- Acquaint the officials with the city's ability in responding to a gas pipeline emergency;
- Identify the types of gas pipeline emergencies of which the city notifies the officials; and
- Plan how the city and officials can engage in mutual assistance to minimize hazards to life or property.

These meetings shall occur at least once per year.

Emergency Defined. Emergencies include but are not limited to:

- Large volumes of uncontrolled escaping gas, either inside or outside a building
- Fire or explosion near or associated with Coalinga's gas distribution system
- Under-pressure in the system (below 15 psig)
- Over-pressure in the system (above 25 psig)
- Natural disaster such as an earthquake

ALWAYS REMEMBER, immediate action in an emergency shall be directed toward protecting people first and then property. Further, the site shall always be made safe prior to departure of city employees:

1. **Protect people first**
2. **Protect property second**
3. **Make site safe before departing scene**

Emergency Communication. During business hours, notices of events are received by calling City Hall, by calling 911, or directly through public works. All calls to 911 that are made within Coalinga are received by the 24-hour dispatcher at the police department located adjacent to City Hall, which is then relayed to CalFire for dispatch. The police dispatcher can directly contact public works by radio, as they may be required to respond to an incident.

During off hours, callers to City Hall are instructed to dial 911 in the event of an emergency. Calls are relayed to CalFire for dispatch. CalFire dispatches emergency response in Coalinga and contacts the public works employee on call through an "on call" cell phone (559-383-4014). One employee is always on call during off hours and is required to stay in town. The special use cell phone is always in the possession of the particular employee on call.

All public works employees carry radios and are required to monitor them while at work. Personnel at City Hall also monitor and utilize the public works radio during business hours.

A 24-hour Emergency Telephone list is maintained and distributed to all key employees. It is attached here as Appendix 3. In the event of a natural gas emergency, after appropriate immediate response personnel have been contacted (fire, police, public works), the City Manager and Mayor shall also be contacted and informed of the nature of the emergency.

Emergency Command Center. In the event of a natural disaster, the emergency command center will be at the Fire Department. Public and press relations will be set up in the city council chambers. If building damage has occurred, coordination will be established outside City Hall on the street until an alternative location can be determined.

Identification and Classification of Reported Incidents. Preliminary identification and classification of incidents is accomplished by personnel at City Hall or by the dispatcher receiving the call. Final classification is determined by public works upon assessment after arriving on scene.

ALWAYS REMEMBER, leaks inside a building get first priority.

All emergency incidents shall be reviewed by the Public Works Supervisor to determine compliance with these procedures and to determine if reporting is required to the Department of Transportation.

Gas Leak Call Guidelines

DISPATCHER shall assume that all calls are an emergency, and proceed as follows.

REQUEST the following information:

- Name
- Address
- Telephone Number
- Type of building (commercial/residential)
- Severity of odor
- Location of odor

Leak inside?

- Where?
- Near an appliance?
- Appliance moved or worked on recently?
- How long has odor been present?

Leak outside?

- Meter set?
- Near building?
- Recent excavation?
- How long has odor been present?

ADVISE the caller, if the leak is judged to be extreme, of the following precautions:

- Caution against ignition (don't hang up phone)
- Do not operate electric appliances
- Do not turn on/off lights
- Do not operate vehicles or equipment
- Do not smoke
- Inside leak: Evacuate
- Outside: Keep away

EXPLAIN to the caller:

- City personnel will respond
- Access to the building is necessary

MONITOR the response of field personnel and assist with communications.

FIELD personnel shall respond and proceed as follows.

- Leak orders shall take precedence over all other orders.
- Responding vehicles shall be parked at a safe distance away from the leak.

- If access to the building is not available the service person shall lock off the meter, when necessary. Perform an outside leak investigation.
- If the situation is deemed a natural gas emergency, field personnel shall follow these guidelines and also utilize the Check List at the back of this section.

Inside Gas Leak Investigation:

If, in the judgment of personnel responding, a hazardous atmosphere exists:

- Evacuate the building or area of all occupants.
- Turn off the gas supply at the riser.
- Notify dispatch if assistance is required.
- Eliminate possibility of ignition
- Notify fire department for ventilation, if necessary.
- Notify police if area access control is necessary.

