SB 4 INTERIM WELL STIMULATION TREATMENT REGULATIONS

TEXT OF READOPTED EMERGENCY REGULATIONS

Text added to existing emergency regulations is shown in underline.

Text deleted from existing emergency regulations is shown in ~~strikethrough~~.

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

Subchapter 2. Environmental Protection

Article 2. Definitions

1761. Well Stimulation and Underground Injection Projects.

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

(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

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(2) Regulations regarding underground injection projects do not apply to well stimulation.
(c) Well stimulation treatment on a well that is part of an underground injection project is subject to the regulations regarding well stimulation treatment.

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, 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, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, 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 chemical registry Internet Web site known as fracfocus.org developed by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission.

(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 or fluids into an underground geologic formation in order to fracture or with intent to fracture the formation, thereby causing or enhancing, for the purposes of this article, 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 unless the water has been determined to be an exempt aquifer pursuant to the Code of Federal Regulations, title 40, part 146.4.

(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, 3160, and 3161, Public Resources Code. Reference: Sections 3106, 3150, 3151, 3152, 3153, 3154, 3156, 3158, 3159, 3160, and 3161, Public Resources Code.

1782. General Well Stimulation Treatment Requirements.

(a) When a well stimulation treatment is performed, the operator shall adhere to all of the following requirements:

(1) Casing shall be sufficiently cemented or otherwise anchored in the hole in order to effectively control the well at all times during well stimulation treatment.

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

(3) The wellbore's mechanical integrity shall be tested and maintained and all cemented casing strings and all tubing strings utilized in the well stimulation treatment operations shall be pressure tested prior to well stimulation treatment. No casing or tubing shall be used unless it has been successfully tested.

(4) 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 prior to well stimulation treatment.

(5) The well stimulation treatment fluid shall not be 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.

(6) The operator's Spill Contingency Plan shall address handling of well stimulation fluid and additives.

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code.

1783. Written Notice of Well Stimulation Treatment.

(a) At least 10 days in advance of commencing a well stimulation treatment, the operator shall submit written notification to the Division that includes all of the information and certifications listed in Section 1783.1. The written notification shall be submitted on the Interim Well Stimulation Treatment Notice form (~~1/14~~ 7/14 version), hereby incorporated by reference, and signed by an authorized representative of the operator with basis of knowledge of all of the information and certifications provided. The Interim Well Stimulation Treatment Notice form shall be submitted to the Division in an electronic format, directed to the email address "NoticeWST@conservation.ca.gov".

(b) Well stimulation treatment shall not commence unless the Division has reviewed the Interim Well Stimulation Treatment Notice form and approved the form as complete. As directed in Public Resources Code section 3161, the Division must allow, and will allow, well stimulation to proceed if the operator has provided all of the required information and certifications.

(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: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code.

1783.1. Contents of Interim Well Stimulation Treatment Notice.

(a) Written notification of a well stimulation treatment shall include the following information:

(1) Operator's name;

(2) Name and telephone number of person filing the form;
(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) API number assigned to the well by the Division;
(6) Name of the oil field;
(7) County in which the well is located;
(8) The time period during which the well stimulation treatment is planned to occur.
(9) For directionally drilled wells, the proposed coordinates (from surface location), the true vertical depth at total depth, and the wellbore path; and
(10) 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.
(11) Whether the Division has made a determination that the well subject to well stimulation treatment is a confidential well under Public Resources Code section 3234.
(b) Written notification of a well stimulation treatment shall include certification of all of the following:
(1) Attached to the notice is a complete list of the names, Chemical Abstract Service (CAS) 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, as required by Public Resources Code section 3160, subdivision (d)(1)(D). If a CAS number does not exist for a chemical constituent, another unique identifier has been provided, if available.
(2) Attached to the notice is a Water Management Plan that includes all of the information required by Public Resources Code section 3160, subdivision (d)(1)(C).
(3) Attached to the notice is a list of locations of existing wells, including plugged and abandoned wells, that may be impacted by the fractures or modifications, as required by Public Resources Code section 3160, subdivision (d)(1)(E).
(4) Attached to the notice is a Groundwater Monitoring Plan that meets the requirements of Section 1783.4.
(5) The operator has contracted with an independent entity to provide neighboring property owners and tenants with a copy of this notice and the attachments thereto, and with information about the availability of water ~~well~~ testing, as required by Public Resources Code section 3160, subdivision (d)(6). The well stimulation will not commence until 30 days after the required notice has been provided. If a notified property owner makes a timely, written request for water ~~well~~ sampling and testing, then the operator will pay for testing and sampling by one or more qualified independent third-party contractors designated by the State Water Resources Control Board, provided that the sampling and testing is consistent with the standards and protocols specified by the State Water Resources Control Board pursuant to Public Resources Code section 3160(d)(7)(B) and is conducted in accordance with Public Resources Code section 3160, subdivision (d)(7)(A). If a notified property owner makes a timely, written request for water ~~well~~ sampling and testing, then the well stimulation will not commence until requested baseline water ~~well~~ sampling and testing is complete.

