



American
Petroleum
Institute

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Ms. Melissa Weitz
U.S. Environmental Protection Agency
Climate Change Division (6207A)
Office of Air and Radiation
1200 Pennsylvania Avenue, NW
Washington, DC 20460
GHGInventory@epa.gov

Re: API Comments on EPA's Updates under Consideration for the 2022 Inventory of
Greenhouse Gas (GHG) Emissions and Sinks

Dear Ms. Weitz,

The American Petroleum Institute (API) appreciates the opportunity to review and provide comments on the proposed updates the U.S. EPA is considering for estimating greenhouse gas (GHG) emissions for the 2022 GHG Inventory (GHGI). The current set of comments addresses the methodologies outlined in EPA's September 2021 technical memoranda on: (a) abandoned oil and gas wells; (b) post-meter emissions; (c) use of Gas Star and Methane Challenge reductions; (d) midstream activity data; and (e) emissions from anomalous well events.

API represents all segments of America's natural gas and oil industry. API was formed in 1919 as a standards-setting organization. In our first 100 years, API has developed more than 700 standards to enhance operational and environmental safety, efficiency, and sustainability. Our 600 members produce, process, and distribute most of the nation's energy. Most of our members will be directly impacted by the way emissions from their operations are depicted in the national GHGI.

API's aim is to make sure that the GHGI emission estimates used are based on the best and most current data available, reflect actual industry practices and activities, and are technically correct. To assist EPA in the endeavor API has participated in EPA's stakeholders' process and expert review phases of the GHGI development process, providing comments and recommendations on the agency's proposed methodologies. API appreciates the continued engagement with EPA through the multi-stakeholders process.

API's comments below are designed to provide feedback on the information the Agency is seeking from industry along with additional input to inform the proposed updated methodologies. For some of the updates under considerations API is providing supplemental information while for others API recommends that EPA reconsider the merit of adopting the proposed revised methodologies, at this time, without allowing additional time for obtaining information about relevant practices.

Updating Abandoned Wells methodology¹

- API commented previously on Abandoned Wells emissions when EPA introduced the update for the 2018 GHGI. API noted that the studies conducted so far have limited geographical coverage and may not be nationally representative. To clarify, EPA uses the “entire US” emission factors from the Townsend-Small study, which include the much higher Eastern US (Appalachian - Ohio) emission factors. They then use these same Eastern US factors from Townsend-Small coupled with emissions from Kang 2016 to develop EF’s for Appalachian basin abandoned wells. API recommends that EPA should use the lower “western US” emission factors for abandoned wells outside of the Appalachian basin.
- Additionally, the Townsend-Small Appalachia data are dominated by one well with emissions of 146 grams/hr that is about an order of magnitude higher than any other well, plugged or unplugged, in the Townsend-Small data. API contends that it is not appropriate to include this well in the emission factor for the entire US. Also, to date no emissions data are available from the state of Texas or many other major producing areas, calling into question the representativeness of the extrapolation of the results of the current studies to a nationwide estimate of the contribution of CH₄ emissions from Abandoned Wells to the GHGI.
- API requests from EPA a better explanation of how it estimated the number of 1.1 million historical abandoned wells, which are not captured in the Enverus database. Moreover, API maintains that EPA should not assume that all historical (pre-Enverus) wells are unplugged, without further supporting information. Looking at the restructured Enverus data at the end of 1975, which is the date EPA used to develop its estimate of historical (pre-Enverus) wells, indicates that 72% of the wells that would be classed as ‘abandoned’ by the criteria in Table 3 of the 2022 memo are shown as actually ‘plugged and abandoned’. Hence, EPA should not ignore the Enverus data in favor of unsupported assumptions.
- API contends that an alternative estimate of historically abandoned wells could be based on data for ‘undocumented orphan wells’ provided in the 2019 report issued by the Interstate Oil & Gas Compact Commission (IOGCC)². According to the IOGCC 2019 report the total estimated number of undocumented orphan wells reported by the states is between 210,000 and 746,000 (as shown in Table 1. *Total Idle and Orphan Wells: All Surveyed States and Provinces (2018)*).
- API also asks EPA to provide greater insight into the process of restructuring of the Enverus data set and the treatment of dry wells. API notes that the designation of “Dry Wells” in the Enverus database indicate a production type rather than a status type and EPA’s approach of considering all wells with no cumulative production as abandoned wells is likely leading to