If, in the judgment of personnel, no hazardous atmosphere exists:

- Eliminate sources of ignition
- Open windows and doors to ventilate the building
- Locate the source of leakage. If the leak cannot be repaired, shut off the appliance or natural gas to the building and tag the deficiency with a shut off or warning notice, as appropriate

If the leak cannot be located, perform a leak check at the following locations:

- Point of entry of all underground utility services
- All drains
- Top of all exterior walls, basement and/or building wall from inside the building
- All cracks in the floor or exterior basement walls
- Crawl space access and other conspicuous openings

Outside Gas Leak Investigation:

- Conduct a quick walk to attempt to find the leak manually (sight, ear, nose)
- If not found, clear and zero the Combustible Gas Indicator in uncontaminated air
- Check for the presence of gas at the point of entry of all underground utility services (gas, water, wastewater, etc.) at nearby buildings
- Check drains, cracks, and manholes
- Evacuate buildings endangered by the leak
- Maintain communication with dispatch

Fire/Explosion at Pipeline

The first consideration in responding to a report of an explosion or of a fire that may involve natural gas is the safety of customers, the general public, and their property. Actions must be directed at protecting life first, then property and the environment. It is also important to determine the cause of the incident. If natural gas cannot be ruled out as a possible source, obtain a gas odorant check as soon as possible.

Personnel who may be required to respond to a report of a fire or explosion shall be thoroughly trained in these emergency response procedures. The incident commander will direct overall emergency activities at the scene.

Fire/Explosion Guideline

DISPATCHER shall assume that all calls are an emergency, and proceed as follows.

REQUEST the following information:

- Name
- Address
- Telephone Number
- Location (if different than address)
- Injuries, if any
- Type of building
- Natural gas involved?
- If inside, any recent remodeling?
- If outside
    - Meter set?
    - Near building?

ADVISE the caller:

- For escaping gas inside, evacuate occupants and move to a safe location
- For escaping gas outside, keep people a safe distance away from the leak

EXPLAIN to the caller:

- Emergency personnel will respond
- A utility representative will respond
- Ask if caller will be there or arrange for someone else

DISPATCH required personnel

MONITOR the response of field personnel, assist with communications, notify the Public Works Supervisor, and document activities as event progresses.

FIELD personnel shall respond and proceed as follows.

- Take the necessary actions to make the situation safe. Protect human life first then property, and the environment.
- Advise the Dispatcher of the actual field situation and request assistance as required.
- If Fire or Police are on site, report to the incident commander and provide necessary assistance.
- Shut off the gas supply, as required to stop uncontrolled gas flow

    - Service valves to buildings
    - Mainline valves
- If natural gas is suspected, check for underground gas leaks
- Evacuate personnel if gas concentrations exceed 1% gas in air (10,000 PPM) in the general atmosphere
- Locate and repair the leak
- Record corrective actions taken
- Maintain communication with Dispatch and report all appropriate information

These guidelines are general in nature and their primary use will be for the training of personnel prior to emergencies. During an actual emergency, the personnel responding to the emergency will be required to exercise their individual judgment to take the appropriate actions considering all apparent circumstances.

Natural Disaster or Civil Disorder

In the event of civil disorder or natural disaster (such as flood, tornado, or earthquake), action shall be taken to enable priority gas distribution operations to be carried on. This action much provide for the security of the public and City employees first, then property and the environment. Such an action plan, necessarily broad in nature, is detailed in the guideline.

Work Provisions

Civil authorities during a civil disorder or natural disaster are expected to direct overall emergency activity in affected areas. In the event of enemy attack, the Civil Defense Headquarters will provide directions. It is vital that the City maintain a continuous and effective liaison and communications with these authorities, utilizing the City personnel assigned liaison duties to the fullest possible extent.

Provision shall be made for continuous (24 hours per day) operations during an emergency. At least one supervisor shall be on duty at all times. All employees on vacation, including supervisors, are subject to recall.

No employee shall be given an assignment in a dangerous or potentially dangerous area unless adequate protection can be assured. City personnel entering such areas must be easily identifiable as City utility personnel. They should be provided with hard hats having City of Coalinga logos affixed. All city vehicles entering the areas should carry the City insignia. Persons assigned to the emergency work force shall perform their emergency duties and responsibilities as directed.

Security forces from outside the City shall be utilized to protect City facilities if the situation warrants.