(6) Within 60 days after the cessation of the well stimulation treatment, the above-named operator will make all public disclosures required by Public Resources Code section 3160, subdivisions (b) and (g), and pursuant to Section 1788.

(c) 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). Notwithstanding any claim of trade secret protection, the Division shall not approve as complete an Interim Well Stimulation Treatment Notice unless all of the information specified in Public Resources Code section 3160, subdivision (d)(1)(D), has been provided to the Division.

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code.

1783.2. Copy of Interim Well Stimulation Treatment Notice; Notice of Availability for Water Testing, Sampling; Request for Water Testing.

(a) At least 30 days in advance of commencing well stimulation treatment, the operator of the well subject to well stimulation treatment 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 Interim Well Stimulation Treatment Notice, approved as complete by the Division;

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

(3) Notice of the availability of water sampling and testing of any surface water located on the parcel that is suitable for drinking or irrigation purposes; and

(4) Information about how to request water sampling and testing, and notice that a request for water sampling and testing must be made within 20 days of receipt of the notification.

(b) A property owner notified pursuant to this section may request water quality sampling and testing on any water well located on the parcel that is suitable for drinking or irrigation purposes and on any surface water located on the parcel that is suitable for drinking or irrigation purposes, provided that the request is made in writing within 20 days of receipt of the notification. Upon receipt of a timely, written request for water quality sampling and testing, the operator shall pay for testing and sampling by one or more qualified independent third-party contractors designated by the State Water Resources Control Board, provided that the sampling and testing is consistent with the standards and protocols specified by the State Water Resources Control Board pursuant to Public Resources Code section 3160(d)(7)(B) and is conducted in accordance with Public Resources Code section 3160, subdivision (d)(7)(A).

(c) For the purposes of this section, “tenant” means a person or entity possessing the right to occupy a legally recognized parcel, or portion thereof.

(d) For the purposes of this section, “horizontal projection” means the surface representation of the horizontal path of the wellbore.

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, 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 completed Interim Well Stimulation Treatment Notice 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 Interim Well Stimulation Treatment Notice and the notification required.

(b) Any person or entity hired by the owner of a well to provide a copy of the Interim Well Stimulation Treatment Notice 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 completed Interim Well Stimulation Treatment Notice was provided, and the date on which the copy of the completed Interim Well Stimulation Treatment Notice 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, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code.

1783.4. Groundwater Sampling, Testing, and Monitoring.

(a) The purpose of this section is to provide interim model groundwater monitoring criteria for groundwater sampling, testing, and monitoring related to well stimulation that is conducted prior to the finalization of model groundwater monitoring criteria by the State Water Resources Control Board. These interim criteria do not apply to regional groundwater monitoring programs developed by the State Water Resources Control Board or the Regional Water Board.

(b) A well-specific (also referred to as "well-by-well") or area-specific (also referred to as "oil or gas field-specific") groundwater monitoring plan shall include all of the following:

(1) A map and cross section of the well borehole(s) to undergo well stimulation treatment, showing the well name(s), extent and orientation of the planned fracture network, the stratigraphic depths of protected waters, and the stratigraphic depths of low-permeability zones that will function to slow the migration of fluids towards protected waters or the surface.