¹ https://www.epa.gov/system/files/documents/2021-09/2022-ghgi-update-abandoned-wells_sept-2021.pdf

² IOGCC, 2019, Idle and Orphan Oil and Gas Wells: State and Provincial Regulatory Strategies; https://iogcc.ok.gov/sites/g/files/gmc836/f/documents/2021/2020_03_04_updated_idle_and_orphan_oil_and_gas_wells_report.pdf



double counting of dry wells in the abandoned well category since they are embedded in the well status counts. Furthermore, EPA's assumption that dry wells are unplugged is neither consistent with the Enverus data nor State plugging requirements. Current Enverus data shows that 93% of dry holes are plugged. Texas requires the same plugging standards for dry holes as for idle production wells and other State requirements are believed to be similar.

- Many of the largest producing states have regulations in place spelling out emissions, discharge or integrity requirements that must be met when a well is non-producing. API stipulates that the simple assignment of the 'unplugged' designation to all the status codes that are not 'Excluded' or 'Plugged and Abandoned' (P&A) overlooks the potential impacts of such regulations and is therefore inaccurate. Such regulations, even if not directly promulgated to control volatile emissions, have the potential for lower emission rates from wells that are subject to regulation when inactive. *See Appendix 1 for matrix of state requirements for inactive wells.* API is looking forward to engaging with EPA on the impact of existing regulatory requirements on emissions from abandoned and inactive wells.
- API's analysis of Enverus data does not validate the information in Table 3 of the 2022 Abandoned Wells Update Memo as representative of calendar year 2019. However, the counts in Table 3 are broadly similar to API's analysis of current date Enverus well counts. API requests that EPA should validate that their modified query of the Enverus database for 2019 counts is correct and provide this information to stakeholders in an updated Table 3 if changes are substantive.
- Moving forward API recommends that EPA should continue to use the Enverus production type field, where available, to classify wells into gas vs. oil and should also use the Enverus P&A status for determining what dry holes are unplugged. API further recommends that EPA should continue to use the cumulative production coupled with the well status and production type information to determine the count of dry wells.
- API is not aware of alternative, high quality, sources of data readily available to inform the count of abandoned wells or the split into plugged and unplugged categories

Post meter emissions³

- API acknowledges EPA's proposed intent to add estimates from post-meter residential, commercial, and industrial customer methane emissions as well as certain natural gas vehicle emissions in accordance with guidance provided in the 2019 Refinement to the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories for natural gas systems (IPCC 2019).
- API recognizes that while post-meter emissions will be part of the Natural Gas Systems chapter of the GHGI, it requests that the data be provided as its own "line item" within natural gas

³ https://www.epa.gov/system/files/documents/2021-09/2022-ghgi-update-post-meter_sept-2021.pdf

systems. It should not be included in the distribution segment, which ends at the customer meter.

- For residential post meter emissions, EPA intends to base its estimate on the Fischer et. al. (2018) report⁴, which measured CH₄ leak emissions from 75 homes that use natural gas in California. This study is used as the basis for the estimate provided in the CARB state GHG inventory. API observes that the limited regional nature of the 2018 data used for CARB's estimate is not sufficiently large to represent residential gas use and potential CH₄ emissions nation-wide. In the absence of better data API suggests that EPA consider a bifurcated approach that uses other available regional data, such as the Merrin and Francisco (2019), outside of California.

