

SB 4 WELL STIMULATION TREATMENT REGULATIONS

TEXT OF PROPOSED REGULATIONS

Added text is shown in underline.

CHAPTER 4. DEVELOPMENT, REGULATION, AND CONSERVATION OF OIL AND GAS RESOURCES

Subchapter 2. Environmental Protection

Article 1. General.

1751. Single-Project Authorization.

(a) For the purposes of this section, "single-project authorization" shall mean a single Division approval for multiple applications for permits to perform well stimulation treatments and/or notices of intent to drill or rework wells.

(b) A request for a single-project authorization shall include:

(1) Identification of each of the applications and notices that are part of the request;

(2) The applications and notices that comprise the request for a single-project authorization.

(c) The Division will specify what operations are approved by a single-project authorization and the conditions under which the operations are approved.

(d) Operations approved by a single-project authorization that have not commenced within one year shall not be commenced without first obtaining a new approval for those operations from the Division.

NOTE: Authority cited: Sections 3013 and 3160, Public Resources Code. Reference: Sections 3106, 3160, and 3203 Public Resources Code.

Article 2. Definitions

1761. Well Stimulation and Underground Injection Projects.

(a) The following definitions are applicable to this chapter:

(1) "Well stimulation treatment" means a treatment of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation. Well stimulation is a short term and non-continual process for the purposes of opening and stimulating channels for the flow of hydrocarbons. Examples of well stimulation treatments include hydraulic fracturing, acid fracturing, and acid matrix stimulation. Well stimulation treatment does not include routine well cleanout work; routine well maintenance; routine treatment for the purpose of removal of formation damage due to

drilling; bottom hole pressure surveys; routine activities that do not affect the integrity of the well or the formation; the removal of scale or precipitate from the perforations, casing, or tubing; or a treatment that does not penetrate into the formation more than 36 inches from the wellbore.

(2) “Underground injection project” or “subsurface injection or disposal project” means sustained or continual injection into one or more wells over an extended period in order to add fluid to a zone for the purpose of enhanced oil recovery, disposal, or storage. Examples of underground injection projects include waterflood injection, steamflood injection, cyclic steam injection, injection disposal, and gas storage projects.

(b) Well stimulation treatments and underground injection projects are two distinct kinds of oil and gas production processes. Unless a regulation expressly addresses both well stimulation and underground injection projects,

(1) Regulations regarding well stimulation treatments do not apply to underground injection projects; and

(2) Regulations regarding underground injection projects do not apply to well stimulation.

NOTE: Authority cited: Sections 3013 and 3160, Public Resources Code. Reference: Section 3106, 3157, and 3160, Public Resources Code.

Article 4. Well Stimulation Treatments

1780. Purpose, Scope, and Applicability.

(a) The purpose of this article is to set forth regulations governing well stimulation treatments, as defined in Section 1761, subdivision (a)(1), except that the requirements of this article do not apply to acid matrix stimulation treatments that use an acid concentration of 7% or less. Nor is an operator required to obtain a permit under Public Resources Code section 3160, subdivision (d), prior to performing an acid matrix stimulation treatment that uses an acid concentration of 7% or less.

(b) Well stimulation treatments are not subsurface injection or disposal projects and are not subject to Sections 1724.6 through 1724.10. This article does not apply to underground injection projects.

(c) For purposes of this article, a well stimulation treatment commences when well stimulation fluid is pumped into the well, and ends when the well stimulation treatment equipment is disconnected from the well.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1781. Definitions.

The following definition shall govern this article:

(a) “**Acid matrix stimulation treatment**” means an acid treatment conducted at pressures lower than the applied pressure necessary to fracture the underground geologic formation.

(b) “**Acid well stimulation treatment**” means a well stimulation treatment that uses, in whole or in part, the application of one or more acids to the well or underground geologic formation. The acid well stimulation treatment may be at any applied pressure and may be used in combination with hydraulic fracturing treatments or other well stimulation treatments. Acid well stimulation treatments include acid matrix stimulation treatments and acid fracturing treatments.

