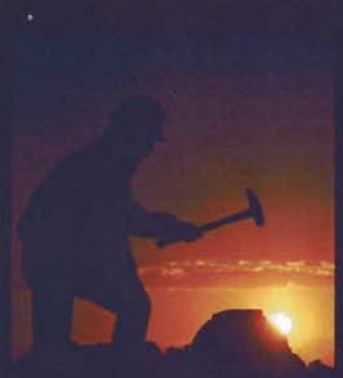

Preliminary Subsurface Methane Gas Investigation for

4363 S. Lincoln Blvd.

Los Angeles, California

GeoKinetics
Geotechnical & Environmental Engineers

Prepared by

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August 22, 2006

1.0 Introduction: GeoKinetics has completed a subsurface methane gas investigation at the property located at 4363 South Lincoln Boulevard in the City of Los Angeles. The location of the subject property is shown in Figure 1 while a recent aerial photograph of the site is provided as Figure 2. The 26,277 ft^2 ($\approx$0.6 acre) property is currently occupied by a car rental facility. We understand the existing structure is to be demolished and a 31-story high multi-family residential tower is to be constructed on the lot. The property is located within the Playa Del Rey Oil Field as it has been mapped by the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). As such, the property is also located within a "Methane Zone" as designated by LADBS. As a result, it will be necessary to incorporate methane gas mitigation measures into the design of the proposed structure in accordance with LADBS requirements. Under the current building code, the nature and extent of the required mitigation measures are partially dependant upon the concentration and pressure of any methane gas that may be present in the surficial soils at the site. The current investigation has been performed for the purpose of documenting the concentration and pressure of methane gas in the subsurface of the subject property such that appropriate mitigative improvements can be specified. This report presents the results of the subsurface gas investigation as well as associated methane mitigation recommendations in accordance with LADBS requirements.

2.0 Background: The presence of methane gas in the subsurface is common within former oil production areas and other locations where organic material - such as grass, leaves, wood, manure, etc. - are present in the soil. Biogenic methane is generated by the bacteriological digestion, or biodegradation, of organic matter in the absence of oxygen. Methane of thermogenic or petrogenic origin may also be present in surficial soils as a result of its upward migration from deeper oil and gas bearing zones. Our experience indicates methane gas is common and can be found in the soil at a relatively high percentage of building sites in southern California. Methane is not toxic, however it is combustible and potentially explosive at concentrations above 53,000 ppm in the presence of oxygen. This concentration is referred to as its Lower Explosive Level or LEL. Methane is lighter than air and therefore has a natural tendency to rise to the ground surface where it typically dissipates into the atmosphere. The presence of non-pressurized methane at shallow depths beneath the ground surface is normally not problematic. The rates at which the methane is generated and/or migrates towards the ground surface are slow enough such that the gas dissipates

naturally under normal circumstances. However, as methane migrates to the ground surface, the potential exists for its accumulation beneath slab-on-grade foundation systems or other relatively impermeable ground coverings. If the gas accumulates to high concentrations, and becomes pressurized, and a crack or other penetration is present in the floor slab of the structure, detectable levels of methane may enter the interior of the building. Improvements - such as sub-slab vent lines or gas membranes - are typically installed as a precautionary measure within Methane Zones, and in other areas if elevated subsurface gas levels are detected.

3.0 Field Investigation: The field work associated with the methane gas investigation at the subject property included the installation and monitoring of two (2) multi-stage subsurface gas probes. The locations of these gas probes are shown in Figure 2. The subsurface gas probes were installed on August 7th and they were subsequently monitored on August 9th and 10th, 2006. The gas probes were installed using a truck-mounted direct push drilling rig. A schematic illustrating the typical configuration of the gas probes is provided as Figure 3. As shown in this figure, each gas probe consists of two or three sets of 1/4-inch diameter polyethylene tubes with an attached porous polypropylene tip. An attempt was made to individual sampling tips at depths of 5, 10, and 20 feet below the finished ground surface (bgs) at both locations. However, the presence of shallow groundwater and/or drilling refusal prevented the installation of sampling tips below a depth of 12 feet at one location and ten feet at the other. As shown in Figure 3, each of the sampling tip was embedded within a 12-inch interval of washed Monterey #3 sand. Bentonite clay seals were placed above and below each sand interval in order to isolate the gas sampling tips. Gas tight quick connect fittings were installed on the ends of the polyethylene tubing at the ground surface to in order to seal the probes between monitoring events. Flush-mounted vaults were installed at the ground surface to protect the installations.

