



INFORMATION BULLETIN

## **BU-054**

Eff: 00-01-2020 Rev: 00-00-0000

### **Construction in the Vicinity of Oil/Gas Wells**

This Bulletin is developed to clarify requirements related to the construction of buildings and structures in the vicinity of oil/gas wells (well) in accordance with the Long Beach Municipal Code (LBMC) Chapter 18.78, also known as the “City Equivalency Standards”.

Permit Applicants (Applicants) are advised early on to review the LBMC Chapter 18.78 and this Bulletin for plan check, inspection, and other technical provisions of construction in the vicinity of a well. Different procedures will be applicable based on well status categories as set forth below:

**Well status can be categorized as:** active, idle (inactive), abandoned without any previous California Geologic Energy Management Division (CALGEM) approval, abandoned to previous CALGEM standards, or abandoned to current CALGEM standards.

Generally, five (5) conditions define any building construction in the vicinity of a well:

**Condition 1.** Well is located three hundred (300) feet or more away from the proposed building or structure. In such a case the building or structure is not subject to the requirements of Chapter 18.78.

**Condition 2.** Well is within three hundred (300) feet from the proposed building or structure - Active and Idle wells shall meet Building and Fire Code requirements, while other well categories (as mentioned above) only require Building Code compliance.

**Condition 2A.** Well is in close proximity to the building or structure - The well meets the CALGEM access/separation distance (10’x10’x50’) from the building and meets the current CALGEM abandonment standards. In such a case, the building or structure is not subject to the requirements of Chapter 18.78.

**Condition 2B.** Well is in close proximity to the building or structure – The well meets the CALGEM access/separation distance from the building and meets the previous CALGEM abandonment standards. In such a case, if the well meets the standards set forth in LBMC Chapter 18.78 it does not have to be re-abandoned to current CALGEM standards.

**Condition 2C.** Well is in close proximity to the building or structure – The well does not meet the CALGEM access/separation distances from the building or meet either CALGEM current standards or the LBMC Chapter 18.78 standards. In such a case, the structure cannot be permitted for construction.

Construction in the vicinity of oil/gas wells may require mitigation of soil methane gas, should the site soil methane testing indicate certain thresholds as set forth in LBMC Chapter 18.79 and the associated Information Bulletin (BU-055).

**Process to obtain grading/building permit to construct in the vicinity of a well:**

Applicants shall follow the following steps to achieve timely approval of projects through different stages of project approval:

**Project Entitlement Phase:**

- Applicants are encouraged to check the City's oil/gas well GIS map ([Link](#)) and exercise due diligence to locate wells on the site, prior to the start of site design. Many wells are buried underground or may not be exactly where they are shown on the City's GIS map, a rough grading permit may be required to locate any wells on the site.
- The Applicant shall report to CALGEM exact coordinates of the well, should the well location be any different than what it is indicated on the GIS map. The actual location of well shall be shown on the site plan signed by a Qualified Professional. Proper site design will have a major impact on plan approval by the City and affect the construction cost.
- Applicants should submit a Construction Site Well Review (CSWR) request to CALGEM to obtain a well abandonment status report. Applicants are encouraged to start this process as early as possible since the process can be lengthy. CALGEM well status reports must be current within 12 months of formal project plan check submittal to the City. The report will address whether the well is abandoned to the current CALGEM standards or not.

**Prior to Plan Review Submittal:**

- Applicant should submit the well status letter issued by CALGEM to the City Development Coordinator for review and consideration.
- Projects that meet CALGEM well current abandonment standards status can submit to plan check
- Projects that do not meet CALGEM well current abandonment standards can submit for the City Well Abandonment Equivalency Standards (LBMC Chapter 18.78). A Qualified Professional Engineer (Petroleum Engineer) can submit an alternate well abandonment process to the City through an Alternate Materials, Design and Methods of Construction and Equipment request for the City's consideration. The following procedures will be applicable:
  - City has established a team of Peer Review consultants to assist with the evaluation of well downhole conditions. Applicants are required to pay for the cost of the peer review services through the City. The fee will be one hundred and fifteen percent (115%) of the Peer Review consultant fee.
  - The City Development Coordinator will solicit proposals from the Peer Review consultants based on the proposed oil well status report and supporting documents provided by the Applicant. The Development Coordinator will make recommendations on the most responsive Peer Review consultant to the Applicant.
  - Applicant pays the Peer Review fee and receives a BFFS project number from the City.