Security of Facilities and Equipment

The city gate stations are vital to providing gas distribution service to customers and thus must be provided special monitoring services or protection to insure their continuous operation. A list of stations requiring special services or protection shall be developed at the time the extent of the emergency is known. Particular attention shall be paid to services in the isolated gas service area north of town and in the vicinity of the City hospital.

Remove City vehicles and equipment from the affected areas unless this would jeopardize the safety of employees. Maintain vehicles and mobile equipment in a fully fueled, operational condition within protected city property. In certain situations, civil authorities may limit the sale of fuel at public service station; therefore, prior arrangements must be made for fueling all City vehicles and equipment at a City facility or, through civil authorities, arrangements must be made for obtaining fuel at outside locations.

Manpower Requirements
The composition of the work force required to deal with a situation covered by this guideline will depend upon the natural and extent of the emergency.

Communications Capability
In the event of emergencies covered by this guideline, the capability to communicate orders, instructions, and information to City personnel is vital. Equally important is the capability to communicate with civil authorities who will be directing operations in the affected areas. Communication between the emergency work group assembled to coordinate operations and assigned personnel should be accomplished using the normal telephone system, including cellular phones whenever possible. City radio facilities may also be utilized for this purpose.

Receiving Reports of Emergencies
Upon receipt of a report of a civil disorder, natural disaster or enemy attack, attempt to obtain and record as appropriate the following information:

- Date and time of report
- Name, address, and telephone number of person making report
- Location of affected areas of the emergency
- Nature and severity of the emergency
- Determine if any City action is immediately necessary and if so, determine if the affected areas is under Police protection

Once the immediate response is completed, all contacts should be notified on the City response list and the emergency command center should be activated, if necessary.

The above guidelines are general in nature and their primary use will be for the training of personnel prior to emergencies. During an actual emergency, the personnel responding to the emergency will be required to exercise their individual judgment to take the appropriate actions considering all apparent circumstances.

Personnel, Equipment, Tools, and Materials. Public works employees, on call or otherwise, qualified to respond to incidents, have immediate access to service trucks equipped with drifts (for stopping gas flow in a severed pipe), fire extinguishers, valve wrenches, maps and other tools and equipment. During off hours, they also have keys to the city corporation yard if additional equipment or materials are needed. During off hours, employees on call take a service truck home with them. City fire trucks are also equipped with drifts and other safety equipment that is sometimes used in natural gas emergencies.

Emergency Shutdown and Safe Restoration of Service. In some natural gas emergencies, public works may be required to reduce or eliminate gas pressure in isolated

geographic areas. When the supply of gas has been cut off to an area, no gas will be turned on to the affected area until the individual service to each customer has been verified as off. If street service valves cannot be located, the gas flow can be shut off by squeeze-off, stoppering, etc. This will insure that a building with a possible failed regulator will not be filled with gas.

Gas service must be restored on a building-to-building basis throughout the affected area. The individual service of each customer must be off, either at the meter or at the service valve. In restoring service to an affected area, all gas piping and meter must be purged and appliances re-lighted. In the event a customer is not present at a service location, a card must be left in a conspicuous location requesting the customer to call the City of Coalinga to arrange for restoration of service. A list of services not relit will be noted.

Review Following a Gas System Emergency §195.615(b)(3). Following natural gas emergencies, a review shall be conducted of employee activities to determine if procedures were effectively followed, if procedures need to be modified to accomplish a higher level of safety, and if additional or modified training is appropriate. Specifically, as soon as practicably possible following an incident, all supervisory personnel involved in the incident shall meet to review in detail:

- The circumstances of the emergency
- The response of personnel to alleviate the emergency
- Compliance with the emergency response procedures
- Personnel training necessary, if any, including classroom and field simulation exercises
- Potential improvements to the emergency response procedures
- Documentation in the gas files of all steps taken to improve procedures and personnel response

Investigation and Reporting (§192.617). Natural gas emergencies shall be investigated as soon as practical following an incident. The following shall be pursued, as applicable.

- Leak survey
- Pressure tests of piping
- Meter regulator check
- Questioning persons on the scene
- Examining burn and debris patterns
- Odorization level
- Recording meter reading
- Weather conditions
- Sample of failed pipe for testing

A report shall be submitted to the Office of Pipeline Safety as specified in the Required Reporting section of the Operations and Maintenance plan.