(c) “**Acid stimulation treatment fluid**” means one or more base fluids mixed with physical and chemical additives for the purpose of performing an acid well stimulation treatment.

(d) “**Additive**” means a substance or combination of substances added to a base fluid for purposes of preparing well stimulation treatment fluid, including, but not limited to, acid stimulation treatment fluid and hydraulic fracturing fluid. An additive may serve additional purposes beyond the transmission of hydraulic pressure to the geologic formation. An additive may be of any phase and may include proppants.

(e) “**Base fluid**” means the continuous phase fluid used in the makeup of a well stimulation treatment fluid. The continuous phase fluid may include, but is not limited to, water, and may be a liquid or a hydrocarbon or nonhydrocarbon gas. A well stimulation treatment may use more than one base fluid.

(f) “**Chemical Disclosure Registry**” means the Internet Web site developed by the Division for the purpose of reporting the information required under Section 1788. Until the Division has completed development of the reporting website, “Chemical Disclosure Registry” shall mean the chemical registry Internet Web site known as fracfocus.org developed by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission, or another publicly accessible information Internet Web site that is designated by the Division.

(g) “**Flowback fluid**” means the fluid recovered from the treated well before the commencement of oil and gas production from that well following a well stimulation treatment. The flowback fluid may include materials of any phase.

(h) “**Hydraulic fracturing**” means a well stimulation treatment that, in whole or in part, includes the pressurized injection of hydraulic fracturing fluid into an underground geologic formation in order to fracture the formation, thereby causing or enhancing, for the purposes of this division, the production of oil or gas from a well.

(i) “**Hydraulic fracturing fluid**” means one or more base fluids mixed with physical and chemical additives for the purpose of hydraulic fracturing.

(j) “**Proppants**” means materials inserted or injected into the underground geologic formation that are intended to prevent fractures from closing.

(k) “**Protected water**” means water outside of a hydrocarbon zone that contains no more than 10,000 mg/l total dissolved solids.

(l) “**Regional Water Board**” means the Regional Water Quality Control Board with jurisdiction over the location of a well subject to well stimulation treatment.

(m) “**Surface property owner**” means the owner of real property as shown on the latest equalized assessment roll or, if more recent information than the information contained on the assessment roll is available, the owner of record according to the county assessor or tax collector.

(n) “Well stimulation treatment fluid” means a base fluid mixed with physical and chemical additives, which may include acid, for the purpose of a well stimulation treatment. A well stimulation treatment may include more than one well stimulation treatment fluid. Well stimulation treatment fluids include, but are not limited to, hydraulic fracturing fluids and acid stimulation treatment fluids.

NOTE: Authority cited: Sections 3013 and 3160, Public Resources Code. Reference: Sections 3106, 3150, 3151, 3152, 3153, 3154, 3156, 3158, 3159, and 3160, Public Resources Code.

1782. General Well Stimulation Treatment Requirements.

(a) When a well stimulation treatment is performed, the operator shall ensure that all of the following:

(1) Casing is sufficiently cemented or otherwise anchored in the hole in order to effectively control the well at all times;

(2) Geologic and hydrologic isolation of the oil and gas formation are maintained during and following the well stimulation treatment;

(3) All potentially productive zones, zones capable of over-pressurizing the surface casing annulus, or corrosive zones be isolated and sealed off to the extent that such isolation is necessary to prevent vertical migration of fluids or gases behind the casing;

(4) All well stimulation treatment fluids are directed into the zone(s) of interest;

(5) The wellbore’s mechanical integrity is tested and maintained;

(6) The well stimulation treat fluids used are of known quantity and description for reporting and disclosure as required pursuant to this Article; and

(7) The well stimulation treatment fluid is not of a concentration level that will damage the well casing, tubing, cement, or other well equipment, or would otherwise cause degradation of the well’s mechanical integrity during the treatment process.

(b) In addition to specific methods set forth in these regulations, to achieve the objectives of this section, the operator shall follow the intent of all applicable well construction requirements, use good engineering practices, and employ best industry standards.

