

ORDINANCE NO.

AN ORDINANCE OF THE CITY COUNCIL OF THE  
CITY OF LONG BEACH AMENDING THE LONG BEACH  
MUNICIPAL CODE BY ADDING CHAPTER 18.79  
RELATING TO METHANE GAS MITIGATION

The City Council of the City of Long Beach ordains as follows:

Section 1. The Long Beach Municipal Code is amended by adding  
Chapter 18.79 to read as follows:

Chapter 18.79

Methane Gas Mitigation

18.79.010 Applicability.

Methane gas mitigation, as described herein, shall be required for all  
newly constructed buildings (structures), additions to existing buildings  
(structures), or changes of use that are located in the following areas:

A. All areas overlying petroleum-bearing formations and within  
the limits of a petroleum reservoir's boundary, as mapped by the State  
Geological Energy Management Division (CalGEM, or any successor  
agency). Properties or parcels which partially fall into the areas described  
herein are fully subject to the methane mitigation measures required by this  
Chapter, for the entire property.

B. Proposed development of structures, and/or impermeable  
surfaces adjacent to a structure, within less than or equal to three hundred  
(300) feet from any active, or one hundred (100) feet of an idle and/or  
abandoned oil/gas well.

1 C. Proposed development of structures within one thousand  
2 (1,000) feet from the refuse footprint of any existing or new landfill or  
3 disposal site.

4 D. Upon a determination by the Development Coordinator that a  
5 hazard may exist from methane intrusion at any geographical location, or in  
6 an area outside the boundaries identified in Section 18.79.010, A through  
7 C, the Development Coordinator may enforce any and all of the  
8 requirements of Chapter 18.79 as required to prevent a potential fire or  
9 explosion due to methane gas concentrations.

10 E. Methane Soil Gas Investigations within the Coastal Zone are  
11 subject to the Local Coastal Development Permit (LCDP) requirements and  
12 procedures of Division IX, Chapter 21.25 of Title 21 – “Zoning”, of this  
13 Code.

14  
15 18.79.020 Definitions.

16 The following terms shall have the following meanings, unless  
17 otherwise clearly apparent from the context:

18 A. “Combustible soil gas” means flammable gas within soil pores.

19 B. “Development Coordinator” means the City Building Official or  
20 designee.

21 C. “Flammable Gas” means a gaseous substance capable of  
22 sustaining combustion or explosion, as defined in the California Fire Code.

23 D. “Gas Membrane Barrier” means a manufactured membrane  
24 barrier designed to prevent the transmission of methane with a minimum dry  
25 thickness of fifteen (15) mils and a gas transmission rate (GTR) of less than  
26 forty (40) milliliters per square meter day (ml/m<sup>2</sup>-D), when tested in  
27 accordance with the American Society for Testing and Materials (ASTM)  
28 D1434 standards.

1 E. "Gas Collection Aggregate" means an aggregate used in the  
2 venting layer and gas collection trenches not containing more than five  
3 percent (5%) fines passing the No. 200 sieve.

4 F. "Methane Gas" means the hydrocarbon substance commonly  
5 known as "natural gas," chemical formula CH<sub>4</sub>. For the purposes of  
6 definition, natural gas from the distribution system of a utility company is  
7 exempt and excluded from the scope of this Chapter.

8 G. "Methane Gas Detection and Alarm System" means one or  
9 more electrical devices capable of continuous monitoring for the presence of  
10 methane gas in accordance with Section 18.79.060. Alarm systems shall  
11 consist of audible and visual alarms capable of alerting occupants that a  
12 hazardous atmosphere exists.

13 H. "Methane System" means a collection of building systems  
14 designed to mitigate the accumulation of methane gas to less than  
15 hazardous levels within a structure. This includes a designed collection  
16 system of piping components located beneath a structure to vent  
17 combustible soil gas to the atmosphere; heating, ventilation, and air  
18 conditioning (HVAC) systems to introduce outdoor air into a structure to  
19 ventilate accumulated methane; and sensors and alarms to detect  
20 concentrations of methane gas, activate HVAC and/or active methane  
21 mitigation, and alert occupants to the presence of methane gas.

