

# REQUIREMENTS FOR IDLE WELL TESTING AND MANAGEMENT

## 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 topographical 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) "Idle well" means any well that has not been used for the production of oil and gas, the production of water for the purposes of enhanced oil recovery or reservoir pressure management, or injection for a period of 24 consecutive months.
- (k) "Long-term idle well" means any well that has been an idle well for eight or more years.
- (l) "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 Marshall 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)~~(m) “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 suppression equipment.

~~(l)~~(n) “Out-of-Service” means any production facility that becomes incapable of containing fluid safely or cannot be shown to operate as designed.

~~(m)~~(o) “In-Service” means any production facility that is capable of containing fluid safely and can be shown to operate as designed.

~~(n)~~(p) “Secondary containment” means an engineered impoundment, such as a catch basin, which can include natural topographical features, that is designed to capture fluid released from a production facility.

~~(o)~~(q) “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)~~(r) “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.

(s) “Underground source of drinking water” or “USDW” has the same meaning as in the Safe Drinking Water Act (42 U.S.C. Sec. 300f).

~~(e)~~(t) “Urban pipeline” means that portion of any pipeline within an urban area as defined in this section.

~~(f)~~(v) “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.

NOTE: Authority cited: Sections 3013, 3270 and 3782, Public Resources Code.  
Reference: Sections 3106, 3010, 3270 and 3782, Public Resources Code.

### *Article 3. Requirements*

#### **1772. Idle Well Inventory and Assessment.**

(a) Operators shall submit an Idle Well Inventory and Assessment to the Division that provides all of the following information for each of the operator’s idle wells:

(1) The location of the idle well, as identified by survey and using latitude and longitude in a format specified by the Division;

(2) Well construction data for the idle well in a digital format approved by the Division;

(3) The age of the idle well and the length of time that the idle well has been an idle well;

(4) Identification of any obstacles or impediments to accessing an idle well;

(5) The history of mechanical integrity testing for the idle well with any failed pressure tests clearly flagged;

(6) The corrosion rate of the idle well or indication that the corrosion rate has not been determined;

(7) Whether the idle well penetrates a USDW;

(8) Whether the idle well indicates any pressure at the surface;

(9) Whether the idle well is a critical well, is environmentally sensitive, or is in a sensitive area;

(10) Whether the idle well is in an area that is prone to subsidence or landslides;

(11) Whether the idle well is in a secure location; and

(12) Indication of issues with the idle well that would make it difficult to either reactivate the well or plug and abandon the well.

(b) Operators shall submit their Idle Well Inventory and Assessment to the Division within six months of the effective date of this section, and shall update the Idle Well Inventory and Assessment no later than February 1 of each year.

NOTE: Authority cited: Section 3013 and 3206.1, Public Resources Code. Reference: Sections 3106 and 3206.1, Public Resources Code.

### **1772.1. Idle Wells Partially Plugged.**

(a) Operators shall obtain approval from the Division prior to partially plugging a well.

(b) The operator shall adhere to the following requirements when partially plugging a well:

(1) Proper hole-fluids shall be placed in the well consistent with section 1723(b);

(2) All oil, gas and disposal zones shall be isolated with cement in accordance with the requirements of Section 1723.1, and

(3) All USDWs and freshwaters shall be isolated with cement in accordance with Section 1723.2.

(b) The operator of a well that has been partially plugged shall conduct a pressure test of the casing of the well at least once every 60 months. The pressure test shall be conducted in accordance with the testing parameter specified in Section 1772.2(a)(2).

NOTE: Authority cited: Section 3013, Public Resources Code. Reference: Section 3106, Public Resources Code.

## **1772.2. Testing of Idle Wells.**

(a) Operators shall test each of their idle wells as follows:

- (1) Within 24 months of a well becoming an idle well, the operator shall conduct a fluid-level test for all idle wells using acoustical, mechanical, or other reliable methods, or other diagnostic tests approved by the Supervisor. The testing method employed is subject to approval by the Division. The operator shall repeat testing at least once every 24 months for as long as the well is an idle well.
  
- (2) Within 24 months of a well becoming an idle well, or within 30 days of a fluid level test indicating that the fluid level in the well is above a USDW, whichever is sooner, the operator shall conduct a casing pressure test from the surface to 500 feet below the base of the USDW, or at least to a depth that is 100 feet from the uppermost perforation or the casing shoe of the deepest cement casing. The pressure test shall be conducted at a pressure of at least 500 psi. Pressure testing shall be conducted with liquid unless the Division approves pressure testing with gas. The pressure test shall be for one hour. A pressure test is successful if during the final thirty minutes of continuous pressure testing the pressure gauge does not show more than a 10 percent overall decline in pressure from the initial pressure and if during the final five minutes of continuous pressure testing the pressure gauge does not show more than an average of 0.075 percent decrease in pressure per minute. The Division may modify the testing parameters on a case-by-case basis if, in the Division's judgement, the modification is necessary to ensure an effective test of the integrity of the casing. The operator shall record the pressure test using a pressure gauge, or other comparable device, of 0.5 percent accuracy or better and submit this recording to the Division in an approved digital format. If for any reason a well cannot be safely and effectively pressure tested as required, then the well shall be deemed to have failed the pressure test. If a well fails the pressure testing required under this subdivision, then, within a timeframe acceptable to the Division, the integrity of the well shall be demonstrated to the Division's satisfaction, either by subsequent testing or by remediation of the well and subsequent testing. The operator shall repeat this testing at least once every 48 months for as long as the well is an idle well.
  