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

1783. Application for Permit to Perform Well Stimulation Treatment.

(a) A well stimulation treatment or repeat well stimulation treatment shall not commence without a valid permit approved by the Division and shall be done in accordance with the conditions of the Division’s approval.

(b) An application for a permit to conduct well stimulation operations shall include all of the information listed in Section 1783.1 and shall be submitted electronically to the Division on a digital form specified by the Division and available on the Division’s public internet Web site at <http://www.conservation.ca.gov/DOG/Pages/Index.aspx>.

(c) The operator shall notify the Division at least 72 hours prior to commencing well stimulation so that Division staff may witness. Three hours prior to commencing, the operator shall confirm with the Division that the well stimulation treatment is proceeding.

NOTE: Authority cited: Sections 3013 and 3160, Public Resources Code. Reference: Sections 3106 and 3160, Public Resources Code.

1783.1. Contents of Application for Permit to Perform Well Stimulation Treatment.

(a) An application for a permit to perform a well stimulation treatment shall include the following:

- (1) Operator's name;
- (2) Name and telephone number of person filing the form;
- (3) Name of person to contact with technical questions regarding operations;
- (4) Telephone number and email address of person to contact with technical questions regarding operations;
- (5) Lease name and number of the well;
- (6) Location of the well, submitted as a non-projected, Latitude Longitude, in the General Coordinate System (GCS) NAD83.
- (7) API number assigned to the well by the Division;
- (8) Type of well;
- (9) Name of the oil field;
- (10) County in which the well is located;
- (11) The time period during which the well stimulation treatment is planned to occur.
- (12) For directionally drilled wells, the proposed coordinates (from surface location), the true vertical depth at total depth, and the wellbore path;
- (13) Estimated true vertical depth of the well;
- (14) Name and vertical depth of the productive horizon where well stimulation treatment will occur;
- (15) The planned location of the well stimulation treatment on the well bore, the estimated length, height, and direction of the induced fractures or other planned modification, if any, and the location of existing wells, including plugged and abandoned wells, that may be impacted by these fractures and modifications;
- (16) Depth of the base of protected water;
- (17) Anticipated volume, rate, and pressures of fluid to be injected;
- (18) Identification of all wells that have previously been hydraulically fractured in the same production horizon within the area of twice the anticipated fracture radius;
- (19) Identification of where in the operator's Spill Contingency Plan handling of well stimulation fluid and additives has been addressed;
- (20) The cement evaluation required under Section 1784(a)(1);
- (21) The well stimulation treatment radius analysis required under Section 1784(a)(2), including identification of all water within the area of the well stimulation treatment radius analysis, and the names and API numbers of all wells within the area of the well stimulation treatment radius analysis;
- (22) The well stimulation treatment design required under Section 1784(a)(3);

(23) A water management plan that includes an estimate of the amount of water to be used in the treatment, an estimate of water to be recycled following the well stimulation treatment, the anticipated source of the water to be used in the treatment, and the anticipated disposal method that will be used for the recovered water in the flowback fluid from the treatment that is not produced water that would be reported pursuant to Section 3227;

(24) The estimated amount of treatment-generated waste materials that are not addressed by the water management plan, and the anticipated disposal method for the waste materials;

(25) Certification from the Regional Water Board that the well subject to the well stimulation treatment is covered by a well-specific, field-wide, or regional ground water monitoring plan developed in accordance with Water Code section 10783; and

(26) A complete list of the names, Chemical Abstract Service numbers, and estimated concentrations, in percent by mass, of each and every chemical constituent of the well stimulation fluids anticipated to be used in the treatment. If a Chemical Abstract Service number does not exist for a chemical constituent, another unique identifier may be used, if available. A claim of trade secret protection for the information required under this section shall be handled in the manner specified under Public Resources Code section 3160, subdivision (j).

NOTE: Authority cited: Sections 3013 and 3160, Public Resources Code. Reference: Sections 3106 and 3160, Public Resources Code; Section 10783, Water Code.