Response Procedures for Emergency: Check List.

1. Fire/Paramedics department been called?

2. Persons evacuated and area blockaded?

3. Police department notified?

4. Public Works notified?
5. City call list executed?
6. Communication established between responding entities?
7. Mutual Assistance necessary?
8. Leak contained?
9. System valves closed?
10. Individual service valves closed?
11. Possibility of recurrence eliminated?
12. Proper tags on service meters?
13. Telephonic report to state and federal authorities?

REMEMBER:

1. People first, then property
2. Inside leaks get first priority
3. Don't take chances

Person Coordinating Response: _____

Date: _____

Location: _____

VII. Maximum Allowable Pressure Limitations (§192.619-621)

Coalinga's entire distribution system operates at 23 to 25 psig. Pressure is reduced at each customer's meter to service pressures between seven and one-half inches water column for residential and up to eight psig for some commercial customers.

The Maximum Allowable Operating Pressure (MAOP) for Coalinga's High Pressure Distribution System is deemed to be 25 psig (§192.621(a)(5)). Pacific Gas & Electric Company maintains over-pressure protection devices at its meters to prevent the MAOP from being exceeded (§192.621(b)).

Pressure checks are conducted each year. Results of pressure checks are included in the O&M Records Binder. Locations for pressure checks are:

1. PG&E master meter (located on the west side of town)
2. 308 San Simeon Street
3. 544 Kimberly Street

From time to time, the integrity of the system shall be tested to assure adequacy for the stated MAOP, and potentially to increase the MAOP to meet increases in gas demand as the city grows. For pressurized steel pipe, non-invasive electronic testing shall be conducted by professionals certified to conduct such tests. Tests shall be conducted on representative samples of each diameter of steel line. Results shall be provided by a State of California registered Professional Engineer.

If a section of pipeline is deemed to be unsafe for the existing MAOP, said section shall either be replaced or the pressure will be reduced to a safe level.

VIII. Starting Up and Shutting Down any Part of the Pipeline (§192.605(b)(5))

The focus of the §192.605(b)(5) is maintaining gas pressures below MAOP when conducting start up and shut down. For Coalinga, the maximum system pressure is 25 psig and the entire system is operated at 23 to 25 psig. Consequently, it would be physically impossible to exceed the MAOP.

IX. Testing New Service Lines and Mains and Reinstating Service Lines and Mains (§192.511, §192.513, and §192.725)

Each segment of a service line or main, whether new or being reinstated, must be tested according to the following.

New service lines and mains (whether plastic or non-plastic) within Coalinga's distribution system must be leak tested as detailed below to assure safe operation at 25 psig and compliance with §192.511 and §192.619(a)(2)(i). The City's policy is to install plastic pipe and no longer install steel unless necessary within the existing steel section of the distribution main.

All pipelines contained in the City of Coalinga gas system will adhere to the following testing requirements:

- All new or replacement segments will be leak tested to ensure discovery of all potentially hazardous leaks in the tested segments.
- All segments operated over one psig shall be tested at no less than 50 psig.
- For testing of plastic pipe, the following requirements:
    - All new or replacement segments will be leak tested to ensure discovery of all potentially hazardous leaks in the test segment.
    - The test pressure must be 150 percent of the maximum operating pressure or 50 psig, whichever is greater, but must not exceed three times the pressure determined under 192.121.
    - During the test, the temperature of thermoplastic material may not be more than 100 degrees Fahrenheit, or the temperature at which the material's long-term hydrostatic strength has been determined under the listed specification, whichever is greater.
    - Each disconnected service line must be tested in the same manner as a new service line before being reinstated. However, if a bypass is used to maintain continuous service, the line need not be tested.

X. Odorization Testing (§192.625)

Coalinga's distribution system contains odorant provided by PG&E that meets the requirements of §192.625.

Sampling of gas is conducted bi-annually to assure the proper concentration of odorant. Records of all odorization and sampling shall be kept on file for a minimum of one year and are included O&M Records Binder.

