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CSLB License No. 885902



October 28, 2022

Nick Cazalis and Jared Warren  
SoLa Impact  
8629 South Vermont Avenue  
Los Angeles, CA 90044

**Subject: *Methane Testing Results***  
***512 West Laconia Boulevard, Los Angeles, CA 90044***  
***APN: 6132-001-020; 4 lots Identified as POR 13 through POR 15 and FR 16***  
***EFI Global Project Number: 045.09884***

Nick and Jared:

EFI Global presents the results of the Methane Testing conducted at 512 West Laconia Boulevard in the City of Los Angeles, California (See Attached Figure 1: Site Location Map). The property is located in a recognized City of Los Angeles Methane Zone. The testing procedures utilized by EFI Global were based on the "Site Testing Standards for Methane" (STSM) provided by the City of Los Angeles Department of Building and Safety (LADBS). It is EFI Global's understanding that you will be constructing a new, 4-story, multi-unit residential apartment structure, with slab-on-grade foundations proposed at the existing Site grade. The project Site is approximately 35,468 square feet in total size. Based on the STSM, these parameters required four (4) shallow gas tests (SGTs-one for each 10,000 square feet or portion thereof) followed by two deep methane probe (MP) sets (one for every 20,000 square feet), each with nested probes installed at 5 feet, 10 feet and 20 feet below grade surface (bgs). The project Site and immediately surrounding area are indicated on the attached Figure 2: Site Plan.

## ***SITE LOCATION INFORMATION***

### **SITE LOCATION AND DESCRIPTION**

The project Site is an irregularly-shaped parcel presently vacant and undeveloped with bare soil over the entire Site, which is accessed via a wrought-iron gate located along Figueroa Street. Figueroa Street is located to the west of the Site, beyond which are residential properties. Immediately north and west of the Site is a moderately steep, northwesterly descending slope which slopes down to the 110 Freeway. Multi-family apartment structures bound the Site to its south. It is our understanding that the Site will be redeveloped with a new multi-family residential structure, with slab-on-grade foundations proposed at the existing Site grade. Figure 2 presents a layout of the Site and indicates the SGT and MP set test locations.

### **GROUNDWATER**

The elevation of the subject property is approximately 179 feet above mean sea level (Figure 1: USGS Inglewood, CA 7.5 Minute Topographic Map). Groundwater was not observed during soil boring activities performed at the Site, which reached a maximum depth of 20.5 feet bgs. The California Geologic Survey, 1998 Seismic Hazard Zone Report (SHZR) for the Inglewood 7.5 Minute Quadrangle indicates a historical high groundwater level of greater than 50 feet bgs at the Site. The historic groundwater data map included in the SHZR is based on groundwater data collected between 1905 and 1998. No other evaluation of groundwater was conducted for this methane investigation of the Site.

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## **FIELD ACTIVITIES**

### **UTILITY CLEARANCE**

EFI Global mobilized to the Site and pre-marked the three (3) proposed methane shallow gas test (SGT) locations on the ground with white paint. Underground Service Alert (USA) was contacted a minimum of 48 hours prior to beginning the subsurface investigation. No conflicts with underground utilities or other subsurface obstructions were identified in the chosen SGT locations.

### **SHALLOW GAS PROBE INSTALLTIONS**

On October 20, 2022, EFI Global directed Minute Man Drilling, Inc. (Minute Man), of Simi Valley, California in the advancement of four (4), 1.5 inch-diameter soil borings to depths of 5.5 feet bgs for the construction of SGT methane probes SGT1 through SGT4. Soil borings were advanced using a truck-mounted, direct push drill rig with 1.5-inch diameter drill rods. At each SGT location, a 1.5-inch diameter steel sampler was advanced through the bare surface soil to approximately 5.5 feet bgs. After the rods were detracted, approximately 6 inches of clean sand was set at the bottom of each soil boring. A length of ¼-inch Nylaflow® tubing fitted with a porous polypropylene tip was set at the top of the sand and buried in approximately 6 additional inches of clean sand, burying the probe in the center of approximately one-foot of clean sand pack. An upper seal consisting of hydrated bentonite was set from the top of the emplaced sand to approximately three inches from the ground surface. The end of the tubing was cut approximately 0.5 feet above ground surface and fitted with a gas-tight quick connect fitting with a valve set in the closed position. Each test probe location was labeled with sample point identification. For protection and safety purposes, the probe tips were buried in clean sand while the subsurface equilibrated. The SGT locations are indicated on Figure 2.