Use of GasStar and Methane Challenge reductions in GHGI⁵

- EPA is assessing the applicability of reductions reported under GasStar and the Methane Challenge voluntary programs for the accounting of emission reductions data to prevent double counting. API supports EPA's intent to remove the current time series of GasStar emission reductions and replace them with an updated series for the span of 1990-2019 for those sources for which 'potential to emit' methodology is still used in the GHGI estimates.
- API objects to EPA's proposal to revise the GasStar emission reductions dataset by applying sunset dates of 7 or 10 years for those emissions, rather than assume that the reductions are permanent. API members, who are also GasStar partners, contend that sunseting of the "reductions" in the GasStar program were not necessarily related to any lack of efficacy, or "decay", of the reduction or control measures put in place. Adoption of the sunset dates' methodology reflected the goal of the GasStar program to drive additional reductions overtime. Thus it was the credits offered in the programs that were retired, with no indications that the emission reductions ceased or that emissions increased.

Applying midstream activity data updates⁶

- EPA is considering using the Enverus Midstream and PHMSA data to update certain activity data. This would result in potentially significant changes to counts of processing plants, gathering and boosting compressor stations, gathering pipeline miles, and transmission pipeline miles, with a smaller change to the count of transmission compressor stations.
- API support the continued use of current sources of activity data previously used in the GHGI which relied on data reported through the GHG Reporting Program (GHGRP) and other

⁴ Marc L. Fischer, Wanyu R. Chan, Woody Delp, Seongeun Jeong, Vi Rapp, Zhimin Zhu. An Estimate of Natural Gas, Methane Emissions from California Homes. Environmental Science & Technology 2018, 52 (17), 10205–10213; <https://pubs.acs.org/doi/10.1021/acs.est.8b03217>

⁵ https://www.epa.gov/system/files/documents/2021-09/2022-ghgi-update-gas-starmc_sept-2021.pdf

⁶ https://www.epa.gov/system/files/documents/2021-09/2022-ghgi-update-activity-data_sept-2021.pdf



regulatory programs. API does not support moving to the Enverus database without further review and explanation on how the database was developed.

- The current activity data in the GHGI has been developed from regulatory data ensuring alignment of, and achieving consistency with, reported industry data. For example, GHGI 2019 data accounts for 667 natural gas processing plants and represents about a 25% higher count than that available from the EIA 757 survey (479 in EIA, 2017)⁷, or the 449 facilities that reported to GHGRP in 2019. This difference may be explained by the regulatory thresholds for the reporting facilities. To compare, the Enverus Midstream database indicates that there are more than double natural gas processing plants (1021 - see Table 6 of EPA September 2021 memo). API is concerned that such a large discrepancy indicates that there might be double-counting of processing plants, which may call into question the reliability of the entirety of Enverus Midstream data.
- API has previously supported the use of PHMSA data for midstream activities and continues to support the use of PHMSA for storage well counts. API affirms that using the PHMSA data uses actual counts versus the current GHGI estimation.

Anomalous Events including Well Blowout and Well Release Emissions⁸

- EPA is considering expanding the estimation of anomalous events from just onshore oil well blowouts to including onshore oil and gas well blowouts and releases. EPA intends to use the existing emission factor and TX RRC extrapolated activity data to estimate blowouts and releases.
- API is concerned over the use of a single emission factor for both oil and gas wells, as well as representing both blowouts and releases. API is seeking more information (with a specific citation) to the “Industry Review Panel” that originally proposed the 2.5 mmcf/event emission factor. API calls on EPA to more precisely distinguish between a well blowout and a well release and explain what the existing distinction is.
- API requests that EPA clarify whether there is a possibility of developing emission factors that are based on the length of the blowout rather than the events count, and further consider whether the TX RRC database can be leveraged to link the activity factor to a set of scaled emission factors, i.e., based on those same qualitative measures by which EPA was able to consider the relative frequencies of blowouts and releases.
- Though API has requested more information regarding the 2.5 mmcf/event EF, API recommends that moving forward for now, EPA continue to apply the current EF (2.5 mmcf/event) to onshore oil well blowouts only. API does not support expanding the use of the current EF to either oil well releases or to natural gas well blowouts and releases without getting

