

# **REQUIREMENTS FOR OIL AND GAS PIPELINES**

## **DISCUSSION DRAFT**

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### **CALIFORNIA CODE OF REGULATIONS, TITLE 14 CHAPTER 4. DEVELOPMENT, REGULATION, AND CONSERVATION OF OIL AND GAS RESOURCES**

#### **Subchapter 2. Environmental Protection**

##### ***Article 2. Definitions***

###### **1760. Definitions.**

The following definitions are applicable to this subchapter:

- (a) “Alteration” of a production facility means any action that changes by more than ten percent the total processing capacity or storage volume of the production facilities within a given secondary containment. “Alteration” does not include activities such as maintenance, replacement, or minor modification of production facilities, or installation of temporary production facilities.
- (b) “Catch basin” means a dry sump that is constructed to protect against unplanned overflow conditions.
- (c) “Decommission” means to safely dismantle and remove a production facility and to restore the site where it was located in accordance with Sections 1775 and 1776(f).
- (d) “Designated waterways” means any named perennial or ephemeral waterways or any perennial waterways shown as solid blue lines on United States Geological Survey topographic maps and any ephemeral waterways that the Supervisor determines to have a direct impact on perennial waterways.
- (e) “Environmentally sensitive” means any of the following:

- (1) A production facility within 300 feet of any public recreational area, or a building intended for human occupancy that is not necessary to the operation of the production operation, such as residences, schools, hospitals, and businesses.
  - (2) A production facility within 200 feet of any officially recognized wildlife preserve or environmentally sensitive habitat that is designated on a United States Geological Survey topographic map, designated waterways, or other surface waters such as lakes, reservoirs, rivers, canals, creeks, or other water bodies that contain water throughout the year.
  - (3) A production facility within the coastal zone as defined in Section 30103(b) of the Public Resources Code.
  - (4) Any production facility which the Supervisor determines may be a significant potential threat to life, health, property, or natural resources in the event of a leak, or that has a history of chronic leaks.
- (f) "Field" means the general surface area that is underlain or reasonably appears to be underlain by an underground accumulation of crude oil or natural gas, or both. The surface area is delineated by the administrative boundaries shown on maps maintained by the Supervisor.
- (g) "Flowline" or "injection line" mean any pipeline that connects a well with a gathering line or header.
- (h) "Gathering line" means a pipeline (independent of size) that transports liquid hydrocarbons between any of the following: multiple wells, a testing facility, a treating and production facility, a storage facility, or a custody transfer facility.
- (i) "Header" means a chamber from which fluid is distributed to or from smaller pipelines.
- (j) "Pipeline" means a tube, usually cylindrical, with a cross sectional area greater than 0.8 square inches (1 inch nominal diameter), through which crude oil, liquid hydrocarbons, combustible gases, and/or produced water flows from one point to another within the administrative boundaries of an oil or gas field. Pipelines under the State Fire Marshal jurisdiction, as specified by the Elder Pipeline Safety Act of 1981 (commencing with § 51010 of the Government Code, and the regulations promulgated thereunder) are exempt from this definition.
- (k) "Production facility" means any equipment attendant to oil and gas production or injection operations including, but not limited to, tanks, flowlines, headers,

gathering lines, wellheads, heater treaters, pumps, valves, compressors, injection equipment, production safety systems, separators, manifolds, and pipelines that are not under the jurisdiction of the State Fire Marshal pursuant to Section 51010 of the Government Code, excluding fire suppressant equipment.

- (l) "Out-of-Service" means any production facility that has become incapable of containing fluid safely or cannot be shown to operate as designed.
- (m) "In-Service" means any production facility that is capable of containing fluid safely and can be shown to operate as designed.
- (n) "Secondary containment" means an engineered impoundment, such as a catch basin, which can include natural topographic features, that is designed to capture fluid released from a production facility.
- (o) "Sump" means an open pit or excavation serving as a receptacle for collecting and/or storing fluids such as mud, hydrocarbons, or waste waters attendant to oil or gas field drilling or producing operations.
  - (1) "Drilling sump" means a sump used in conjunction with well drilling operations.
  - (2) "Evaporation sump" means a sump containing fresh or saline water which can properly be used to store such waters for evaporation.
  - (3) "Operations sump" means a sump used in conjunction with an abandonment or rework operation.
- (p) "Urban area" means a cohesive area of at least twenty-five business establishments, residences, or combination thereof, the perimeter of which is 300 feet beyond the outer limits of the outermost structures.
- (q) "Urban pipeline" means that portion of any pipeline within an urban area as defined in this section.
- (r) "Waste water" means produced water that after being separated from the produced oil may be of such quality that discharge requirements need to be set by a California Regional Water Quality Control Board.
- (s) "Active gas pipeline" means an in-service gas pipeline regardless of diameter that is within the division's jurisdiction.
- (t) "Sensitive area" means any of the following:

- (1) An area containing a building intended for human occupancy, such as a residence, school, hospital, or business that is located within 300 feet of an active gas pipeline and that is not necessary to the operation of the pipeline.
- (2) An area determined by the supervisor to present significant potential threat to life, health, property, or natural resources in the event of a leak from an active gas pipeline.
- (3) An area determined by the Supervisor to have an active gas pipeline that has a history of chronic leaks.
- (4) This section does not affect or limit the authority of the Supervisor pursuant to Section 3106, 3270, or any other section of this code, or any regulation implementing those sections.

NOTE: Authority cited: Sections 3013, 3270 and 3782, Public Resources Code.

Reference: Sections 3106, 3010, 3270, 3270.5 and 3782, Public Resources Code.

### ***Article 3. Requirements***

#### **1774. Pipeline Construction and Maintenance.**

Newly installed pipelines shall be designed, constructed, and all pipelines shall be tested, operated, and maintained in accordance with good oil field practice and applicable standards, as set forth in either the American Petroleum Institute (API) (API Rec. Prac. 1110, 3d Ed., Dec. 1991, and API Spec. effective 1990), American Society for Testing and Materials (ASTM) (ASTM Designation Stand. Spec., 1991), or Code of Federal Regulations 49, Part 192, or other methods approved by the Supervisor. The Supervisor may require design or construction modifications, and/or additional testing and maintenance if he or she determines that good oil field practices and applicable standards have not been used. Good oilfield practice includes, but is not limited to:

- (a) Utilization of preventative methods such as cathodic protection and corrosion inhibitors, as appropriate, to minimize external and internal corrosion.
- (b) Utilization of pipeline coating or external wrapping for new or replaced buried or partially buried pipelines to minimize external corrosion. The coating or external wrapping should have a high electrical resistance, be an effective moisture barrier, have good adhesion to the pipe, and be able to resist damage during handling.

- (c) Employment, where practical, of equipment such as low-pressure alarms and safety shut-down devices to minimize spill volume in the event of a leak.
- (d) ~~If feasible, locating above ground, preferably on supports or racks, any new pipelines or parts of a pipeline system that are being relocated or replaced. Locating new pipelines and relocating repaired or replaced sections of older pipelines on supports or racks above ground is preferred when feasible.~~

NOTE: Authority cited: Sections 3013 and 3270, Public Resources Code. Reference: Sections 3106, 3224, and 3270 and 3270.5, Public Resources Code.

#### **1774.1. Pipeline Inspection and Testing.**

- (a) Operators shall visually inspect all aboveground pipelines for leaks and corrosion at least once a year.
- (b) Operators shall inspect all active gas pipelines that are in sensitive areas and that are 10 or more years old for leaks or other defects at least once a year, or at a frequency approved by the Supervisor and listed in the Pipeline-Management Plan.
- (b)(c) The Supervisor may order such tests or inspections deemed necessary to establish the reliability of any pipeline system. Repair, replacement, or cathodic protection may be required.
- (c)(d) Any pipeline that has had a leak resulting in the release of a reportable quantity shall be pressure tested to verify integrity prior to being placed back into service. Operators shall conduct pressure testing in accordance with subdivision (f)(2) on any pipeline that has had a leak resulting in the release of a reportable quantity. The pipeline shall not be returned to service unless the pressure testing has been successfully completed and the integrity of the pipeline has been verified to the Division's satisfaction.
- (d)(e) Operators shall not use Pipe clamps, wooden plugs or screw-in plugs shall not be used for permanent repair of pipeline leaks.
- (e)(f) The operator shall perform periodic A mechanical integrity testing shall be performed on all active environmentally sensitive pipelines that are gathering lines, all urban pipelines over 4" in diameter, and all active gas pipelines in sensitive areas. The mechanical integrity testing shall be conducted every two years, or at an alternative frequency approved by the Supervisor based on demonstrated wall thickness and service life over a period of at least two years. The testing frequencies shall be specified in the operator's Pipeline Management Plan. Pipelines less than 10 years old are exempt from the two year testing requirements of this subdivision. These tests shall be performed to ensure the pipeline integrity by using at least one of the following methods: Subject to review and approval by

the Division, the operator shall identify effective mechanical integrity testing methods based on pipeline type and use. The mechanical integrity testing methodology for compliance with this subdivision shall be specified in the operator's Pipeline Management Plan and shall include at least one of the following:

- (1) Nondestructive testing using ultrasonic or other techniques approved by the Supervisor, to determine wall thickness;.
- (2) ~~Hydrostatic testing using the guidelines recommended in Publication API RP 1110 (3d Ed., Dec. 1991), Testing Liquid Petroleum Pipelines, or the methods approved by the State Fire Marshal, Pipeline Safety and Enforcement Division. Pressure testing using:~~
  - (A) The guidelines recommended by industry standards, such as the American Petroleum Institute, American Society of Mechanical Engineers for oil or gas pipelines; or
  - (B) The method approved by the State Fire Marshal, Pipeline Safety Division for liquid pipelines or US Department of Transportation, Pipeline and Hazardous Materials Safety Administration for gas pipelines;
- (3) Internal inspection devices such as a smart pig, as approved by the Supervisor; or
- (4) ~~Or a~~Any other method of ensuring the integrity of a pipeline that is approved by the Supervisor.

Copies of mechanical integrity test results shall be maintained in a local office of the operator for ~~five~~ ten years and made available to the Division, upon request. The operator shall assess all test results to determine continued safe operations and that risks identified in the pipeline management plan are adequately addressed. The operator shall repair and retest or remove from service any pipeline that fails the mechanical integrity test. ~~The Division shall be promptly notified in writing by the operator of any pipeline taken out of service due to a test failure. The operator shall promptly notify the Division in writing of any pipeline taken out of service due to a test failure.~~

- (f)(g) A county board of ~~s~~Supervisors, a city council, or another state agency may petition the Supervisor to include other pipelines within their jurisdiction as environmentally sensitive or within a sensitive area. The request must be in writing and based on findings of a competent, professional evaluation that shows there is a probability of significant public danger or environmental damage if a leak were to occur.

- (1) Within 30 days of receipt of a petition, the Supervisor shall notify any affected operator.
- (2) Within 60 days of notification to the operators, the Supervisor shall schedule a hearing with the petitioner and operators to allow all parties to be heard.
- (3) Within 30 days after the conclusion of the hearing, the Supervisor shall make a determination as to whether the areas or pipelines should be considered environmentally sensitive or a sensitive area.

NOTE: Authority cited: Sections 3013 and 3270, Public Resources Code. Reference: Sections 3106, and 3270 and 3270.5, Public Resources Code.

## **1774.2. Pipeline Management Plans.**

- (a) Operators shall prepare a Pipeline Management Plan for all pipelines within two years of the effective date of this regulation, and the plan shall be provided to the Supervisor upon request within one year of the effective date of this regulation. An up to date copy shall be maintained with required updates to be made available to the Supervisor upon request. Operators shall submit mapping and other specified data in accordance with section 1774.3 of this Chapter.

The plan shall be updated within 90 days whenever pipelines are acquired, installed, altered, or at the request of the Supervisor. Pipelines that have been abandoned to the standards specified in Section 1776(f) are exempt from this requirement.

- (b) The Pipeline Management Plan shall include the following:
  - (1) A listing of information on each pipeline including, but not limited to: pipeline type, grade, actual or estimated installation date of pipeline, design and operating pressures, installed leak detection systems, and any available leak, repair, inspection and testing history.
  - (2) A description of the testing method and schedule for all pipelines. If the operator has pipelines subject to the mechanical integrity testing requirements of Section 1774.1(f), then this shall include identification of the testing frequency and methodology, including documentation of all requisite approvals from the Division.
  - (3) A description of preventative maintenance performed for associated appurtenance, instrumentation, and equipment (e.g. valves, actuators, gauges, sensors, etc.) to ensure safe pipeline operations.

(4) A list and maps of all pipelines that indicate which lines pass through sensitive areas, environmentally sensitive areas, urban areas, and designated waterways.

(5) A description of the product transferred in each pipeline.

(c) The Supervisor may establish additional requirements or modifications to a pipeline management plan, based on individual circumstances, to ensure life, health, property, and natural resources are protected adequately.

(d) A plan pursuant to California Code of Regulations Title 8, Section 6533 may fulfill the requirements of this section if the plan is determined to be adequate by the appropriate Division district deputy.

NOTE: Authority cited: Sections 3013 and 3270, Public Resources Code. Reference: Sections 3106, and 3270 and 3270.5, Public Resources Code.