- The City Building Official will issue a Notice to Proceed to the selected Peer Review consultant to review the well abandonment conditions in accordance with LBMC Chapter 18.78.
- Peer Review consultant completes the review and prepares a report of findings and mitigation recommendations for each well for consideration by the Development Coordinator.
- After review and discussion with the Peer Review consultant, the Development Coordinator will provide the report to Applicant
- Applicant will review, and an agreement will be reached to abandon the wells per the Peer Review consultant recommendation, and conditions will be finalized through approval of a formal Alternate Materials, Design and Methods of Construction and Equipment Process.
- Applicant will pay for the well head methane testing, and for the City staff observing the testing.
- Applicant will submit the well leak test results to the Development Coordinator together with the Peer Review Consultant evaluation to the Development Coordinator.
- Upon completion of all necessary mitigation and satisfactory well abandonment including well down hole, the Development Coordinator will close the well abandonment file by sending it to archive, grading or building or grading permit is issued, and final payment to the Peer Review consultant is authorized.

**Plan Review Submittal Phase:**

Applicant shall submit the project grading/building plans and the supportive documents to plan check and include the peer review recommendation letter on the plans.

- Plans will be routed to Building plan check and Development Coordinator designees. Projects with active or idle wells, within three hundred (300) feet of a well, or with a methane gas mitigation system level II and III (per LBMC Chapter 18.79) will be routed to the Fire Department for review.
- Plan Check and Development Coordinator designees will review the project for compliance with the applicable City requirements including LBMC Chapters 18.78 and 18.79. Development Coordinator Designees will verify conditions in the field and review the above well head plans in accordance with the City prescriptive standard plans (Attachment 1).
- Unless exempted per LBMC Chapter 18.79, an approved testing company hired by the Applicant shall conduct site soil methane testing in accordance with LBMC Chapter 18.79 and submit the results for City review. Plan review staff will scan the test results and attach them to the permit in IPS. Based on levels of methane detected, methane gas mitigation may be required.
- Development Coordinator Designees will review the test results and project plans for consistency with LBMC Chapter 18.78, and the code modification for the well abandonment procedures, if Peer Review is required, the result of Approved Alternate Materials, Design and Methods of Construction and Equipment shall be incorporated into the plans.

- Applicant shall submit a recorded well abandonment indemnification affidavit to Plan Check prior to approval of a grading or building permit, whichever occurs first. After approval of the indemnification affidavit (Attachment 2) by the City Attorney, the indemnification will be scanned and attached to the project in IPS.

**Project Construction/Inspection Phase:**

- Applicant will pay for the vent cone inspection in conjunction with LBMC 18.78
- A pre-construction meeting shall be held on the site to by Applicant to discuss grading, building, and any well abandonment procedures with the Development Coordinator designee.
- The Development Coordinator Designee will oversee any well abandonment procedure, in conjunction with the Applicants Qualified Professional. At completion of abandonment the Qualified Professional will submit a letter certifying the well abandonment prior to final well leak testing. The Development Coordinator designee will attach the certification to the permit in IPS.
- Applicant will inform CALGEM and receive CALGEM inspection prior to project final grading/building approval by the City.
- The Development Coordinator Designee will conduct the well head inspection, including capping and vent cone requirements upon receiving an inspection request from the Applicant.
- Applicant shall submit a recorded Covenant (Attachment 3) on the property to the City inspector prior to final grading or building inspection, as applicable. After approval of the Covenant by the City Attorney, the inspector will attach the covenant to the project in IPS.
- Applicant will install any methane mitigation measures when required per LBMC Chapter 18.79. Building inspector will inspect all necessary methane mitigation.
- Upon well abandonment meeting the LBMC Chapter 18.78 requirements, the Building Official issues, a Notice of Well Abandonment Completion (Attachment 4) and project building or structure receives final inspection.

