

Our Ref AMP/14862CO/2/JLJ

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London Borough of Hackney
Hackney Service Centre
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For the attention of Mr Steven Pye, Pollution Control Officer

By Email only –
steven.pye@hackney.gov.uk

Dear Steven

**STONE STUDIOS, 80 TO 84 & 88 WALLIS ROAD, HACKNEY WICK E9 5LN
- RADIELLO CARTRIDGE AIR MONITORING FOR VOC & SVOC**

This letter reports the findings of the second round of ongoing air monitoring around the boundary of the above site by RSA Geotechnics Limited, at the request of Telford Homes PLC.

1. Introduction

Groundworks are in progress at the above site and the excavation of the reduced level dig in Block A to facilitate construction of the basement commenced on 17 September 2018.

Earlier investigation of the site identified the potential for significant odour/vapour release during development. Recent CFA piling works have brought to surface hydrocarbon contaminated soils, as identified within the earlier site investigation. Some odours have been reported, and there is the potential for odour/vapour issues to increase during the bulk excavation phase for basement construction.

Air monitoring will be maintained for the duration of the groundworks by RSA Geotechnics Limited to assess concentrations of volatile organic compounds at the perimeter of the site during the bulk excavation works and enable the assessment of potential risks to off-site receptors. Radiello 130 passive diffusive sampling tubes have been installed at five locations round the perimeter of the site, to enable measurement of time weighted average concentrations of BTEX and VOC. Monitoring locations are as illustrated on drawing number 14862GI2/8.

Key volatile constituents of the contamination at the site were considered to be benzene and naphthalene, and these compounds have been adopted as markers for the initial assessment of contamination.

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The EH40 Workplace Exposure Limit (WEL) for 8 hour time-weighted average (TWA) exposure for benzene of 1 ppm (3.25 mg/m³) has been adopted for initial assessment. In the absence of a short-term (15 minute) exposure limit (STEL) a value equivalent to three times the 8 hour TWA is commonly adopted (3 ppm).

There is no UK WEL screening value for naphthalene. However, the US Occupational Safety and Health Administration (OSHA) sets a Permissible Exposure limit (PEL) of 10 ppm (50 mg/m³) for naphthalene in workplace air (8 hour TWA). The National Institute for Occupational Safety and Health (NIOSH) 'immediately dangerous to life or health' (IDLH) screening value for naphthalene in air is 250 ppm.

2. Fieldwork

The second round of monitoring discussed in this report was undertaken over a seven day period between 7 and 14 September 2018, prior to commencement of the bulk excavation.

3. Laboratory Analysis

The laboratory analysis included suites of both VOCs and SVOCs. The results were calculated as time weighted average concentrations.

Concentrations of VOCs were below the detection limit for the test method, of 1 µg/m³ (0.0003 ppm).

The only SVOC recording measurable concentrations was for naphthalene. Measurable concentrations were recorded at all five locations, with a maximum concentration of 110 µg/m³ (0.021 ppm).

Some limited measurable concentrations for SVOC TIC (Tentatively Identified Compounds) were recorded, with a maximum concentration of 262 µg/m³ (0.052 ppm) recorded for 1,2,3-trimethylbenzene. There are no UK screening values for the majority of these compounds, however the EH40 WEL (8 hr TWA) for trimethylbenzenes (all isomers or mixtures) is 25 ppm or 125000 µg/m³, so the recorded concentration is considered very low.

4. Conclusions

Time-weighted average concentrations of benzene in the atmosphere were below the detection limit for the test method, of 0.0003 ppm, and well below the adopted initial screening value of 1 ppm.

The highest measured concentration of naphthalene of 0.021 ppm was considerably below the OSHA PEL of 10 ppm.

The initial air monitoring indicates that there is no significant risk to human health from the measured concentrations. The monitoring is continuing at present.

Should you require any further information or assistance, please do not hesitate to contact us again.

Yours sincerely
RSA Geotechnics Ltd



Adrian Phillips, FGS
Technical Director

Encs Locations for Passive Air and Vapour Monitoring
– Drawing Number 14862GI2/8
Laboratory Test Report (ELAB, 18-19595)

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