⁷ <https://www.eia.gov/naturalgas/ngqs/#?report=RP9&year1=2017&year2=2017&company=Name>

⁸ https://www.epa.gov/system/files/documents/2021-10/2022-ghgi-update-well_blowouts_releases.pdf



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more information, better leveraging TX RRC database, or scaling EFs based on event and well types.

- API supports using measured emissions data or engineering estimates for unique major anomalous leak events when they occur. Such major events need to be evaluated on a case-by-case basis, per IPCC guidelines⁹.

API welcomes EPA's willingness to work with industry to improve the data used for the national inventory. API encourages EPA to continue these collaborative discussions including making progress in addressing the new data collected by the API field study on Pneumatic Controllers emissions.¹⁰ As indicated before, API is available to work with EPA to make best use of the information available under the GHGRP, or other appropriate sources of information/data, to improve the national greenhouse gas emission inventory. To that end we await hearing about the agency's next steps with regard to incorporating revisions to the GHGRP.

Sincerely,

A handwritten signature in blue ink that reads "Marcus J. Koblitz".

Marcus Koblitz

Policy Advisor, Climate & ESG Policy

Corporate Policy

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cc. Mark DeFigueiredo, DeFigueiredo.Mark@epa.gov

Attach: Appendix 1. Matrix of State and Federal Well Abandonment Programs

⁹ 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, 4.2.2.3 CHOICE OF EMISSION FACTOR1 B 2 a vi Other

¹⁰ API, *Pneumatic Controller Inventory and Measurement at 67 Oil and Gas Sites in the Western United States*, March 2020 (submitted to EPA by memorandum on July 2, 2020)