As discussed previously, monitoring of the gas probes was performed on August 9th and 10th, 2006 during periods of falling barometric pressure. The subsurface gas pressure relative to atmospheric, and the concentrations of methane, oxygen, and carbon dioxide, were measured in both of the subsurface probes during the three monitoring events. The monitoring equipment that was utilized and the associated detection limits, or resolutions, are summarized in Table 1. As indicated, subsurface gas pressures were measured to the nearest 0.05 inches of water prior to each sampling event using a Magnahelic gauge while the

barometric pressure was measured and recorded to the nearest 0.1 inches of mercury using a digital barometer. The gas probe methane, oxygen and carbon dioxide concentrations were measured in the field using a portable, methane specific, GA-90 infra-red gas analyzer. A volume of gas equivalent to approximately ten times that of the ¼-inch diameter polyethylene gas probe tube was extracted through the GA-90 during the monitoring process. Steady state readings were generally obtained after approximately two tubing volumes of gas had been extracted. The highest methane reading displayed in each instance was recorded. The GA-90 was calibrated at the beginning and the end of each day of monitoring using a certified mixture of 15% methane, 15% carbon dioxide, and 70% nitrogen calibration gas (Note: all gas concentrations referred to in this report are on a volumetric basis). A Photovac Flame Ionization Detector (FID) was used to confirm combustible gas levels at selected probes where sufficient oxygen was present in the probe to operate the FID. The gas levels measured with both detectors were found to be consistent. Combustible gas concentrations in excess of 100 ppm were not detected with the FID.

Ambient gas levels in the air four feet above the ground surface were recorded at the site periodically during the monitoring. In each instance, the measured gas level fell within the following range:

Gas	Measured Range
Methane	<0.1%
Carbon Dioxide	<0.1%
Oxygen	20.0% to 20.1%

4.0 Results: The pressures and concentrations measured in each of the subsurface gas probes during the two monitoring events are summarized in Table 2. As indicated, methane gas was not detected at either of the gas probe installations. The pressures measured in the gas probes ranged from 0.00 to +0.05 inches of water. This pressure range is relatively small (i.e. <0.002 psi) and consistent with normal barometric variations and associated lag.

The concentration of oxygen in the atmosphere at sea level is approximately 21%. The oxygen levels were found to be moderately to significantly depressed below typical atmospheric levels at each gas probe installation. The lowest subsurface oxygen level recorded at the site was 1.7% at a depth of 5 feet in gas probe P-1. The average oxygen concentration measured in the gas probes was approximately 5%.

The average concentration of carbon dioxide in the atmosphere at sea level is approximately 0.03%. Subsurface carbon dioxide levels were elevated above typical atmospheric levels in each of the gas probes. The highest carbon dioxide concentration measured at the site was 16.4% at a depth of 5 feet in gas probe P-1. The average carbon dioxide concentration measured in the gas probes was approximately 10%.

The elevated carbon dioxide levels and depressed oxygen levels indicate organic material entrained within the soil at the site is being biodegraded under aerobic conditions. Based upon the absence of methane gas and the corresponding low soil gas pressures, we conclude the property should be classified as a Level I site with a Design Methane Pressure of $\leq$2" of water in accordance with LADBS guidelines. A copy of the LADBS methane testing compliance form for this project is included as Attachment A for your reference.

As discussed previously, the property is shown to be located within a Methane Zone. The following methane mitigation measures are typically required by LADBS for new Level I buildings within the methane zone:

1. **Sub-Slab Vent System:** A series of perforated vent lines and an associated 4" thick gravel blanket must be installed beneath the floor slab of the proposed structure. The perforated vent lines must be connected to solid vent piping that extends through the walls or pipe chases of the building to outlets above the roof line. A dewatering system must be installed if the design high groundwater level for the project is not at least one foot below the lowest vent piping elevation.

2. **Impervious Membrane:** A continuous gas membrane is required below the floor slab of the building. This membrane must be sealed against footings, pilings, and utilities to form a gas-tight barrier beneath the building.

3. **Utility Trench Dams:** A section of impervious backfill consisting of compacted native soil or sand / cement slurry must be installed in utility trenches that extend beneath the perimeter of the building in order to prevent methane gas from migrating beneath the structure through sand bedding or backfill.

4. **Conduit Seals:** Gas tight seals must be installed on all conduits (e.g. electrical, cable T.V., telephone, etc.) that extend to the interior of the structure. The purpose of these seals is to prevent methane gas from entering subsurface cracks or discontinuities in the conduits and subsequently migrating to the interior of the building.

Plans and specifications for the mitigative improvements outlined above should be prepared and submitted to LADBS for review and approval along with the architectural plans for the proposed structure.