### **SHALLOW GAS TESTING**

Following an equilibration period of not less than ½ hour, each SGT probe was tested to measure methane concentrations for the determination of MP set locations. A Magnehelic® pressure gauge with a detection limit of 0.01 inches of water was utilized to determine soil gas pressure before each SGT methane measurement was collected. EFI Global utilized an Eagle Multi-Gas Detector manufactured by RKI Instruments, Inc., (model number 201, serial number 57065) to determine methane concentrations in accordance with the test equipment manufacturer's instructions and the required LADBS detection limits. This instrument has been approved by LADBS for use in onsite methane testing and was calibrated for methane immediately before use with a 50% LEL (2.5% vol) calibration gas. Following the appropriate instrument warm-up and fresh-air calibration, readings of methane in ppmv were collected from each SGT probe. The Shallow Gas Test Results are indicated on the attached Table 1.

As indicated in Table 1, measurable methane concentrations were detected in the four SGT probes (SGT1 through SGT4). Results of the SGT's show location SGT2 had the highest detected methane concentration, measured at 740 parts per million by volume (ppmv). SGT1 had the second highest methane reading, measured at 570 ppmv. SGT3 and SGT4 indicated lower measured methane concentrations of 420 and 150 ppmv, respectively.

Based on the two maximum methane concentrations detected during the shallow gas testing, locations SGT1 and SGT2 were selected as locations for the installation of deeper methane probe (MP) sets.

### **DEEP METHANE PROBE SET INSTALLTIONS**

On October 20, 2022, EFI Global directed the installation of deep methane probe sets at the locations as determined by the SGT results. EFI Global directed Minute Man in the advancement of two (2) deep MP set borings (MP1 and MP2) to a maximum depth of 20.5-feet bgs. Accordingly, nested deep MP sets were installed at depths of 5-, 1- and 20-feet bgs at locations MP1 and MP2. The MP set target depth of 20-feet bgs was based on the depth of the deepest potential foundation for the planned underground parking (at grade), in accordance with the LADBS STSM.

MP borings MP1 and MP2 were advanced using a truck-mounted, direct push rig to provide an annular space for nested probe construction. At each depth where a probe was installed, approximately 6 inches of clean sand was set above the bottom of the boring. A length of ¼-inch Nylaflow tubing fitted with a porous polypropylene tip was set at the top of the sand and was buried in approximately 6 additional inches of clean sand. A seal consisting of hydrated bentonite was then set above the sand to a depth six inches below the next probe depth and the installation was repeated until all three nested probes were installed in each boring. The remainder of each boring

was backfilled using hydrated bentonite to approximately three inches from the ground surface. The end of each probe remaining above ground was cut approximately 0.5 feet above ground surface and fitted with a gas-tight quick-connect fitting with a valve set in the closed position. The tubing of each probe was identified by using a different color, identifying the probe depth. For probe protection and Site safety purposes, the probe tips were buried in clean sand and a 1-inch thick, temporary surface concrete patch was emplaced at each location following initial testing. The locations of methane probe sets MP1 and MP2 are indicated on Figure 2.

## **PRESSURE MONITORING AND METHANE PROBE SET TESTING**

On October 20, 2022, EFI Global collected the first of two consecutive pressure and methane readings from the six nested probes in the two deep MP set borings MP1 and MP2. EFI Global utilized a Magnehelic® pressure gauge with a detection limit of 0.01 inches of water to determine gas pressure before methane measurements were collected. EFI Global utilized the same Eagle Multi-Gas Detector, as used during the SGTs and as indicated above, to determine methane concentrations in accordance with the test equipment manufacturer's instructions. Methane readings were collected upon completion of pressure measurements and after appropriate calibration for methane using 50% LEL (2.5%) gas, instrument warm-up and fresh-air calibration. Once measurements were obtained, each probe set was covered with a temporary concrete patch to protect the probes and provide safe surface conditions. The field testing results obtained on October 20, 2022 are summarized in the attached Table 1.