Locations for odorization testing are:

1. 130 Hill View Way
2. 609 Washington Street
3. 312 Stanford Street
4. 160 West Cedar Street
5. 204 Walnut Street
6. 304 San Simeon Lane
7. 544 Kimberly Lane
8. 1831 Rock View Lane
9. 175 McCollum Lane

XI. Corrosion Protection (§192.451 – 491)

The City of Coalinga maintains a corrosion protection program for its steel natural gas pipe. The protection program consists of:

- Protective coating on all steel pipe
- Visual inspections whenever buried pipe is exposed
- Use of sacrificial anodes
- A network of 13 rectifiers
- Annual testing of pipe-to-soil potentials

- Annual testing of the voltage shift when rectifiers are cycled (IR drop study)
- Inspection and maintenance of rectifiers at least six times per year but with intervals not exceeding 2 ½ months.
- Inspection and maintenance for atmospheric corrosion
- Inspection and maintenance for electrical isolation

Coalinga's corrosion protection program is under the direction of the Public Works Department.

Rectifier System. Public Works Department maintains a network of 13 rectifiers at the following locations.

1. 600 Harvard (College & West Harvard)
2. 611 College (Alley between Washington & College)
3. 401 Madison (Alley between Madison & Monroe)
4. 348 West Polk (Alley between Polk & Tyler)
5. 155 East Polk
6. 190 East Roosevelt (Alley between Harrison & Roosevelt)
7. 500 Alicia
8. 526 East Pleasant
9. 741 East Valley (Alley between Valley & Polk)
10. 210 Buchanan (Alley between Buchanan & Lincoln)
11. 106 E. Cherry Lane (Cherry Lane off of Elm Street)
12. 1412 East Elm (North end of Maple Street)
13. 1200 Block of Nevada St.

Criteria for Cathodic Protection. At least one of the following three criteria shall be met to assure cathodic protection of the steel gas system.

1. Cathodic voltage of at least -0.850 volts as measured in reference to a saturated copper-copper sulfate electrode(CSE).
2. A negative (cathodic) voltage shift of at least 300 millivolts made with protective current applied, also considering voltage (IR) drops other than those across the structure-electrolyte boundary.
3. A minimum negative (cathodic) polarization voltage shift of 100 millivolts done by interrupting the protective current and immediately measuring the polarization decay.

Rectifiers are typically inspected on a monthly basis but not less than six times per year. As of 2019, Coalinga has installed remote monitoring units at each rectifier for ease of access, continual monitoring, and immediate alarms in the event of rectifier failure.

Annually, the City hires a PHMSA-Operator Qualified contractor to conduct tests that are more extensive. During each annual visit, the contractor tests locations at approximately ten percent of the city's locations on a rotating basis, plus 55 of the same locations each year. The contractor shall also perform an IR drop study as a secondary test consistent with §192.463, Appendix D, II and III. The contractor suggests corrective actions at specific locations, and adjusts and repairs rectifiers, as required. Records of each contractor's and Public Works' inspections and corrections are kept on file in Public Works.

Electrical Isolation Testing (§192.467)

Coalinga's natural gas pipeline network is cathodically protected as a single unit. However, in order to provide sufficient cathodic protection, insulators must be placed at each meter service assembly (MSA) where cathodic protection is present on City owned pipeline. Insulators are not tested with a predetermined frequency. Tests are conducted as a troubleshooting measure to the cathodic protection system.

Visual Inspection of Gas Main. When gas mains are intentionally uncovered or cut, a visual inspection shall be conducted. Where conditions permit, tests and observations to determine the condition of the main as well as the effectiveness of protection shall be completed and recorded as follows:

- Potential-to-soil where exposed
- Condition of structure surface
- Condition of coating
- Inspection for internal corrosion
- Reason for main exposure
- Method of repair, if applicable

In the event corrosion has occurred that may result in wall thickness less than that required for the MAOP of the pipeline, the remaining wall thickness may be less than 30 percent of the nominal wall thickness, or localized corrosion pitting may have occurred to a degree where leakage might result, the section of pipe shall be further inspected circumferentially and longitudinally beyond the exposed portion (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the exposed portion.

Atmospheric Corrosion. Issues of atmospheric corrosion are associated exclusively with meter risers. Meter risers are inspected on a rotating basis such that all risers are inspected once every three years. Corrective action is taken, as necessary, to assure above-ground steel pipe is protected from atmospheric corrosion.

Remedial Measures: Transmission Lines (§192.485)

Coalinga's gas system does not include any transmission lines, as defined in §192.3.