5.0 Closing: This investigation has been performed with the degree of skill and care ordinarily exercised by engineers practicing in this, and similar, localities. No other warranty, expressed or implied, is given regarding the conclusions or professional opinions presented in this report. The scope of this report is limited to the matters expressly covered herein. This report is presented for the sole use of MDR Tower, LLC and may not be relied upon by any other party without written authorization from GeoKinetics. All recommendations, findings, and conclusions presented in this report are based upon facts and circumstances as they existed at the time this report was prepared. A change in any fact or circumstance upon which this report is based may necessitate re-evaluation and/or modification of the recommendations, findings, and conclusions presented herein. Due to the nature of this type of investigation, uncertainty exists with respect to the subsurface conditions that are present between boring / sampling locations. The subsurface methane concentrations at the site could vary over time and may change in response to site modifications. The methane levels identified in this report represent the concentrations that were measured at the time of the current

investigation. Higher or lower concentrations could occur in the future. If the level of inherent uncertainty is unacceptable, additional sampling and/or testing should be considered.

We hope this information is helpful to you. Please do not hesitate to contact the undersigned if you have any questions or comments.

Sincerely,
GEOKINETICS, INC.

Glenn D. Tofani, GE/RCE/REA
Principal Engineer

John DeReamer, Ph.D./PG
Principal Geologist

attachments

Table 1. Gas Probe Monitoring Equipment & Parameters

Parameter	Equipment	Detection Limit or Resolution	Range
Barometric Pressure	Digital Barometer	0.1" of Hg	25 to 36 in Hg
Gas Probe Pressure	Pressure Gauge	0.1" of H_2O	-5 to +5 in H_2O
Methane Concentration	GA-90 Infrared Gas Analyzer	0.1%	0.1% to 100%
	FID	0.1 ppm	0.1 to 1,000 ppm
		1 ppm	1 to 10,000 ppm
Carbon Dioxide Concentration	GA-90 Infrared Gas Analyzer	0.1%	0.1% to 50%
Oxygen Concentrations	GA-90 Infrared Gas Analyzer	0.1%	0.1% to 25%

Table 2 - MDR Tower LLC,
Los Angeles, California
Multi-Stage Gas Probe Monitoring Results

GAS PROBE #	MONITORING DATE	PROBE DEPTH (feet)	GAS CONCENTRATION (%)			GAS PROBE PRESSURE (IN H_2O)	BAROMETRIC PRESSURE (IN Hg)
			CH_4	CO_2	O_2		
P-1	8/9/2006	5	0.00	16.4	1.7	0.00	29.8
	8/10/2006		0.00	16.4	1.9	0.00	29.8
	8/9/2006	8	0.00	13.8	3.1	0.05	29.8
	8/10/2006		0.00	14.0	3.0	0.00	29.8
	8/9/2006	12	0.00	7.8	2.4	0.05	29.8
	8/10/2006		0.00	9.6	3.0	0.05	29.8
P-2	8/9/2006	5	0.00	0.8	9.7	0.00	29.8
	8/10/2006		0.00	7.5	8.9	0.05	29.8
	8/9/2006	10	0.00	6.6	9.3	0.00	29.8
	8/10/2006		0.00	4.0	9.0	0.00	29.8
Background	8/9/2006	Pre-Monitoring	0.00	0.0	20.1	-	29.8
	8/10/2006		0.00	0.0	20.1	-	29.8
	8/9/2006	Post-Monitoring	0.00	0.0	20.0	-	29.8
	8/10/2006		0.00	0.0	20.0	-	29.8