On October 21, 2022, EFI Global returned to the Site to collect the second of two pressure and methane readings from the six nested probes in the two deep MP sets. Equipment, calibrations and testing procedures were conducted as specified above. The results of the final field testing on probe sets MP1 and MP2 obtained on November 16 are also summarized in the attached Table 1.

Following completion of the final methane measurements, the SGT probes and MP sets were abandoned and the bare soil surface was left as-is, with hydrated bentonite showing at the surface in the four boring locations.

## **CONCLUSIONS**

As indicated in the attached Table 1, a maximum methane detection of 900 ppmv and a maximum pressure of 0.02 inches of water were recorded during the three sampling events. Therefore, a Design Methane Concentration of 900 ppmv and a Design Methane Pressure of < 2" should be used to determine the Site Design Level.

Based on the results of our investigation, the Site qualifies as **Site Design Level II with less than 2-inches pressure**, as defined in the Minimum Methane Mitigation Requirements set forth in Table 1A of the LADBS "Standard Plan: Methane Hazard Mitigation". LADBS Form 1, the Certificate of Compliance for Methane Test Data, as well as a Site Plan and a copy of LADBS Tables 1A and 1B are included as attachments to this letter report.

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***SIGNATURE OF PROFESSIONAL***

We sincerely appreciate the opportunity to be of service. Please let me know if you have any questions or comments regarding the enclosed report. If you would like assistance in preparing the required methane mitigation system, do not hesitate to contact our office and we can refer you to a firm that performs this work. We look forward to working with you again.

Respectfully submitted,



John G. Siskowic, PG  
Senior Geologist  
California Professional Geologist  
License No. 8255



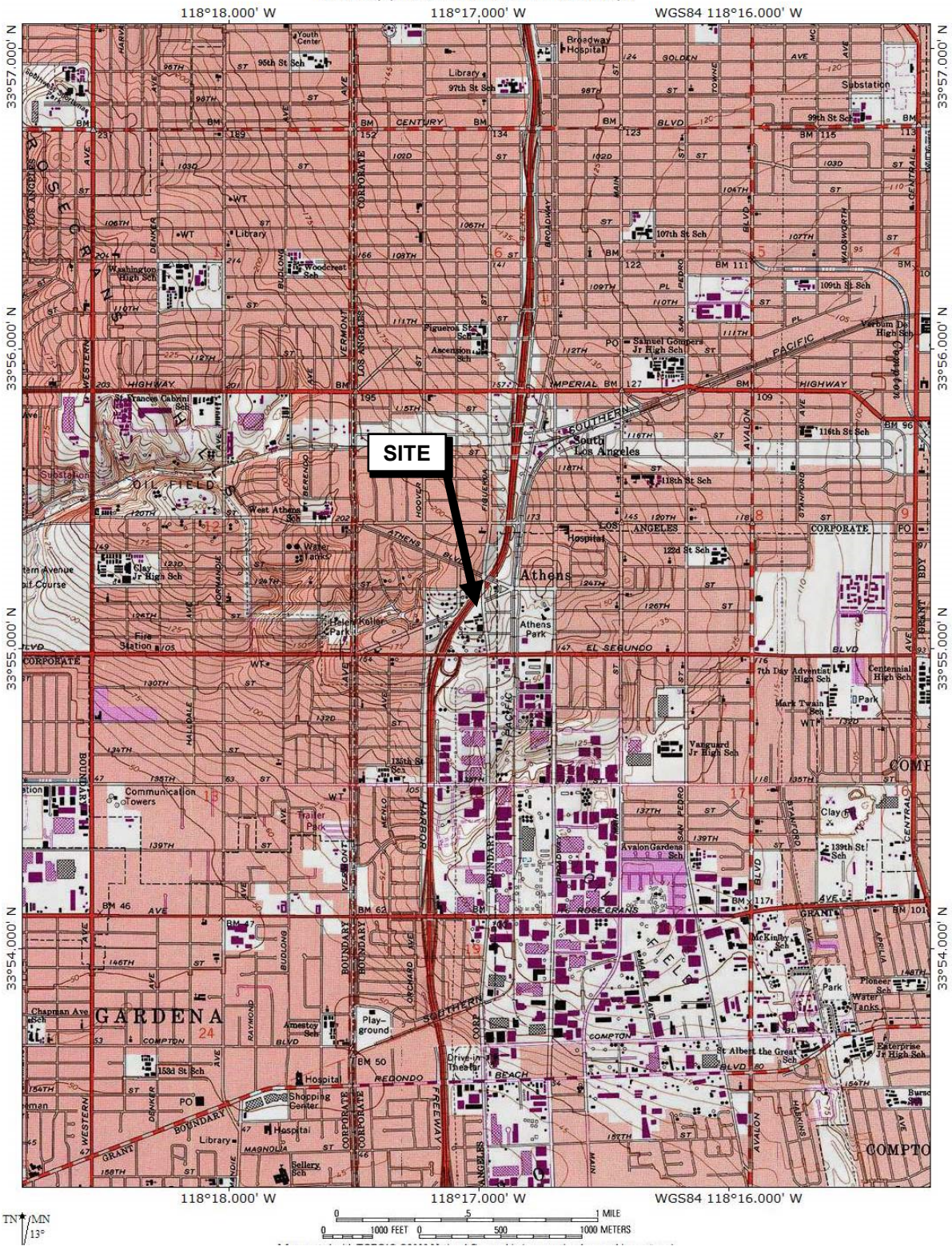
Attachments:

- Illustrations: Figures 1 and 2
- Data Table: Table 1
- LADBS Form 1- Certificate of Compliance
- LADBS Tables 1A and 1B

***ILLUSTRATIONS***

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TOPO! map printed on 10/17/22 from "Untitled.tpo"



**Figure 1**  
**Site Location Map**

512 West Laconia Boulevard  
Los Angeles, CA 90044

Source:  
USGS Inglewood, CA 7.5 Minute  
Topographic Map  
(Revised 1981)

Project Number: 045.09884

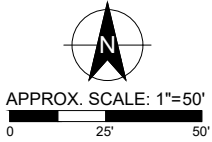




BASEMAP SOURCE: BING MAPS.

**LEGEND**

- PROPERTY LINE
- SG2/MP2  $\Delta$  SHALLOW GAS/METHANE PROBE SET
- SG4  $\Delta$  SHALLOW GAS



**SITE PLAN**  
 512 W. LACONIA BOULEVARD  
 LOS ANGELES, CA 90044



PN: 045.09884	FIGURE
DT: 10/29/2022	2
DB: KK   CB: JS	

***DATA TABLE 1***





**LADBS FORM 1**

**FORM 1 - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA**

**Part 1: Certification Sheet**

Site Address: 512 West Laconia Boulevard, Los Angeles, CA 90044

Legal Description: Tract: ATHENS

Lot: 13-16

Block: 18

Building Use: Residential

Architect's, Engineer's or Geologist's Stamp:

Name of Architect, Engineer, or Geologist: <u>John G. Siskowic, PG</u>
Mailing Address: <u>5261 West Imperial Highway</u> <u>Los Angeles CA, 90045</u>
Telephone: <u>(310) 854-6300</u>
Name of Testing Laboratory: <u>Andersen Environmental</u>
City Test Lab License #: <u>TA10207</u>
Telephone: <u>(888) 705-6300</u>



I hereby certify that I have tested the above site for the purpose of methane mitigation and that all procedures were conducted by a City of Los Angeles licensed testing agency in conformity with the requirements of the LADBS Information Bulletin P/BC 2014-101. Where the inspection and testing of all or part of the work above is delegated, full responsibility shall be assumed by the architect, engineer or geologist whose signature is affixed thereon.