1783.2. Copy of Well Stimulation Permit; Notice of Availability for Water Testing, Sampling.

(a) At least 30 days in advance of commencing well stimulation treatment, the operator of any oil or gas well receiving a well stimulation treatment permit from the Division is required to provide to surface property owners and tenants of legally recognized parcels of land situated within a 1500 foot radius of the wellhead of any such well, or within 500 feet of the horizontal projection of the subsurface parts of any such well, the following:

(1) A copy of the well stimulation treatment permit;

(2) Notice of the availability for water sampling and testing of any water well suitable for drinking or irrigation purposes; and

(3) Notice of the availability for water sampling and testing of any surface water suitable for drinking or irrigation purposes.

(b) For the purposes of this section, "tenant" means a person or entity possessing the right to occupy a legally recognized parcel, or portion thereof, by way of a valid written agreement.

(c) For the purposes of this section, "horizontal projection" means the surface representation of the horizontal path of the wellbore.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1783.3. Duty to Hire Independent Third Party to Provide Copy of Permit, Notice of Water Testing, Sampling.

(a) It is the operator's responsibility to identify the surface property owners and tenants to whom a copy of the well stimulation treatment permit must be provided and notification is required under Section 1783.2. To fulfill this responsibility, the operator or owner must hire an independent person or entity to provide a copy of the permit and the notification required.

(b) Any person or entity hired by the owner of a well to provide a copy of the permit and notice in accordance with this regulation shall, after providing such notice, deliver to the Division, in writing, the following:

(1) The names of the property owners or tenants identified;

(2) The method by which the copy of the permit was provided, and the date on which the copy of the permit was provided; and

(3) The method by which the notice of the availability of water sampling and testing was provided, and the date on which the notice was provided.

(c) Information about the availability of water quality testing may be included in the notification or the notification may reference a website with further information about testing options.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1784. Evaluation Prior to Well Stimulation Treatment.

(a) The operator shall do all of the following prior to commencing or recommencing well stimulation treatment operations:

(1) Allowing at least 48 hours to elapse after cement placement, the operator shall run a radial cement evaluation log or other cement evaluation method that is approved by the Division and capable of demonstrating adequate cementing. If the quality of the cement outside of the production casing is not sufficient to ensure the geologic and hydrologic isolation of the oil and gas formation during and following well stimulation treatment, then the operator must develop a plan to remediate the cement and obtain approval from the Division for the remediation plan prior to proceeding. The operator is only required to evaluate the cement that is required to be in place under Section 1722.4. The Division may waive the requirement of doing a cement evaluation if the supervisor is satisfied that, based on geologic and engineering information available from previous drilling or producing operations in the area where the well stimulation treatment will occur, well construction and cementing methods have been established that ensure that there will be no voids in the annular space of the well.

(2) The operator shall conduct a well stimulation treatment radius analysis to ensure the geologic and hydrologic isolation of the oil and gas formation during and following well stimulation treatment.

(i) The operator shall utilize modelling approved by the Division that will effectively simulate the projected well stimulation treatment area of influence within the design limits of the projected well stimulation treatment operations.

(ii) The well stimulation treatment radius analysis shall include a review of all wells and faults (active or inactive) within a radius of twice the anticipated well stimulation treatment length from each point of well stimulation treatment to ensure the geologic and hydrologic isolation of the oil and gas formation during and following well stimulation.

(iii) If a radius of five times the anticipated well stimulation treatment length from a point of treatment extends beyond the productive horizon being evaluated for possible well stimulation treatment, then the well stimulation treatment radius analysis shall include a review of the geological formations adjacent to the productive horizon. The operator shall assess the mechanical rock properties, including permeability, relative hardness (using Young's Modulus), relative elasticity (using Poisson's Ratio), and other relevant characteristics of the geological formations to determine whether the geological formations will ensure the geologic and hydrologic isolation of the oil and gas formation during and following well stimulation.

(3) Utilizing the well stimulation treatment radius analysis conducted pursuant to subsection (a)(4), the operator shall design the well stimulation treatment so as to ensure that the well stimulation treatment fluids or hydrocarbons do not migrate and remain geologically and hydrologically isolated to the hydrocarbon formation.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1784.1. Pressure Testing Prior to Well Stimulation Treatment.