22 1. Active Methane System: The complete designed piping  
23 system originating below a building or structure and terminating above  
24 the building or structure with a motorized evacuation device to exhaust  
25 accumulated gases;

26 2. Passive Methane System: A non-powered piping  
27 system originating below a building and terminating outside of the  
28 building using natural air flow for venting accumulated gases.

1 I. "Mitigation Plan" means a site-specific plan for the purpose of  
2 addressing potential hazards due to the presence of combustible soil gases.  
3 The Mitigation Plan shall be approved by City plan check staff or the  
4 Development Coordinator prior to construction.

5 J. "Qualified Professional" means a California Registered  
6 Professional Civil Engineer, Petroleum Engineer, or Geologist for general  
7 gas mitigation design.

8 K. "Soil Gas Investigation" means a scientific investigation  
9 performed in accordance with Section 18.79.030 reviewed and approved by  
10 the Development Coordinator, conducted under the direction of a Qualified  
11 Professional, for the purpose of determining the locations and concentrations  
12 of combustible soil gas.

13 L. "Standards" means a set of prescriptive details referenced and  
14 included as a part of this Chapter, or in any implementing rules or  
15 regulations, including, but not limited to, Building and Safety Bulletins  
16 promulgated by the Development Coordinator or designee pursuant to the  
17 Chapter.

18 M. "Subslab Vent Piping" means a minimum of three (3) inch  
19 diameter polyvinyl chloride (PVC), high-density polyethylene (HDPE),  
20 acrylonitrile butadiene styrene (ABS), or strip composite perforated pipe or  
21 equivalent.

22 N. "Vertical Vent Risers" means a minimum of three (3) inch  
23 diameter cast-iron or galvanized steel pipe connecting subslab piping to the  
24 atmosphere.

25  
26 18.79.030 Methane soil gas investigation.

27 A. Methane soil gas testing shall be required if a property under  
28 development meets the criteria set forth in Section 18.79.010. The

1 requirement for testing may be waived by the Development Coordinator if  
2 the proposed development meets the exemption criteria below:

3 1. Single- or two (2)-family homes with first floor areas,  
4 including garage space(s), patios, and other impervious surfaces connected  
5 to the structure, less than five thousand (5,000) square feet shall not require  
6 site testing and can default to the methane gas mitigation system(s) design  
7 Level I in accordance with Building and Safety Bulletin BU-055;

8 2. Site testing shall not be required if the methane  
9 mitigation system(s) meets design Level III in accordance with Building and  
10 Safety Bulletin BU-055.

11 B. Site soil testing shall be performed after site remediation, in  
12 accordance with the Long Beach Oil/Gas Well Abandonment provisions of  
13 Chapter 18.78, CalGEM requirements, and/or local site cleanup  
14 requirements. Site soil testing shall be performed prior to site grading, or a  
15 minimum of thirty (30) days after any site grading commences.

16 C. Soil testing. Soil testing shall be performed in accordance with  
17 the Building and Safety Bulletin BU-055.

18  
19 18.79.040 Exemptions. Exemptions are as set forth and described in this  
20 Chapter and in Building and Safety Bulletin BU-055.

21  
22 18.79.050 Methane gas mitigation design requirements.

23 Methane gas mitigation design requirements shall be performed in  
24 accordance with the Building and Safety Bulletin BU-055.

25  
26 18.79.060 Methane gas mitigation components.

27 The methane gas mitigation components shall be designed and  
28 performed in accordance with the Building and Safety Bulletin BU-055.

1 18.79.070 Operations and maintenance.

2 Operations and maintenance shall be performed in accordance with  
3 the Building and Safety Bulletin BU-055.

4  
5 18.79.080 Plan review and inspection fees.

6 A. Methane gas plan check and inspection fees shall be required  
7 for any project with methane mitigation in accordance with the Resolution  
8 establishing the City's Master Schedule of Fees and Charges;

9 B. A separate alarm system plan review and inspection fee shall  
10 be assessed for the methane gas Levels II and III systems per Long Beach  
11 Fire Code requirements.