- (3) Within 24 months of a well becoming an idle well, the operator shall perform a clean out tag on the well to verify the current effective depth of the well. The operator shall attempt to reach the Division-approved effective depth, but shall at least reach 25 feet below the uppermost perforation in the lowermost zone. If the operator is unable to reach 25 feet below the uppermost perforation in the

lowermost zone, then the operator shall clean the well out to at least that depth. The operator shall repeat this testing at least once every 48 months for as long as the well is an idle well.

(4) If there is any indication that an idle well exhibits a high risk of corrosion or other mechanical integrity issues, including damage caused by subsidence or other factors, then the Division may require the operator to conduct an ultrasonic or magnetic flux survey, or equivalent survey approved by the Division, to measure mechanical integrity. If the survey is performed and the corrosion rate cannot be determined, then the operator shall repeat this survey after 24 months, but within 36 months, to determine the corrosion rate. The Division will determine a future testing schedule based on well condition, corrosion rate, and other identified risks.

(5) Within 15 years of a well becoming an idle well, the operator shall provide the Division with an engineering analysis demonstrating to the Division's satisfaction that it is viable to return the well to operation in the future. The engineering analysis shall document that the well could be used to access potential oil and gas reserves, that it has mechanical integrity, and that it meets current well construction requirements.

(b) In addition to any other penalty or remedial requirement imposed by the Division, within 12 months of failing to comply with a requirement of this section, the operator shall do one of the following:

(1) Bring the well into compliance to the satisfaction of the Division;

(2) Partially plug and abandon the well in accordance with Section 1772.2; or

(3) Plug and abandon the well in accordance with Section 3208.

(c) If the operator demonstrates to the Division's satisfaction that a well is not within one-half mile of a USDW, then for purposes of this section the well shall not be deemed an idle well until it has met the definition of "idle well" in Public Resources Code section 3008 for two years.

(d) Before conducting any test required under this section, the operator shall give the appropriate district office 24 hours' notice, or a notice acceptable to the district office, so that a Division inspector may witness the testing.

NOTE: Authority cited: Section 3013, Public Resources Code. Reference: Sections 3106 and 3106.1, Public Resources Code.

### **1772.3. Requirements for Observation Wells.**

- (a) If any part of the well bore of an observation well is within 0.5 mile of a USDW, then the operator shall conduct a fluid level test using acoustical, mechanical, or other reliable methods, or other diagnostic tests approved by the Supervisor.
- (b) Operators shall conduct a casing pressure test from the surface to 500 feet below the base of the USDW, or at least to a depth that is 100 feet from the uppermost perforation or the casing shoe of the deepest cemented casing, on all observation wells every five years. The pressure test shall be conducted in accordance with the testing parameter specified in Section 1772.2(a)(2).
- (c) Before conducting any test required under this section, the operator shall give the appropriate district office 24 hours' notice, or a notice acceptable to the district office, so that Division staff may witness the testing.

NOTE: Authority cited: Section 3013, Public Resources Code. Reference: Sections 3008 and 3106, Public Resources Code.

### **1772.4. Securing of Idle Wells in Public Places.**

The operator shall secure all idle wells and attendant facilities in locations accessible to the public so as to prevent unauthorized access to the well and attendant facilities and other risks of damage to life, health, property, and natural resources. Operator's actions to secure their idle wells shall include, as appropriate:

- (a) Securing all pumping units to ensure the unit cannot operate should the brake fail, be inadvertently released, or for any other reason;
- (b) Installing fencing around the idle well and facilities;
- (c) Removing electrical connections to all idle equipment;
- (d) Removing or preventing access to all idle tanks or equipment;
- (e) Closing and securing all valves; and
- (f) Any other actions determined necessary by the Division.

NOTE: Authority cited: Section 3013 and 3206.1, Public Resources Code. Reference: Section 3106 and 3206.1, Public Resources Code.

### **1772.5. Verification of Production or Injection.**

For any well for which injection or production has been reported under Public Resources Code section 3227 or 3406, upon request by the Division, the operator shall demonstrate that the well is capable of producing or injecting and did in fact produce or inject as reported. In order to make this demonstration, the Division may require an equipment check, well test, or verifying documentation including, but not limited to:

- (a) Operability of the production or injection equipment;
- (b) Filling of production tanks;
- (c) Field production reports;
- (d) Lease oil inventory at the beginning or end of the month;
- (e) Run tickets or automated shipping data, which includes the shipping and/or purchasing company and the volume received;
- (f) Lab data, such as gravity, water cut, and/or temperature;
- (g) Details of the methods used to allocate production to wells; or
- (h) Any other documentation or means by which the Division may reasonably require an operator to verify production.

NOTE: Authority cited: Section 3013, Public Resources Code. Reference: Sections 3008, 3106, 3227 and 3406, Public Resources Code.