(a) The operator shall do all of the following not more than 24 hours prior to commencing or recommencing well stimulation treatment:

(1) All cemented casing strings and all tubing strings to be utilized in the well stimulation treatment operations shall be pressure tested for at least 30 minutes at a pressure equal to 125% of the maximum surface pressure anticipated during the well stimulation treatment . If during testing there is a pressure drop of 10% or more from the original test pressure, then the tested casing or tubing shall not be used until the cause of the pressure drop is identified and corrected. No casing or tubing shall be used unless it has been successfully tested pursuant to this section.

(2) All surface equipment to be utilized for well stimulation treatment shall be rigged up as designed. The pump, and all equipment downstream from the pump, shall be pressure tested at a pressure equal to 125% of the maximum surface pressure anticipated during the well stimulation treatment.

(b) The operator shall notify the Division at least 24 hours prior to conducting the pressure testing required under this section so that Division staff may witness.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1785. Monitoring During Well Stimulation Treatment Operations.

(a) The operator shall continuously monitor all of the following parameters during the well stimulation treatment, if applicable:

(1) Surface injection pressure;

(2) Slurry rate;

(3) Proppant concentration;

(4) Fluid rate; and

(5) All annuli pressures.

(b) The operator shall terminate the well stimulation treatment and immediately provide the collected data to the Division if any of the following occur:

(1) A production-surface casing annulus pressure change of 20% or greater than the calculated pressure increase due to pressure and/or temperature expansion;

(2) Pressure exceeding 90% of the API rated minimum internal yield on any casing string in communication with the well stimulation treatment;

(3) The operator has reason to suspect any potential breach in the production casing, production casing cement, or isolation of any sources of protected water.

(c) If any of the events listed in subdivision (b) occur, then the operator shall perform diagnostic testing on the well to determine whether a breach has occurred. Diagnostic testing shall be done as soon as is reasonably practical. The Division shall be notified when diagnostic testing is being done so that Division staff may witness the testing. All diagnostic testing results shall be provided to the Division.

(d) If diagnostic testing reveals that a breach has occurred, then the operator shall immediately shut-in the well, isolate the perforated interval, and notify the Division and the Regional Water Board with all of the following information:

(1) A description of the activities leading up to the well failure.

(2) Depth interval of the well failure and methods used to determine the depth interval.

(3) An exact description of the chemical constituents of the well stimulation treatment fluid, or of the fluid that is most representative of the fluid composition in the well at the time of the well failure, including:

(A) Total dissolved solids;

(B) Chloride, sodium, and all organic or inorganic chemicals listed in the tables in California Code of Regulations, title 14, sections 64431 and 64444; and

(C) Gross alpha, gross beta, uranium, tritium, radium 226+228, and all other radionuclides.

(4) An estimate of the volume of fluid lost during well failure.

(5) If available, groundwater quality data for the protected water closest to the well failure.

(e) Groundwater quality data submitted to the Regional Water Boards under subsection (d) shall be in an electronic format that follows the guidelines detailed in California Code of Regulations, title 23, chapter 30.

(f) If the surface casing annulus is not open to atmospheric pressure, then the surface casing pressures shall be monitored with a gauge and pressure relief device. The maximum set pressure on the relief device shall be the lowest of the following and well stimulation treatment shall be terminated if pressures in excess of the maximum set pressure are observed in the surface casing annulus:

(1) A pressure equal to: 0.70 times 0.433 times the true vertical depth of the surface casing shoe (expressed in feet);

- (2) 70% of the API rated minimum internal yield for the surface casing; or
- (3) A pressure change that is 20% or greater than the calculated pressure increase due to pressure and/or temperature expansion.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1786. Storage and Handling of Well Stimulation Treatment Fluids.

(a) Operators shall adhere to the following requirements for the storage and handling of well stimulation treatment fluid, additives, and produced water from a well that has had a well stimulation treatment:

(1) Fluids shall be stored in compliance with the secondary containment requirements of Section 1773.1, except that secondary containment is not required for portable or temporary production facilities.