Signed: *John G. Siskowic* date 10/28/2022

Required Data:

- Project is in the (Methane Zone) or (Methane Buffer Zone).
- Depth of ground water observed during testing: N/A feet below the Impervious Membrane.
- Depth of Historical High Ground Water Table Elevation\*: > 50 feet below the Impervious Membrane.
- Design Methane Concentration\*\*: 900 parts per million in volume (ppmv).
- Design Methane Pressure\*\*\*: 0.02 inches of water column.
- Site Design Level: (Level I, Level II, Level III, Level IV, Level V) with < 2 inches of water column.

De-watering:

- De-watering ( is ) (is not) required per Section 7104.3.7.
- Pump discharge rate N/A cubic feet per minute per reference geology or soil report:  
N/A dated N/A.

Additional Investigation:

- Additional investigation ( was ) (was not) conducted.

Latest Grading on Site:

- Date of last grading on site (was) (was not) more than 30 days before Site Testing.
- See Attached explanation of the effect on soil gas survey results by grading operations.

Notes:

\* Historical High Ground Water Table Elevation shall mean the highest recorded elevation of ground water table based on historical records and field investigations as determined by the engineer for the methane mitigation system.

\*\* Design Methane Concentration shall mean the highest recorded measured methane concentration from either Shallow Soil Gas Test or any Gas Probe Set on the site.

\*\*\* Design Methane Pressure shall mean the highest total pressure measured from any Gas Probe Set on the site.

# FORM 1 (CONTINUED) - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

## Part 2: Test Data - Shallow Soil Gas Test and Gas Probe Test

Site Address: 512 West Laconia Boulevard, Los Angeles, CA 90044

Description of Gas Analysis Instrument(s):

Instrument Name and Model: RKI Eagle Instrument Accuracy:  $\pm$  5% ppmv.

City of Los Angeles Testing License #: TA10207

Date	Time	Probe Set #	Concentration (ppmv)	Pressure (inches water column)	Probe Depth (feet)	Description / Probe Location
10/20/22	08:30	SGT1	570	0.01	5	50'W of E PL; 110'N of S PL
	08:32	SGT2	740	0.00	5	45'W of E PL; 35' N of S PL
	08:34	SGT3	420	0.01	5	125'W of E PL; 60'N of S PL
∇	08:36	SGT4	150	0.01	5	75' E of W PL; 37'N of S PL
10/20/22	10:28	MP1	590	0.01	5	50'W of E PL; 110'N of S PL
	10:30	MP1	580	0.01	10	See Figure 2
	10:32	MP1	570	0.00	20	See Figure 2
	10:34	MP2	760	0.02	5	45'W of E PL; 35' N of S PL
	10:36	MP2	900	0.01	10	See Figure 2
∇	10:38	MP2	740	0.01	20	See Figure 2
10/21/22	11:00	MP1	410	0.01	5	See Figure 2
	11:03	MP1	370	0.00	10	See Figure 2
	11:06	MP1	440	0.00	20	See Figure 2
	11:09	MP2	520	0.00	5	See Figure 2
	11:12	MP2	790	0.01	10	See Figure 2
∇	11:15	MP2	680	0.00	20	See Figure 2

Barometric Pressure on 10/20/2022 = 29.95 in. Hg

PL = Property Line

Barometric Pressure on 10/21/2022 = 29.94 in. Hg

N,S,E,W = Cardinal Directions

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities. For efficient handling of information internally and in the internet, conversion to this new format of code related and administrative information bulletins including MGD and RGA that were previously issued will allow flexibility and timely distribution of information to the public.