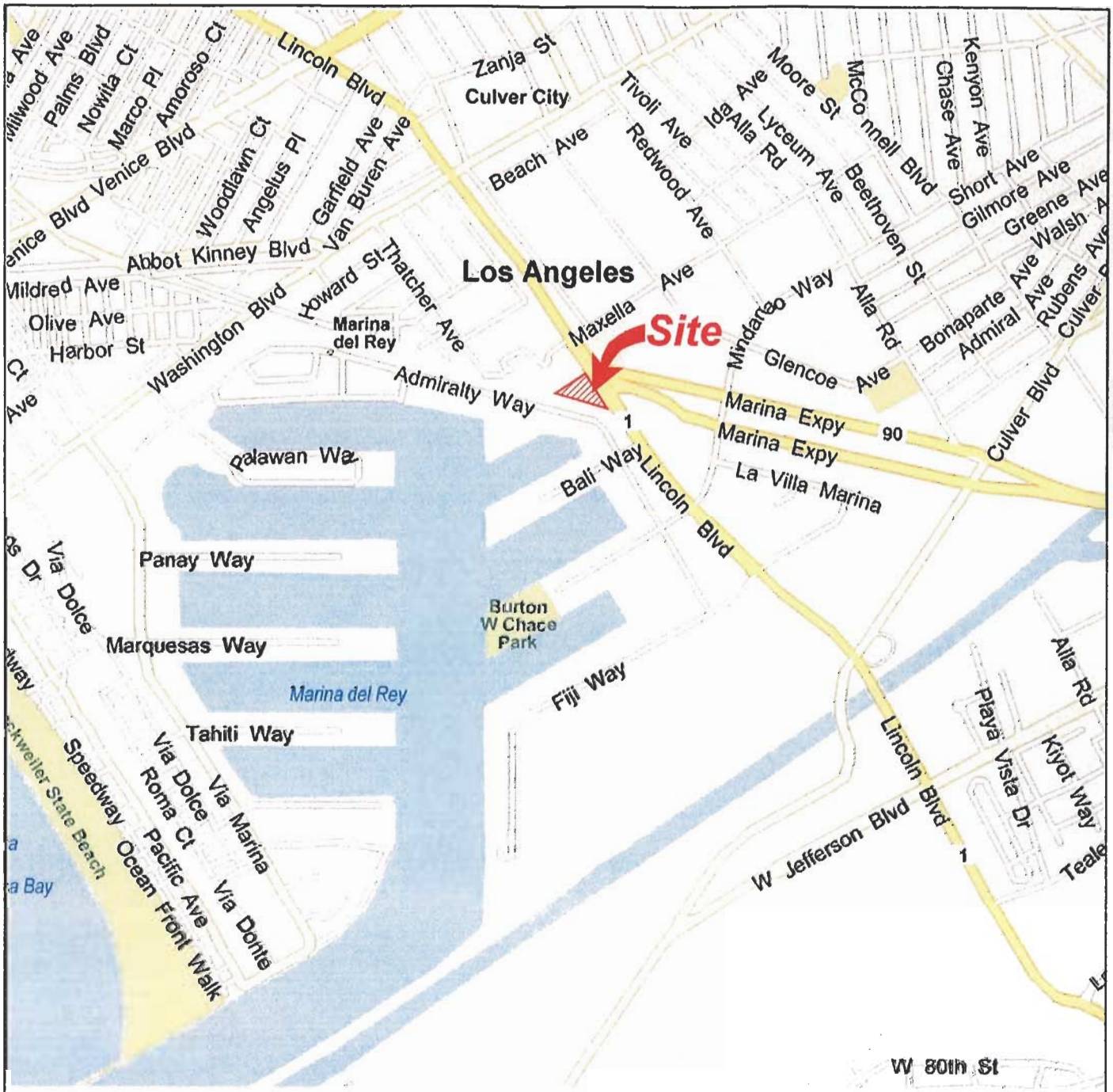
Level I: 0 - 100 ppm (0% to 0.01%)

Level II: 101 - 1,000 ppm (>0.01% to 0.1%)

Level III: 1,001 - 5,000 ppm (>01% to 0.5%)

Level IV: 5,001 to 12,500 ppm (>0.5% to 1.25%)

Level V: Greater than 12,500 ppm (>1.25%)



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Geotechnical & Environmental Engineers

Project Name: MDR Tower LLC

Date: August 2006

Site Location Map

Figure 1

Legend

P-2 — Methane Probe with Designation

<1,000 — Methane Concentration Below Detection Limit in Parts Per Million (ppm)