(2) Operators shall be in compliance with all applicable testing, inspection, and maintenance requirements for production facilities containing well stimulation treatment fluids.

(3) Fluids shall be accounted for in the operator's Spill Contingency Plan;

(4) Fluids shall be stored in containers and shall not be stored in sumps or pits;

(5) In the event of an unauthorized release, the operator shall immediately notify the appropriate response entities for the location and the type of fluids involved, as required by all applicable federal, state, and local laws and regulations; and shall perform clean up and remediation of the area, as required by all applicable federal, state, and local laws and regulations.

(6) Within 5 days of the occurrence of an unauthorized release, the operator shall provide the Division a written report that includes:

(A) A description of the activities leading up to the release;

(B) The type and volumes of fluid released;

(C) The cause(s) of release;

(D) Action taken to stop, control, and respond to the release; and

(E) Steps taken and any changes in operational procedures implemented by the operator to prevent future releases.

(7) Operators shall be in compliance with all applicable requirements of the Regional Water Board, the Department of Toxic Substances Control, and the Air Quality Management District with jurisdiction over the location of the well.

(8) If fluids will be transported offsite and not injected into a well regulated by the Division under Sections 1724.6 through 1724.10, then the fluids shall be evaluated to determine if they are hazardous waste, as defined by Department of Toxic Substances Control in its regulations.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1787. Well Monitoring After Well Stimulation Treatment.

(a) Operators shall monitor each producing well that has had a well stimulation treatment to identify any potential problems with a well that could endanger any underground source of protected water or hydrocarbon zone. If there is any indication of a well failure, the operator shall immediately notify the Division and the Regional Water Board and perform diagnostic testing on the well to determine whether a well failure has actually occurred. If the testing indicates that a well failure has occurred, then the operator shall immediately take all appropriate measures to prevent contamination of all underground sources of protected water, hydrocarbon zones, and all surface waters in the area of the well and shall provide the Division and the Regional Water Board with the information described in section 1785(d).

(b) Operators shall adhere to the following requirements for a well that has had a well stimulation treatment:

(1) The production pressure of the well shall be monitored at least once every two days for the first thirty days after the well stimulation treatment and on a monthly basis thereafter. Information regarding production pressures shall be reported to the Division on a monthly basis.

(2) The well shall be monitored at least once every two days for the first thirty days after the well stimulation treatment and on a monthly basis thereafter to determine the amount of gas, oil, and water produced, including the volume of readily identifiable well stimulation treatment fluid flowback. The operator shall report the information to the Division on a monthly basis for 5 years or until there has been a 95% reduction in well stimulation treatment fluid contained in the produced fluid, whichever comes first.

(3) The annular pressures of the well shall be reported to the Division annually. It shall be immediately reported to the Division if annular pressure exceeds 70% of the API rated minimum internal yield or collapse strength of casing, or if surface casing pressures exceed a pressure equal to: 0.70 times 0.433 times the true vertical depth of the surface casing shoe (expressed in feet).

(4) The annular valve shall be kept accessible from the surface or left open and plumbed to the surface with a working pressure gauge unless it has been demonstrated to the Division's satisfaction that there are no voids in the annular space.

(5) A properly functioning pressure relief device shall be installed on the annulus between the surface casing and the production casing, or, if intermediate casing is set, on the annuli between the surface casing and the intermediate casing and the production casing. This requirement may be waived by the Division, if the operator demonstrates to the Division's satisfaction that the installation of a pressure relief device is unnecessary based on technical analysis and/or operating experience in the area.

(6) If a pressure relief device is installed, then all pressure releases from the device shall be reported to the Division within 24 hours of detection. The maximum set pressure of a surface casing pressure relief device shall be the lowest of the following:

(A) A pressure equal to: 0.70 times 0.433 times the true vertical depth of the surface casing shoe (expressed in feet);

(B) 70% of the API rated minimum internal yield for the surface casing; or

(C) A pressure change that is 20% or greater than the calculated pressure increase due to pressure and/or temperature expansion

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.