***LADBS TABLES 1A AND 1B***

**Table 1A - MITIGATION REQUIREMENTS FOR METHANE ZONE** (See notes)

Site Design Level		Level I		Level II		Level III		Level IV		Level V	
Design Methane Concentration (ppmv)		0 - 100		101 - 1,000		1,001 - 5,000		5,001 - 12,500		> 12,500	
Design Methane Pressure (see note 1) (inches of water column)		≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	All Pressure	
PASSIVE SYSTEM	De-watering System	X	X	X	X	X	X	X	X	X	
	Sub-Slab Vent System	Perforated Horizontal Pipes	X	X	X	X	X	X	X	X	X
		Gravel Blanket Thickness Under Impervious Membrane	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Gravel Thickness Surrounding Perforated Horizontal Pipes	2"	2"	2"	3"	2"	3"	2"	4"	4"
		Vent Risers	X	X	X	X	X	X	X	X	X
	Impervious Membrane	X	X	X	X	X	X	X	X	X	
ACTIVE SYSTEM	Sub-Slab System								X	X	
	Lowest Occupied Space System	Gas Detection System (see note 2)	X		X	X	X	X	X	X	X
		Mechanical Ventilation (see notes 3, 4, 5)	X		X	X	X	X	X	X	X
		Alarm System	X		X	X	X	X	X	X	X
Control Panel		X		X	X	X	X	X	X		
MISC. SYSTEM	Trench Dam	X	X	X	X	X	X	X	X	X	
	Conduit or Cable Seal Filling	X	X	X	X	X	X	X	X	X	
	Additional Vent Risers (see note 5)									X	

**Table 1B - MITIGATION REQUIREMENTS FOR METHANE BUFFER ZONE** (See notes)

Site Design Level		Level I		Level II		Level III		Level IV		Level V	
Design Methane Concentration (ppmv)		0 - 100		101 - 1,000		1,001 - 5,000		5,001 - 12,500		> 12,500	
Design Methane Pressure (see note 1) (inches of water column)		≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	≤ 2"	> 2"	All Pressure	
PASSIVE SYSTEM	De-watering System		X		X		X		X	X	
	Sub-Slab Vent System	Perforated Horizontal Pipes	X		X		X		X	X	X
		Gravel Blanket Thickness Under Impervious Membrane	2"		3"		3"		2"	4"	4"
		Gravel Thickness Surrounding Perforated Horizontal Pipes	2"		3"		3"		2"	4"	4"
		Vent Risers	X		X		X		X	X	X
	Impervious Membrane	X		X		X		X	X	X	
ACTIVE SYSTEM	Sub-Slab System									X	
	Lowest Occupied Space System	Gas Detection System (see note 2)	X		X		X		X	X	X
		Mechanical Ventilation (see notes 3, 4, 5)	X		X		X		X	X	X
		Alarm System	X		X		X		X	X	X
Control Panel		X		X		X		X	X		
MISC. SYSTEM	Trench Dam	X		X		X		X	X	X	
	Conduit or Cable Seal Filling	X		X		X		X	X	X	
	Additional Vent Risers (see note 5)									X	

**NOTES FOR TABLES 1A AND 1B:**

- \*X\* = indicates a required mitigation component
- 1. De-watering is not required when the maximum Historical High Ground Water Table Elevation, or projected post-construction ground water level, is more than 12 inches below the bottom of the Perforated Horizontal Pipes.
- 2. The Mechanical Extraction System shall be capable of providing an equivalent of a complete change of air 20 minutes of the total volume of the Gravel Blanket.
- 3. The mechanical ventilation system shall be capable of providing an equivalent of one complete change of the lowest occupied space every 15 minutes.
- 4. Vent openings to comply with Item IV.B.4 on sheet 1 may be used in lieu of mechanical ventilation.
- 5. The total quantity of the installed Vent Risers shall be increased to twice the rate for the Passive System.

**LEGEND**

- 1. Tables 1A and 1B taken from Los Angeles Department of Building and Safety (LADBS) Standard Plan for Methane Hazard Mitigation. For additional information, please see the complete LADBS Standard Plan.
- 2. "X" indicates a required mitigation component



**METHANE MITIGATION REQUIREMENTS**

SOURCE: LOS ANGELES DEPARTMENT OF BUILDING AND SAFETY (LADBS)

REVISED: 08/13/2015 ; 4/8/2021