XII. Patrolling (§192.721) and Pipeline Markers (§192.707)

Patrolling. Coalinga's pipeline system contains no "Transmission Lines" as defined in §102.3. However, Coalinga's system is rated as "High-Pressure Distribution" and also contains "Mains." Accordingly, Coalinga's plan for patrolling its natural gas system is prepared to comply with DOT requirements pertaining to High-Pressure Distribution and Mains. Further, Coalinga's pipeline system is determined to be entirely Class 3 previously in this document.

For natural gas Mains where anticipated physical movement or external loading could cause failure or leakage, federal requirements require they be patrolled:

- In business districts, at intervals not exceeding 4-1/2 months, but at least four

times each calendar year
- Outside business districts, at intervals not exceeding 7-1/2 months, but at least twice each calendar year

Coalinga's meter readers patrol the system each month as they read the gas meters. Documentation will not be completed for every month; however, documentation will be maintained for the intervals indicated above. The form "Patrolling of Pipeline System" in included in Appendix 1.

Pipeline Markers. One location in Coalinga requires pipeline markers pursuant to DOT regulations. It is the exposed natural gas pipeline adjacent to the footbridge near Amandako Mobil Home Park. The marker sign(s) there clearly indicate "Warning," or "Caution," or "Danger," followed by "Gas Pipeline" and "City of Coalinga" and city phone number.

XIII. Construction and Meter Installations

All construction activities are conducted by DOT qualified personnel, whether Coalinga employee or outside contractor. Before any excavation activity shall be conducted, Underground Service Alert must first be contacted and the area marked. All metal and plastic pipe installations must be done with certified materials and follow appropriate manufacturer and government procedures and regulations. Metallic wire must be installed with all plastic piping.

Regarding trenching in particular, personnel shall take adequate precautions in excavated trenches to protect personnel from hazards of unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line.

City of Coalinga adopts Chapter VI, "Repairs and Construction" and Chapter VII, "Proper Location and Design of Customer Meter and Regulator Sets" from OPS' Guidance Manual for Operators of Small Natural Gas Systems. They are included as Appendix 4.

XIV. Joining Plastic Pipe: Inspection of Joints (§192.287)

No person may carry out the inspection of joints in plastic pipes unless that person has been qualified by appropriate training or experience in evaluating the acceptability of plastic pipe joints made under the applicable joining procedure. (§192.287)

No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by appropriate training and specimen testing. (§195.285)

The specimen joint must be visually examined during and after assembly and found to have the same appearance as a joint or photographs of a joint that is acceptable under the applicable joining procedure and tested in accordance with the following butt fusion criteria. Pursuant to §192.285, the following is one acceptable examination method.

First, cut the fused specimen into three strips, each of which is visually examined and found to be free of voids or discontinuities on the cut surfaces of the joint. Next, deform each strip by bending and by torque force, and if failure occurs, it must not initiate in the joint area.

Each person must be requalified under an applicable procedure once each calendar year at intervals not exceeding 15 months, or after any production joint is found unacceptable by testing under §192.513.

XV. Leakage Surveys and Reporting (§192.723)

Survey Intervals. For the business district, a gas detector survey shall be conducted at intervals not exceeding 15 months, but at least once each calendar year. The leakage survey will include tests of the atmosphere in gas, electric, telephone, sewer, and water system manholes, at cracks in pavement and sidewalks, and other locations providing an opportunity for finding gas leaks. For residential areas outside the business district, a gas detector survey shall be made as frequently as necessary for safe operation, but at intervals not exceeding 5 years.

Leaks shall be classified as soon as they are found. If a hazardous condition is found, immediate action shall be taken.

Maps are maintained showing areas inspected for leaks and leads found.

Records of the areas checked, date, conditions, leak class and corrective action taken will be kept on file for two (2) years.

Leak Classifications.

"Grade 1"	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
"Grade 2"	A leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard
"Grade 3"	A leak that is non-hazardous at the time of detection and can be reasonably expected to remain non-hazardous

Responding to Gas Leak Reports (Non-Emergency)

An employee receiving a report of a gas leak will ask the person reporting the leak the necessary questions to properly respond. If the leak is classified as an emergency, the employee will immediately notify public works and Coalinga Fire Department.

