

## Nowell, Keith, Env. Health

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**From:** Nowell, Keith, Env. Health  
**Sent:** Thursday, May 19, 2016 3:46 PM  
**To:** 'Dennis Laduzinsky'  
**Cc:** Daniel Ross; Roe, Dilan, Env. Health  
**Subject:** RE: RO# 2914 - 988 Broadway, Oakland

Dennis,

Please submit the work plan to the Alameda County Environmental Health (ACEH) ftp site and the State Water Resources Control Board's (SWRCBs) Geotracker website.

Thank you,  
Keith Nowell

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**From:** Dennis Laduzinsky [mailto:dennis@ngem.com]  
**Sent:** Thursday, May 19, 2016 1:52 PM  
**To:** Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>  
**Cc:** Daniel Ross <DRoss@cimgroup.com>  
**Subject:** RO# 2914 - 988 Broadway, Oakland

Keith,

As a follow-up to our meeting at your office on May 11, I am providing the following work plan summary outlining the proposed indoor air testing program at the Courtyard Marriott Hotel, in Oakland.

We plan on collecting these samples on Monday, May 23, so your timely review of the work plan is appreciated.

Don't hesitate to call or email if you have any questions.

Thanks

Work Plan:

In order to evaluate potential impacts to indoor air at the Courtyard Marriott Hotel building at 988 Broadway in Oakland related to methane generated from degradation of residual petroleum hydrocarbons in soil beneath the site, two indoor air samples will be collected and analyzed for fixed gasses. One indoor air sample will be collected in a vacant commercial tenant space located just to the east of the hotel entrance along 9<sup>th</sup> Street (the approximate location where previous soil sampling along the sidewalk showed petroleum hydrocarbon impact). A second sample will be collected in a conference room located inside the hotel, in close proximity to the commercial tenant space. Proposed sample locations are shown on the attached figure.

Each sample will be collected using a 6-liter summa canister fitted with a regulator set to continuously sample indoor air over an approximate 8-hour time period. Canister pressures will be recorded at the start and at the end of the sampling period. Methane readings will also be recorded at the start and end of the sampling period in each room using a hand-held field instrument (Gastech Land Surveyor) calibrated for methane.

Following sample collection, each summa canister will be analyzed for methane, oxygen, carbon dioxide, and nitrogen using test method ASTM-D1946 at Torrent Laboratory of Milpitas, California. The method produces reporting limits of 0.001% (10 parts per million by volume, or ppmv) for methane, and 0.025% (250 ppmv) for oxygen, carbon dioxide, and nitrogen.

Test results for methane will be compared to generally accepted screening standards. The lower explosive limit (LEL) for methane in air is 5% (50,000 ppmv). Previous DTSC guidance has conservatively recommended 500 ppmv methane (1% of the LEL) in indoor air as a threshold concentration suggesting a need for further evaluation. Guidance documents generally recommend notification to the fire department at indoor air methane concentrations of 25% of the LEL (12,500 ppmv). Results of the testing program will be summarized in a written report showing sample locations and indoor air sample test results.



**Dennis Laduzinsky, C.E.G.**  
Principal

Northgate Environmental Management, Inc.  
428 13<sup>th</sup> Street, 4<sup>th</sup> Floor, Oakland, CA 94612  
direct (510) 839-0688 ext. 202; cell (510) 381-1189; fax (510) 839-4350  
<http://www.ngem.com/>



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