(2) Complete well construction details for the well borehole(s) to undergo well stimulation treatment and all new and existing groundwater wells that will be used for monitoring.

(3) To the extent that information is publicly available, a map showing the location of all existing groundwater supply wells (public, private domestic, irrigation, and industrial) and groundwater monitoring wells within a 1500-foot radius of the well(s) to undergo well stimulation treatment, or within 500 feet of the surface representation of the horizontal path of the wellbore of any such well.

(4) A map showing location of any abandoned or inactive wells within a 1500-foot radius of the well(s) to undergo well stimulation treatment, or within 500 feet of the surface representation of the horizontal path of the wellbore of any such well.

(5) A map showing location of groundwater wells (new and existing monitoring wells and supply wells) to be sampled in the groundwater monitoring plan.

(6) A contingency plan for reporting information in the event of a well failure, or any other unintended event that has the potential to affect groundwater quality, such as the detection of a fracture beyond the intended zone or into protected waters. A "well failure" means instances where the well casing has been compromised producing a subsurface leak into water bearing zones and is a potential threat to groundwater quality. The contingency plan shall, at a minimum, require the well operator to submit the following information to the Division, the State Water Resources Control Board, and the appropriate Regional Water Board within 48 hours of discovery of a well failure or other unintended event that has the potential to affect groundwater quality:

(A) A description of the activities leading up to the well failure or unintended event;

(B) Depth interval(s) of the well failure or unintended event;

(C) Chemical composition of the well stimulation treatment fluid and of the fluid in the well at the time of the well failure, or unintended event; and

(D) An estimate of the volume of fluid lost during well failure, or unintended event.

(c) Well-specific and area-specific groundwater monitoring should be designed to assess whether protected waters have been impacted by well stimulation treatment. Groundwater wells to be used for groundwater monitoring should be located within reasonable proximity of the oil or gas well(s) undergoing stimulation treatment. Groundwater wells to be used for groundwater monitoring should be screened at depths in the aquifer where existing groundwater supply wells are screened. Additional groundwater wells to be used for groundwater monitoring should be screened near the base of protected waters. The number of new and existing groundwater wells to be used for groundwater monitoring, their locations, depths, screened intervals, and justification for their use shall be included in the groundwater monitoring plan. If any groundwater wells identified in accordance with subsection (b)(3) are not to be used for groundwater monitoring, a justification for their exclusion shall be included in the groundwater monitoring plan. The Division shall not approve as complete an Interim Well Stimulation Treatment Notice submitted on or after January 1, 2014 that asserts the absence of protected water as the basis for not conducting groundwater monitoring unless the submittal includes written concurrence by the Water Boards with the operator's determination of the absence of protected water.

(d) If new groundwater wells are used for well-specific or area-specific groundwater monitoring, they shall be constructed in accordance with any applicable local well ordinances. If there are no applicable local well ordinances, they shall be constructed in accordance with the California Well Standards contained in Department of Water

Resources Bulletin 74-81 (publicly available at http://www.water.ca.gov//pubs/groundwater/water_well_standards__bulletin_74-81_/ca_well_standards_bulletin74-81_1981.pdf), as supplemented by Department of Water Resources Bulletin 74-90 (publicly available at http://www.water.ca.gov/pubs/groundwater/water_well_standards__bulletin_74-90_/ca_well_standards_bulletin74-90_1991.pdf).

(e) For well-specific and area-specific groundwater monitoring, the operator should sample the groundwater monitoring wells frequently enough to detect changes in water quality. The operator shall sample the groundwater monitoring wells before well stimulation commences to establish a groundwater quality baseline and at least once within 60 days after the well stimulation is completed. The well operator shall sample the wells semiannually thereafter until the State Water Resources Control Board has developed its final groundwater monitoring model criteria.