12  
13 18.79.090 Inspections.

14 All methane mitigation components shall be inspected by the City's  
15 inspection staff as referenced in accordance with the Building and Safety  
16 Bulletin BU-055.

17  
18 18.79.100 Qualified professional project certification.

19 The Qualified Professional shall submit a certification to the City  
20 inspector prior to final approval of the grading/building Certificate of  
21 Occupancy stating the following:

22 A. "I am a Qualified Engineer/Geologist in the State of California,  
23 and I am knowledgeable in the field of methane gas mitigation systems;

24 B. The methane gas mitigation system has been constructed  
25 and installed under my direct supervision and in accordance with the  
26 approved plans (a copy of the "as-built" plans must be provided);

27 C. The structure is free from methane gas and can be safely  
28 occupied" (a copy of the test results shall be provided).

18.79.110 Covenant and agreement.

Before the building/structure final inspection, a recorded Covenant and Agreement shall be submitted to the Development Coordinator as set forth below:

A. Methane Mitigation Design Requirement Levels I and II. The Owner of the property shall acknowledge for themselves, their heirs, successors in interest, and assigns the following:

1. The building is constructed within the City of Long Beach Methane Gas Zone and/or within three hundred (300) feet from an active oil well, one hundred (100) feet from an abandoned oil well, or one thousand (1,000) feet from a landfill, and is subject to methane gas intrusion from the underlying soil;

2. That a methane gas mitigation system has been designed and approved and is on file with the Development Coordinator and that said system has been correctly installed on the property;

B. Methane Mitigation Design Requirement Level III.

The Owner of the property shall acknowledge for themselves, their heirs, successors in interest, and assigns the following:

1. "The building is constructed within the City of Long Beach Methane Zone and/or within three-hundred (300) feet from an active oil well, one hundred (100) feet from an abandoned oil well, or one-thousand (1,000) feet from a landfill and is subject to methane gas intrusion from the underlying soil;

2. That a methane mitigation system has been designed and approved and is on file with the Development Coordinator, and has been correctly installed on the property;

3. That the property owner will maintain and operate the methane gas mitigation system in accordance with the requirements

1 specified in the plans, as approved by the Development Coordinator or  
2 Building Official, and Fire Marshal of the City of Long Beach;

3 4. That an irrevocable consent is granted to the City of  
4 Long Beach to permit its authorized employees and representatives to enter  
5 onto the premises during regular business hours for the purpose of  
6 inspecting and testing for methane intrusion".

7  
8 18.79.120 Adoption of administrative rules.

9 The City Manager, or designee, is authorized and directed to  
10 promptly adopt administrative rules, which may be in the form of  
11 Informational Bulletins, supplemental to the provisions of this Ordinance as  
12 necessary or appropriate to implement the Ordinance. The provisions of  
13 this Ordinance and the rules adopted by the City Manager, or designee,  
14 shall be provided to property owners, developers, potential developers, and  
15 other interested members of the public to the widest extent practical. No  
16 person shall fail to comply with any such Informational Bulletin, rule or  
17 regulation.

18  
19 Section 2. The City Clerk shall certify to the passage of this ordinance by  
20 the City Council and cause it to be posted in three (3) conspicuous places in the City of  
21 Long Beach, and it shall take effect on the thirty-first (31st) day after it is approved by the  
22 Mayor.

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I hereby certify that the foregoing ordinance was adopted by the City Council of the City of Long Beach at its meeting of \_\_\_\_\_, 20\_\_\_\_, by the following vote:

Ayes: Councilmembers: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Noes: Councilmembers: \_\_\_\_\_

\_\_\_\_\_

Absent: Councilmembers: \_\_\_\_\_

\_\_\_\_\_

Recusal(s): Councilmembers: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
City Clerk

Approved: \_\_\_\_\_  
(Date)

\_\_\_\_\_  
Mayor