**Project Post Construction Phase:**

- Project owner shall be responsible for well and methane gas mitigations on the site, including but not limited to maintenance, monitoring, and reporting of any well related activities to CALGEM and the City.

**Testing, Design, and other technical provisions of Construction in the Vicinity of Oil/Gas Wells:**

Leak test request - (Referenced in LBMC Section 18.78.110)

A leak test request shall be submitted to Development Coordinator setting forth the following:

Well Name, API Number, Location (northing, easting), Equipment to be used in leak testing, Firm name, qualifications, certification and/or license information to perform leak testing, and Signature of Applicant.

Leak testing requirements – (Referenced in LBMC Section 18.78.120)

- Examination. Abandoned wells shall be tested for gas leakage and visually inspected for oil leakage.
- Detector. A leak test shall be completed utilizing a portable gas detector approved in advance by the Development Coordinator and submitted under the oversight of the Qualified Professional. A portable gas detector calibration form shall be provided to the Development Coordinator for inclusion in the leak test observation report
- Leaking Well. A well shall be considered leaking if the meter reading is greater than five hundred (500) parts per million (ppm) as observed by the Development Coordinator and/or the CALGEM representative. If wells are found to be leaking, there shall be a diligent attempt to abandon the wells to current CALGEM well abandonment standards. If the meter reading is between fifty (50) and five hundred (500) parts per million (ppm), the Development Coordinator shall review the test results with the well exhibit and may require structure offsets and/or a higher-level of methane mitigation design in accordance with LBMC Chapter 18.79
- Metal top plate. Following a successful leak test, a metal top plate shall be immediately welded by a licensed welder in the presence of the Development Coordinator and/or CALGEM representative (per CALGEM requirements)
- Site Restoration. Following all testing and inspection, the test area shall be returned to its previous state and fencing may be required around the area or the entire site, in accordance with Title 14, Division 2, Chapter 4, Subchapter 3, Article 3, Section 1775 of the California Code of Regulations;
- Vent Risers and Vent Cones. Vent risers and vent cones shall be installed in accordance with the requirements specified below prior to completing of any site grading activities
- Inspections
  - Inspections shall be performed by the Development Coordinator during leak testing, metal plate welding, and vent cone installation and completion
  - Inspections must be scheduled at least two (2) business days in advance
  - Cone and riser installation shall be observed and inspected by the Development Coordinator
  - Observation Report. The Development Coordinator will review the leak test observation report documenting the date, time, and summary of the testing as certified by the Qualified Professional.

Site clean-up - (Referenced in LBMC 18.78.130)

Any potential site cleanup shall be under the direction of City of Long Beach Health Officer or designee, and grading and compaction around the well head shall be per the grading permit requirements of the City.

### Vent cone - (Referenced in LBMC Section 18.78.140)

Well vent cones are designed to accumulate potential hazardous and explosive gasses that travel through well casings to the ground surface and vent them to an approved location

**Design** - Vent cones shall be of a type and design approved by Development Coordinator. The design and installation shall be in conformance with applicable codes, such as the current adopted edition of the California Building Code, Mechanical Code, Plumbing Code, and any additional City standards. Any design not in conformance with this specification shall be approved, stamped, and signed by a Qualified Professional Engineer licensed in the State of California

**Size** - The vent cone shall be a minimum four (4) foot in diameter extending a minimum of two (2) feet above the abandoned well cap and backfilled with three quarter (3/4) inches of gravel.