N

0 110 120 Feet

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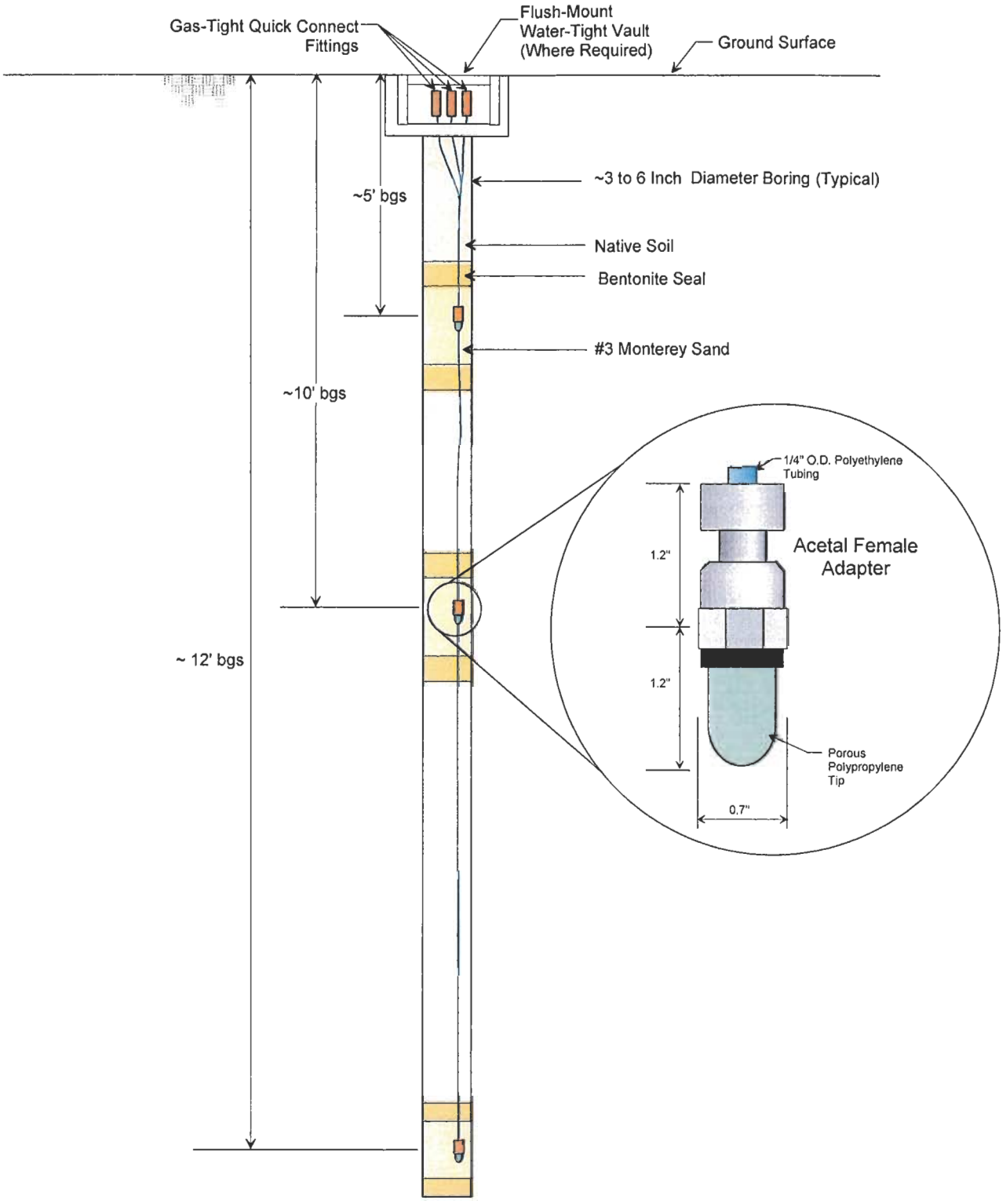
Date: August 2006

Site Plan with Gas Probe Locations and Maximum Measured Methane Levels

Figure 2



Note: Probe Depths May Vary From One Installation to Another Due to sub-surface Conditions.

Not to Scale

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Project Name: MDR Tower LLC

Date: August 2006

Typical Configuration of Gas Probe Installation

Figure 3

Attachment A

Methane Gas Investigation
Compliance Certificate

FORM 1 - CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 1: Certification Sheet

Site: MDR Tower, LLC

Address: 4363 S. Lincoln Blvd., Los Angeles, California.

Legal Description: APN # 4229-018-026

Building Use: Commercial (Car Rental Facility)

Name of Engineer:

Glenn D. Tofani
GeoKinetics

Mailing Address:

77 Bunsen
Irvine, CA 92618

Telephone:

(949) 502.5353

Registered Civil / Soil Engineer Stamp:

I hereby certify that I have tested the above site for the purpose of methane mitigation, and that all procedures were conducted in conformity with the requirements of the LADBS Methane Mitigation Standard. Where the inspection and testing of all or part of the work above is delegated, full responsibility shall be assumed by the licensed engineer or geologist whose signature is affixed thereon.

Signed: _____ **date** 8-22-06

Required Data:

- Depth to ground water: >12 feet below existing ground surface.
- Design Methane Concentration: <100 parts per million in volume (ppmv)
- Design Methane Pressure: ≤ 2 inches of water column.
- Methane Design Level: I

De-watering:

- De-watering not required.
- Pump discharge rate n.a. gallons per minute.
- Reference geology or soil report: n.a.

Additional Investigation:

- Additional investigation not conducted.

Latest Grading on Site:

- Date of last grading on site was: Years ago
- Explanation of the effect on soil gas survey results by grading operations: n.a.
- Building Excavation: Not Yet Initiated.