Appendix 1. Matrix of State and Federal Well Abandonment Programs

State	Terminology	Non-Producing Period Allowed With Approval	Non-Producing Period Allowed Without Approval	Testing Requirements	Well Abandonment Approach	TA Requirements	Inactive Status
California	<p>Idled Well - any well that for a period of 24 consecutive months has not either produced oil or natural gas, produced water to be used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. An idle well continues to be an idle well until it has been properly abandoned in accordance with Public Resources Code section 3208 or it has been shown to the Division's satisfaction that, since the well became an idle well, the well has for a continuous six-month period either maintained production of oil or natural gas, maintained production of water used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. An idle well does not include an active observation well.</p> <p>Long-term Idle - any well that has been an idle well for 8 or more years</p>	Approval is not required	<p>After 3 years annual idle well fees are assessed in an amount that increases with time. Idle wells must be tested; if a test fails, the well must be plugged.</p>	<p>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 operator shall repeat testing at least once every 24 months for as long as the well is an idle well, unless the operator demonstrates that the wellbore does not penetrate a USDW, in which case fluid-level testing under this section is not required.</p>			
Colorado	<p>Shut-in - a well capable of producing by opening valves, activating existing equipment or supplying a power source. Mechanical Integrity Tests (MITs) on these wells must be performed within two years of the date they become shut-in. If a well passes this test, mechanical integrity tests must be performed on the well on a five year interval, but if a well fails this test, the operator must repair or plug and abandon the well within six months of the date of the test, assuming the test is run within two years</p> <p>Inactive - any shut-in well from which no production has been sold for a period of 1 year; any well which has been temporarily abandoned for a period of 6 consecutive months; or, any injection well which has not been utilized for a period of 1 year</p> <p>Suspended operations - a well in which drilling operations have been suspended prior to reaching total depth and at least one casing string (the surface casing) has been set and cemented in the wellbore.</p> <p>Temporarily Abandoned - a well that (1) has all its downhole completed intervals plugged above the highest perforation in a way that prevents the well from producing without removing a plug or (2) is unable to produce without additional equipment. Within 30 days of when a well becomes temporarily abandoned, a mechanical integrity test must be performed on the well. If a well passes this test, the well may be temporarily abandoned for not more than six months, provided the hole is cased or left in a manner that prevents the migration of oil, gas, water, or other substance from the formation or horizon in which it originally occurred. If a well fails this test, however, the operator must repair or plug and abandon the well within six months of the date of the test. Still, an operator may request temporary abandonment status for longer than six months by explaining the reason for such extension and providing plans for future operations.</p> <p>Waiting on completion - a well which has been drilled, cased, and cemented but the objective hydrocarbon formation has not been completed or stimulated using an open-hole, a liner, or a perforated casing completion</p>	<p>Temporarily Abandoned - up to 6 months with successful MIT; requires additional justification (future beneficial use) for TA status beyond 6 months;</p> <p>Shut-in Well, Suspended Operations Well, Waiting on Completion Well - 5 years from the date of successful MIT</p>	<p>Temporarily Abandoned - within 30 days an MIT is required;</p> <p>Shut-in Well, Suspended Operations Well, Waiting on Completion Well - 2 years before MIT requirement</p>	<p>Shut-in well: MIT must be performed within 2 years of being shut in, then in 5-year increments</p> <p>Temporarily Abandoned - within 30 days an MIT is required;</p>	<p>Inactive Well - inactive wells potentially subject operators to additional bonding requirements. Rule 707 requires a \$10k bond for each excess inactive well less than 3k feet deep, and a \$20k bond to reach excess inactive well equal to or more than 3k feet deep. An operator has "excess" wells if their current plugging bond is less than the amount of necessary to individually bond each of their inactive wells.</p> <p>Temporarily Abandoned - within 30 days an MIT is required; TA status is allowed up to 6 months with successful MIT; requires additional justification (future beneficial use) for TA status beyond 6 months; MIT test required every 5 years if TA status extension granted</p> <p>Shut-in Well, Suspended Operations Well, Waiting on Completion Well - 2 years before MIT requirement; if successful MIT the well can remain in current status with successful MIT tests every 5 years</p>		
Federal	<p>Idled Well - Any well that has been nonoperational for at least 7 years AND has no anticipated beneficial use (42 USC 15907)</p> <p>Nonoperational Well - all shut-in and temporarily abandoned wells</p> <p>Shut-in Well - a nonoperational well that can still physically and mechanically operate without additional equipment with the turn of a switch (injection wells, water supply wells, disposal wells, and wells capable of producing paying quantities); no notification required from operator prior to shutting in, but BLM will require an MIT for a well in SI-status for 3+ years (BLM IM 2020-006)</p> <p>Temporarily Abandoned Wells - a nonoperational well that is not physically or mechanically capable of producing oil/gas or injection; No well may be TA'd for more than 30 days without prior approval from AO. (43 CFR 3162.3-4) AO may authorize additional delays to P&A, each up to 12-month; prior to delay-approval the operator must have conducted a MIT within previous 3 years</p>	If the idled well is TA status, then 12 month approvals. If SI status, then no period-approval but may require MIT test	<p>If there is anticipated beneficial use, BLM needs to ensure the timely completion of steps to return the well to operation. If there is no anticipated beneficial use, BLM needs to ensure the timely P&A of the well. (IM 2020-006)</p>		<p>Idle Well Review - Each BLM FO reviews 20% of the idled wells in their jurisdiction annually. BLM FO determines whether a well continues to have beneficial use. If not, BLM needs to ensure timely P&A. If yes, BLM needs to ensure operator timely completes necessary steps to return the well to operation. Justification for future beneficial use requires a determination that the well can benefit the oil and gas lease. Potential beneficial use determinations include: a well capable of production in paying quantities; a service well for water disposal; a water supply well for on-lease completions; an injection well for enhanced recovery; or a monitoring well needed for on-lease activity</p>		
Idaho	<p>Inactive Well - a well that has remained idled for 2 years</p>	3 years; may be renewed	2 years		<p>The operator must be notified within 6 months of being notified by Idaho unless the operator provides a written request to extend inactive status, an individual bond if the well was covered by a blanket bond, and a description of how the well is closed to the atmosphere. The aforementioned extension shall not exceed 3 years and a MIT shall be performed within 2 years after the date of last use.</p>		
Montana	None	Not defined; approved on case-by-case basis	1 year after a well is no longer useful for its intended purpose				