(f) For all groundwater sampling, testing, and monitoring conducted pursuant to this Article, groundwater shall be measured for field parameters including pH, temperature, and electrical conductivity. For all groundwater sampling, testing, and monitoring conducted pursuant to this Article, groundwater samples shall be analyzed using current applicable EPA-approved analytical methods for water, if available, for all of the following: appropriate indicator compounds(s) for the well stimulation treatment fluid; total dissolved solids; metals listed in California Code of Regulations, title 22, section 66261.24, subdivision (a)(2)(A); benzene, toluene, ethylbenzene, and xylenes; total petroleum hydrocarbons for crude oil; polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene,benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene); radionuclides listed under California Code of Regulations, title 22, Table 64442; methane; major and minor cations (including sodium, potassium, magnesium, and calcium); major and minor anions (including nitrate, chloride, sulfate, alkalinity, and bromide); and trace elements (including lithium, strontium, and boron).

(g) For all groundwater sampling, testing, and monitoring conducted pursuant to this Article, groundwater sampling shall be done in accordance with all of the following:

(1) All groundwater sampling is to be performed by a qualified person. A qualified person is any person with the knowledge and training in proper sampling methods, chain of custody, and quality assurance/quality control protocols. Any person conducting groundwater sampling, other than personnel from an approved laboratory, shall consult with the laboratory to ensure that the sampler understands and follows the proper sampling collection procedures and protocols.

(2) All procedures to sample groundwater monitoring wells shall be consistent with U.S. Environmental Protection Agency (US EPA) Groundwater Sampling Guidelines for Superfund and RCRA Project Managers (May 2002) (publicly available at www.epa.gov/superfund/remedytech/tsp/download/gw_sampling_guide.pdf). All procedures to sample groundwater supply wells shall be consistent with US EPA Science and Ecosystem Support Division Operating Procedure for Groundwater Sampling (March 2013) (publicly available at www.epa.gov/region04/sesd/fbqstp/Groundwater-Sampling.pdf).

(3) All analytical testing shall be performed by a laboratory that is certified by the California Department of Public Health environmental laboratory accreditation program (ELAP).

(4) All groundwater monitoring data collected in accordance with a well-by-well or area-specific groundwater monitoring plan shall be compiled in groundwater monitoring reports, and submitted to the State Water Resources Control Board. Data collected prior to commencement of, and within 60 days of completion of, well stimulation treatment shall be submitted in a single groundwater monitoring report. Subsequent semiannual data should be submitted in semiannual groundwater monitoring reports. Groundwater monitoring reports shall include at a minimum:

(A) Site plan with locations of wells used for groundwater monitoring, and oil and gas wells.

(B) Table(s) of analytical results, with both recent and historical data in chronological order and tabulated by well number.

(C) Maps and/or cross-sections displaying groundwater analytical results.

(D) Well completion reports and associated lithologic information for sampled well(s).

(E) Description of field procedures, including well installation or selection, and groundwater sampling.

(F) Copies of analytical laboratory reports, including quality assurance/quality control procedures and analytical test methods.

(G) Changes, if any, to the scope of work, and rationale for the changes.

(H) Decontamination procedures.

(I) Waste management and disposal procedures, including associated documentation.

(5) All groundwater quality data and groundwater monitoring reports shall be submitted to the State Water Resources Control Board in an electronic format that follows the guidelines detailed in California Code of Regulations, title 23, division 3, chapter 30 (commencing with section 3890).

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code; Section 10783, Water 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 publicly disclose 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) For hydraulic fracturing well stimulation treatments, the operator shall post the information listed in subsection (a) to the Chemical Disclosure Registry, to the extent that the website is able to receive the information. ~~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 on the Well Stimulation Treatment Disclosure Reporting Form. For well stimulation treatments other than hydraulic fracturing,~~ In addition, the operator shall provide all of the information listed in subsection (a) directly to the Division on the Well Stimulation Treatment Disclosure Reporting Form. The Well Stimulation Treatment Disclosure Reporting Form is available on the Division's public internet website at ftp://ftp.consrv.ca.gov/pub/oil/forms/Oil%26Gas/OG110S.XLSX. The Well Stimulation Treatment Disclosure Reporting Form shall be submitted to the Division in an electronic format, directed to the email address "DisclosureWST@conservation.ca.gov".

(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 State Water Resources Control Board in an electronic format that follows the guidelines detailed in California Code of Regulations, title 23, chapter 30.