1788. Required Public Disclosures.

(a) Except as provided in subdivision (c), within 60 days after the cessation of a well stimulation treatment, the operator shall post to the Chemical Disclosure Registry all of the following information:

- (1) Operator's name;
- (2) API number assigned to the well by the Division;
- (3) Lease name and number of the well;
- (4) Location of the well, submitted as a non-projected, Latitude Longitude, in the General Coordinate System (GCS) NAD83.
- (5) County in which the well is located;
- (6) Date that the well stimulation treatment occurred;
- (7) True vertical depth of the well;
- (8) Name and vertical depth of the productive horizon where well stimulation treatment occurred;
- (9) The trade name, supplier, concentration, and a brief description of the intended purpose of each additive contained in the well stimulation fluids used;
- (10) The total volume of base fluid used during the well stimulation treatment;
- (11) Identification of whether the base fluid is water suitable for irrigation or domestic purposes, water not suitable for irrigation or domestic purposes, or a fluid other than water;
- (12) The source, volume, and specific composition and disposition of all water associated with the well stimulation treatment, including, but not limited to, water used as base fluid and water recovered from the well following the well stimulation treatment that is not otherwise reported as produced water pursuant to Section 3227;
- (13) Identification of any reuse of treated or untreated water for well stimulation treatments and well stimulation treatment-related activities;
- (14) The specific composition and disposition of all well stimulation treatment fluids, including waste fluids, other than water;
- (15) Any radiological components or tracers injected into the well as part of the well stimulation treatment, a description of the recovery method, if any, for those components or tracers, the recovery rate, and specific disposal information for recovered components or tracers;
- (16) The radioactivity of the recovered well stimulation fluids;
- (17) The location of the portion of the well subject to the well stimulation treatment and the extent of the fracturing or other modification, if any, surrounding the well induced by the treatment.
- (18) The estimated volume of well stimulation treatment fluid that has been recovered; and

(19) A complete list of the names, Chemical Abstract Service numbers, and maximum concentration, in percent by mass, of each and every chemical constituent of the well stimulation treatment fluids used. If a Chemical Abstract Service number does not exist for a chemical constituent, the operator may provide another unique identifier, if available.

(b) If the Chemical Disclosure Registry is unable to receive information required to be reported under this section, then the operator shall provide the information directly to the Division.

(c) Except for items (1) through (6) of subsection (a), operators are not required to post information to the Chemical Disclosure Registry if the information is found in a well record that the Division has determined is not public record, pursuant to Public Resources Code section 3234. If information listed in subsection (a) is not posted to the Chemical Disclosure Registry on this basis, then the operator shall inform the Division in writing, specifying the information that is not being publicly disclosed. It is the operator's responsibility to post the information to the Chemical Disclosure Registry as soon as the information becomes public record under Public Resources Code section 3234.

(d) A claim of trade secret protection for the information required to be disclosed under this section shall be handled in the manner specified under Public Resources Code section 3160, subdivision (j).

(e) Groundwater quality data reported under this section shall also be submitted to the Regional Water Board in an electronic format that follows the guidelines detailed in California Code of Regulations, title 23, chapter 30.

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Sections 3106, 3160, and 3234, Public Resources Code.

1789. Post-Well Stimulation Treatment Report.

(a) Within 60 days after the cessation of a well stimulation treatment, the operator shall submit a report to the Division describing:

(1) The results of the well stimulation treatment;

(2) The pressures encountered during the well stimulation treatment; and

(3) How the actual well stimulation treatment differs from what was anticipated in the well stimulation treatment design that was prepared under Section 1784(a)(5).

(b) If data maintained by the U.S. Geological Survey indicate that, since the commencement of well stimulation treatment, an earthquake of magnitude 2.0 or greater has occurred in the area of the well stimulation treatment radius analysis required under Section 1784(a)(4), then the occurrence of that earthquake shall be noted in the report prepared under subsection (a).

NOTE: Authority cited: Section 3013 and 3160, Public Resources Code. Reference: Section 3106 and 3160, Public Resources Code.