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New Mexico	<p>Inactive Well - a well that is not being used for beneficial purposes such as production, injection or monitoring and that is not being drilled, completed, repaired or worked over. An operator can have a maximum of 5-10 inactive wells dependent on well count</p> <p>Temporarily Abandoned Well - a well that has the perforations plugged off and has demonstrated MI as confirmed by OCD</p> <p>Shut-in Well - a production or an injection well that is temporarily closed, whether by closing a valve or disconnection or other physical means</p>	<p>Temporarily Abandoned Well - up to 10 years with a renewal at the 5 year mark. Well can be TA'd past 10 years if the operator can show future utility and the expected timeframe to RTP/RTI/PA</p>	<p>Production wells: one year plus 90 days. Disposal wells: one year. Injection wells: associated EOR project inactive for one year.</p>			<p>The division shall not approve a permit for approved temporary abandonment until the operator furnishes evidence demonstrating that the well's casing and cementing are mechanically and physically sound and in such condition as to prevent:</p> <ol style="list-style-type: none"> 1. damage to the producing zone; 2. migration of hydrocarbons or water; 3. the contamination of fresh water or other natural resources; and 4. the leakage of a substance at the surface <p>The operator shall also demonstrate both internal and external mechanical integrity 19.15.25.13 NMAC</p>	
North Dakota	<p>Inactive Well - a well that has submitted no production report or has had no production in over 3 months</p> <p>Abandoned Well - upon the removal of production equipment or the failure to produce oil or gas (or failure to inject) for 1 year</p> <p>Not Completed Well - a well drilled to too depth but not completed for 12 months</p> <p>Temporary Abandoned Well - wellbore isolated from target formation, with MIT</p>	<p>1 year before considered abandoned; For TA wells: MIT every five years. Pressure test, bond log, pressure gauges for "not completed." NDIC has option to put abandoned wells on a single well bond."</p>	<p>1 year</p>		<p>Abandoned Well - a well with abandoned-well status must be promptly returned to production in paying quantities, approved by the commission for temporarily abandoned status, or plugged and reclaimed within six months. If none of the three preceding conditions are met, the industrial commission may require the well to be placed immediately on a single-well bond in an amount equal to the cost of plugging the well and reclaiming the well site. North Dakota Century Code § 38-08-04(12)</p> <p>Temporarily Abandoned Well - The director may waive for one year the requirement to plug and reclaim an abandoned well by giving the well temporarily abandoned status. This status may only be given to wells that are to be used for purposes related to the production of oil and gas and its perforations must be isolated, the integrity of its casing must be proven, and its casing must be sealed at the surface, all in a manner approved by the director. The director may extend a well's temporarily abandoned status and each extension may be approved for up to one year. North Dakota Administrative Code § 43-02-03-55(2)</p>	<p>If a well is given temporarily abandoned status, the well's perforations must be isolated, the integrity of its casing must be proven, and its casing must be sealed at the surface, all in a manner approved by the director. NDAC 43-02-03-55</p>	
Oklahoma	<p>Shut in, temporarily abandoned, or inactive.</p>	<p>Compliance with regulations. Minimum surety of \$25,000.00, which can be increased.</p>	<p>Gas: indefinite. Oil: one year. Injection/disposal: one year for commercial, up to five years for non-commercial.</p>				