After the necessary questions have been asked and it has been determined that a hazardous gas leak exists inside a building, the customer should be advised to:

1. Evacuate the occupants of the structure to a safe distance
2. Not operate any electric switches. Do not turn "on" or "off."

3. Not use the phone
4. Extinguish all open flames, not use matches, cigarettes or other possible sources of ignition
5. Turn off gas meter if feasible
6. Immediately dispatch Public Works to the location

The Public Works Supervisor shall assure that all employees are familiar with the procedure concerning gas leak calls.

A complete file of completed leak report forms will be kept along with any other pertinent records concerning leaks. Such reporting shall be combined with other natural gas work orders.

XVI. Abandonment or Deactivation of Facilities (§192.727)

Abandonment. When a gas main or service is abandoned, the person in charge shall take into consideration the location and size of the main or service and determine the necessity of purging the line. Under normal conditions, larger lines should be filled with water. After a line no longer contains an explosive mixture, the ends shall be sealed. However, the pipeline need not be purged when the volume of gas is so small that there is no potential hazard.

All gas valve boxes shall be removed from the abandoned line and the standpipes filled to grade with sand or a suitable substitute**.**

Deactivation. Whenever service to a customer is discontinued, the person in charge shall perform one of the following.

- The valve shall be closed to prevent the flow of gas to the customer and the valve shall be locked
- A mechanical device shall be inserting inside the service line to prevent the flow of gas
- The customer's piping shall be physically disconnected from the gas supply and sealed at both ends

When service is reactivated, the person in charge will restore gas flow, purge and light all gas appliances. If an appliance will not light, the control valve for that appliance shall be turned off and the customer notified that this appliance requires service work before it may be used.

When natural gas service is initiated or discontinued, the following shall be recorded on a work order form and provided to the city utility billing office.

- Service Address
- Meter serial number or probe number
- Meter reading
- Date the meter is turned on or off

XVII. Pressure Limiting Devices (§192.739 – 743)

Except for service regulators located at individual meters, the City of Coalinga does not operate any form of pressure limiting device. Gas pressure is reduced by PG&E to a

maximum of 25 psig before it enters Coalinga's gas distribution system.

Regulators supplying residential and commercial customers are inspected for proper operation each time a customer's gas meter is changed and each time a service call is made to customers where a malfunction of utility equipment has occurred. Regulators not equipped with full internal relief shall be replaced at time of discovery.

XVIII. Excess Flow Valves (§192.383)

Any EFV installed must comply with the performance standards in CFR 49 §192.381. Accordingly, after April 14, 2017, an EFV will be installed on any new or replaced service line which serves any of the following:

- A single service line to one single-family residence (SFR);
- A branched service line to an SFR installed concurrently with the primary SFR service line;
- A branched service line to an SFR installed off a previously installed SFR service line that does not contain an EFV;
- Multifamily residences with known customer load not exceeding 1,000 SCFH per service at time of service installation based on installed meter capacity, and
- A single, small commercial customer service by a single service line with a known customer load not exceeding 1,000 SCFH, at the time of meter installation, based on installed meter capacity.

Existing service line customers who desire an EFV on service lines not exceeding 1,000 SCFH may request an EFV to be installed. The process to request installation of an EFV can be obtained through Customer Service at City Hall.

The City of Coalinga need not install an EFV, even if requested, if any of the following are true:

- The service line does not operate at a pressure of 10 psig or greater throughout the year;
- The operator has prior experience with contaminants in the gas stream that could interfere with the EFV's operation or cause loss of service to a customer;
- An EFV could interfere with necessary operation or maintenance activities, such as blowing liquids from the line; or
- An EFV meeting the performance standards in §192.381 is not commercially available to the operator.

The City of Coalinga shall provide written or electronic notification to customers of its right to request the installation of an EFV. Electronic notification can include emails, Web site postings, and e-billing notices.

- The notification shall include an explanation for the service line customer of the potential safety benefits that may be derived from installing an EFV.
- The explanation shall include information that an EFV is designed to shut off the flow of natural gas automatically if the service line breaks.
- The notification shall include a description of EFV installation and replacement costs. The notice shall alert the customer that the costs for maintaining and replacing an EFV may later be incurred, and what those costs will be to the extent known.