NOTE: Authority cited: Section 3013, 3160, and 3161, Public Resources Code. Reference: Section 3106, 3160, and 3161, Public Resources Code.

NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

INTERIM WELL STIMULATION TREATMENT NOTICE

1 Name of Operator	**2** Email address

3 Address	**4** City/ State	**5** Zip Code

6 Well	**7** API No.	**8** Field (and Area, if applicable)

9 County				**10** Directional Status:	**11** Type of treatment
12 Sec.	**13** T.	**14** R.	**15** B.&M.	☐ Directionally drilled ☐ Horizontally drilled ☐ Not directionally drilled ☐ Unknown	☐ Hydraulic Fracture ☐ Acid Matrix ☐ Other, type:

16 If the well is directionally or horizontally drilled, the proposed coordinates (from surface location), the true vertical depth at total depth, and the wellbore path shall all be provided as in an attachment to this notice.

17 Location of Well (Give surface location from property or section corner, street center line)

18 Lat./Long. in decimal degrees, to six decimal places, submitted in a non-projected (GCS) NAD 83 format:

Lat: Long:

19 Has the Division made a determination that the well subject to well stimulation treatment is a confidential well under Public Resources Code section 3234? ☐ Yes ☐ No

20 Time period during which the well stimulation treatment is planned to occur	**21** Planned location of the well stimulation treatment on the well bore Measured Depth: TVD:	**22** Name of stimulated horizon and depth
23 Estimated length of fractures or other planned modification	**24** Estimated height of fractures or other planned modification	**25** Estimated direction of fractures or other planned modification

26 Pursuant to Public Resources Code section 3161, subdivision (b)(1), I hereby certify that the above-named operator has or will comply with the requirements of Public Resources Code section 3160, subdivisions (b), (d)(1)(A)–(F), (d)(6), (d)(7), and (g), as demonstrated by the information reported in and attached to this notice and the following certifications:

☐ Attached to this notice is a complete list of the names, Chemical Abstract Service (CAS) 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, as required by Public Resources Code section 3160, subdivision (d)(1)(D). If a CAS number does not exist for a chemical constituent, another unique identifier has been provided, if available.

☐ Attached to this notice is a Water Management Plan that includes all of the information required by Public Resources Code section 3160, subdivision (d)(1)(C).

☐ Attached to this notice is a list of locations of existing wells, including plugged and abandoned wells, that may be impacted by the fractures or modifications, as required by Public Resources Code section 3160, subdivision (d)(1)(E).

☐ Attached to this notice is a Groundwater Monitoring Plan that meets the requirements of California Code of Regulations, title 14, section 1783.4.

☐ The above-named operator has contracted with an independent entity to provide neighboring property owners and tenants with a copy of this notice and the attachments thereto, and with information about the availability of water testing, as required by Public Resources Code section 3160, subdivision (d)(6). The well stimulation will not commence until 30 days after the required notice has been provided. If a notified property owner makes a timely, written request for water sampling and testing, then the operator will pay for testing and sampling by one or more qualified independent third-party contractors designated by the State Water Resources Control Board, provided that the sampling and testing is consistent with the standards and protocols specified by the State Water Resources Control Board pursuant to Public Resources Code section 3160(d)(7)(B) and is conducted in accordance with Public Resources Code section 3160, subdivision (d)(7)(A). If a notified property owner makes a timely, written request for water sampling and testing, then the well stimulation will not commence until requested baseline water testing is complete, as required by Public Resources Code section 3160, subdivision (d)(7).

☐ Within 60 days after the cessation of the well stimulation treatment, the above-named operator will make all public disclosures required by Public Resources Code section 3160, subdivisions (b) and (g), and pursuant to California Code of Regulations, title 14, section 1788.

27 Name of Person Filing Certification	**28** Telephone Number	**29** Signature	**30** Date
31 Address	**32** City/ State		**33** Zip Code

FOR DIVISION OF OIL, GAS, AND GEOTHRERMAL RESOURCES USE ONLY

Reviewed and approved as complete:

Name: _____

Signature: _____ Date: _____