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Pennsylvania							<p>CONVENTIONAL WELLS § 78.102. Criteria for approval of inactive status. To obtain inactive status, the applicant shall affirmatively demonstrate to the Department's satisfaction that:</p> <p>(1) The condition of the well is sufficient to:</p> <p>(i) Prevent damage to the producing zone or contamination of fresh water or other natural resources or surface leakage of substances.</p> <p>(ii) Stop the vertical flow of fluid or gas within the well bore.</p> <p>(iii) Protect fresh groundwater.</p> <p>(iv) Pose no threat to the health and safety of persons, property or the environment.</p>
Texas	<p>Inactive Well - an unplugged well that has been spudded or equipped with cemented casing and that has no reported production, disposal, injection, or other permitted activity for a period of greater than 1 year (16 Tex. Admin. Code 3.15); plugging operations on each dry or inactive well shall be commenced within 1 year after drilling or operations ceases, unless a plugging extension is granted</p>	1 year	Indefinitely, but must be renewed annually		<p>Within 1 year of the well becoming inactive the operator must P&A or request a plugging extension. To receive a plugging extension an operator must choose 1:</p> <p>Blanket (Operator-Level) Options: operator must P&A or restore 10% of its inactive wells, or increase the operator's blanket bond to P&A liability of all inactive wells or \$2M</p> <p>Individual (Well-Level) Options: file an abeyance of plugging report, or a statement that the well is part of a Commission-approved EOR project, or that an approved fluid level or hydraulic pressure test has been performed, or additional financial security in the amount of the P&A liability, or an escrow fund deposit of no less than 10% of the P&A liability</p>		
Utah	<p>Shut-in Well - well that is completed, capable of production in paying quantities, and is not being operated</p> <p>Temporarily Abandoned - well that is completed, not capable of production in paying quantities, and not being operated</p>	Up to 5 years Operator must provide reasons for shut-in or TA, length of time, data showing the well has integrity, and bond in amount of actual plugging and restoration costs.	1 year		<p>If a well is to be shut-in or temporarily abandoned for a period exceeding 1 year, the operator shall file a Sundry Notice providing the following information:</p> <ol style="list-style-type: none"> 1. Reasons for SI or TA of the well, 2. The length of time the well is expected to be SI or TA'd, and 3. An explanation and supporting data, for showing the well has integrity. <p>After review the Division will either approve the continued shut-in or temporarily abandoned status or require remedial action to be taken to establish and maintain the well's integrity. After five (5) years of nonactivity or nonproductivity, the well shall be plugged</p>		

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Wyoming	<p><u>Shut-in well</u> - a well not currently considered active in which the completion interval has not been isolated from the wellbore and the wellbore condition is such that its utility may be restored by opening valves or by energizing equipment.</p> <p><u>Temporarily Abandoned Well</u> - a well in which the completion interval has been isolated from the wellbore and the surface with a bridge plug, cement plug or with packer plus tubing plug.</p> <p><u>Idle well</u> - a well that has been either shut in or TA'd for 1 year.</p>	Indefinite with annual reviews and Supervisor extensions	<u>Shut-in Well</u> - requires a Notice of Intent (NOI) sundry be submitted if the well has not produced or injected in 30 consecutive days.		<p><u>Idle Wells</u> - WOGCC schedules operator idle well reviews annually to determine the likelihood of future use, determine MIT requirements and calculate the bond amount. All idle wells are bonded at \$10/ft and evaluated annually to determine required bond amount based on total footage throughout the state. MIT is required every five years for injection wells and based on time a well is TA'd or SI may require MIT on producers as well.</p> <p><u>Temporarily Abandoned Wells</u> - require a Notice of Intent (NOI) sundry be submitted for approval of the procedure and estimated time of TA. An additional sundry will be required to bring the well back online and to determine if an MIT will be required. WOGCC Supervisor may require an operator to plug and abandon any well TA'd for 24 consecutive months.</p>		