- The notification shall indicate that if a service line customer requests installation of an EFV and the load does not exceed 1,000 SCFH and a condition preventing installation is not present, the City shall install an EFV at a mutually agreeable date.

XIX. Valve Maintenance (§192.747)

All valves located in Coalinga's distribution mains shall be inspected, operated and lubricated at intervals not exceeding 15 months, but at least once each calendar year. Inspections shall consist of cleaning the valve boxes, operating the valve as much as possible and greasing all lubricated plug valves. The inspection of each valve shall include the checking, and if necessary, the correction of listed locations.

An inoperable valve is defined as valve that cannot be readily opened by one operator-qualified employee. All inoperable valves shall be repaired or replaced as soon as practicably possible.

A record of each inspection shall be kept in the Operations and Maintenance Records Binder.

XX. Prevention of Accidental Ignition (§192.751)

Precautions shall be taken to prohibit smoking or other sources of ignition in an area where the leakage or presence of gas may constitute a hazard of fire or explosion.

Applicable signs, warning devices and/or barricades shall be used as required. Traffic shall be routed as far away from the area as practical.

Tools and lights used shall be approved types. Welding shall only be performed in accordance with the Federal Safety Standards. All welders shall be qualified under Coalinga's OQ program. An effort shall be made to avoid any other known sources of accidental ignition.

When venting a hazardous amount of natural gas, a fire extinguisher must be available and ready for immediate use.

XXI. Tapping (§192.627) and Purging Gas Lines (§192.629)

Purging. When it is necessary to blow down a pipeline or fill a pipeline with natural gas that has contained air, the following procedures shall be followed and shall be applicable to all pipelines regardless of the operating pressure. All personnel shall be qualified under Coalinga's OQ program.

When a pipeline full of air is placed in service the air may be safely displaced with gas by introducing a moderately rapid rate of flow through the pipeline and out a vent at the opposite end. The flow should be contained without interruption until the vented gas is free from air. The vent should then be closed. Whenever possible a "squeegee" type pig

or a slug of inert gas should be used to separate the gas and air to minimize the possibility of an explosion mixture.

In cases where gas in a pipeline is to be displaced with air procedures similar to, but the reverse of, that described above should be used. If the rate of air that can be supplied is not sufficient to create a turbulent flow of air then a "squeegee" pig or inert gas must be used. If there is a reason to suspect the presence of a volatile flammable liquid, precautions should be taken to minimize the possibility of striking static sparks within the pipeline.

Tapping. Each tap made on a pipeline under pressure shall be made by personnel qualified to make hot taps under Coalinga's OQ program.

XXII. Public Awareness Program

As of August 1, 2018, a separate Public Awareness Program is maintained, in addition to the language below.

Coalinga maintains a continuing educational program to enable customers, the public, appropriate government organizations and person engaged in excavation related activities to recognize a gas pipeline emergency for the purpose of reporting to the operator or the appropriate public officials. The program and the media used must be comprehensive as necessary to reach all areas in which the operator transports gas. Coalinga conducts public awareness activities in English and Spanish.

Specifically, Coalinga notifies each customer once in writing that Coalinga does not maintain the customer's buried piping. This written notification is included by the Customer Service department with initial paperwork when an account is initially established, or when an account is transferred from one party to another. In no case shall notification be later than 90 days after customer first receives gas at a particular location. The notice shall state the following consistent with §192.16:

- The operator does not maintain the customer's buried piping
- If the customer's buried piping is not maintained, it may be subject to the potential hazards of corrosion and leakage
- Buried gas piping should be
    - Periodically inspected for leaks;
    - Periodically inspected for corrosion of the piping is metallic; and
    - Repaired if any unsafe condition is discovered.
- When excavating near buried gas piping, the piping should be located in advance, and the excavation done by hand.
- The operator (if applicable), plumbing contractors, and heating contractors can assist in locating, inspecting, and repairing the customer's buried piping.

Coalinga shall make available for inspection:

- A copy of notice currently in use; and
- Evidence that notices have been sent to customers within the previous three years.

XXIII. Record Keeping

Records shall be maintained on all new piping system installations and repairs and/or changes to existing piping systems in sufficient details to provide historical information, physical location, design ratings, and any other pertinent data necessary for the safe and continuous operation and maintenance of the system. All records shall be readily available to operating personnel.