### Horizontal pipes – (Referenced in LBMC Section 18.78.150)

Horizontal piping may be necessary to route the vent riser to an appropriate location outside of a building footprint or away from hazardous aboveground locations

- **Standards.** Horizontal vent piping shall conform to the following requirements:
  - Horizontal piping connecting the vent cone to the vent riser shall be non-perforated and sloped one percent (1%) down towards the vent cone to provide for drainage and clean-out of pipe
  - The pipe shall be placed in a sanded trench with a minimum cover of two (2) feet. These horizontal runs shall be provided with a fourteen (14)-gauge solid strand, yellow insulated utility locator wire installed directly above the well-vent pipe
  - Proposed construction materials for horizontal pipes shall be submitted to the City in the Mitigation Plan for review.

### Vent risers – (referenced in LBMC Section 18.78.160)

- **Design.** Vent risers can stand alone or be integrated into the proposed design
- **Standards.** Vent riser pipes shall comply with the following requirements:
  - Vent riser pipe shall have a minimum diameter of two (2) inches
  - The point of gas emission of flag pole vents shall be located at the very top of the pole, which shall be provided with a screened rain guard
- The flag pole vents shall be positioned as below:
  - Ten (10) ft above grade
  - A minimum of one (1) foot above a roof line
  - Ten (10) ft away and three (3) feet above any fresh air intake or opening into a building
  - Three (3) ft away from the property line

- Flag pole vents shall be clearly and permanently marked/labeled with the words: “Caution methane gas in pipe. No smoking or sparks within twenty (20) feet. If damaged immediately notify the Fire Dept. – Dial 911
- Flag pole vents shall be fitted with a one (1) inch sampling port, located between two (2) to four (4) feet above grade, near the base of the pole. The sampling port must be labeled with a permanent sign with the words: “CAUTION METHANE GAS TEST PORT;”
- Whenever abandoned well casings must be vented to a structure, such venting shall comply with the most current requirements of methane gas mitigation (i.e., electrical classifications, vent spacing, outlet spacing, etc.)
- Abandoned well casings that are vented to structures shall not be vented in any way that penetrate the building’s “structural envelope”
- Abandoned well casings that are vented to structures shall have the vent pipes securely attached to the outside of an exterior wall
- Whenever abandoned well casings must be vented within a structure, detailed plans of the proposed venting system shall be submitted to the City, together with a justification for the venting, for review and approval by the Development Coordinator, prior to any building permits being issued
- If necessary, for aesthetic purposes, the vent pipe may be located in an “exterior vent riser chase,” which must be designed by a Qualified Professional Engineer
- The vent pipe may also be attached to self-supporting satellite structures such as light standards, signage, or patios
- Well vents shall be leak tested in accordance with Section 712 of the California Plumbing Code.

## Attachment 1

**Standard – Details**

<b>FIGURE</b>	<b>TITLE</b>
#1	Well Vent
#2	Oil Well Vent Riser
#3	Oil Well Vent Riser to Light Standards
#4	Oil Vent Sign



Attachment 2

**Indemnification for Construction in the Vicinity of Abandoned Oil Wells**

Attachment 3

**Covenant and Agreement**

Attachment 4

**Notice of Well Abandonment Completion**

Date:

[Addressee]

[Title]

[Organization]

[Address]

[City, State Zip]

**Well Name:**

**Well APN Number:**

**Location:**

**Permit Number: BFFS...**

Dear [Salutation]:

This compliance letter (Final Notice) has been issued as an indication that the well referenced above meets the City of Long Beach "Well Abandonment Equivalency Standards" as established by Long Beach Municipal Code (LBMC) Chapter 18.78. The City Equivalency Standards also mandate that the project developer/owner will be ultimately responsible for all liabilities arising from the well after the abandonment.

If you have questions regarding this matter, please contact the City of Long Beach Building Official at (562) 570-7713.

Sincerely,

David Khorram, P.E., C.B.O., C.G.B.P.  
Superintendent of Building and Safety

DK:KQ

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CC: Oscar Orci, Director of Development Services  
Project File

To request this information in an alternative format or to request a reasonable accommodation, please contact the Development Services Department at [longbeach.gov/lbds](http://longbeach.gov/lbds) and 562.570.3807. A minimum of three business days is requested to ensure availability; attempts will be made to accommodate requests with shorter notice.