18 May 2015

Mr Andrew Hanna
Statewide Planning Pty Ltd
Level 2
7 Charles Street
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Attention Andrew Hanna
Subject: Advice on Environmental Contamination Report prepared for:
677-687 Canterbury Road, Belmore NSW

Review Comments

The purpose of this letter is to draw your attention to the key issues regarding contamination and future management of that contamination at the subject site based on our review of the following documents:

- Stage 1 and Stage 2 Environmental Site Investigation, 20 March 2014, Geo-Environmental Engineering Pty Ltd (Stage 1 & 2).
- Remedial Action Plan, 21 May 2014, Geo-Environmental Engineering Pty Ltd (RAP).

The following presents the key issues identified.

Lead Contamination in Soil and Waste Classification

The concentration of lead (Pb) at borehole 26 (BH26) in the surface soil/fill material beneath the existing concrete slab is a contamination hotspot. The concentration was 6,000mg/kg compared to a land use criterion of 1,200mg/kg. The additional testing of soil material from the same sampling container showed that the average Pb concentration was 3,500mg/kg in the soil sampling container.

Both reports incorrectly classify the Pb impacted soil as "Restricted Solid Waste" (RSW). The soil material should be correctly classified as "Hazardous Waste" (HW) in accordance with Table 1 of the NSW DECCW Waste Classification Guidelines 2009 because the average Pb concentration exceeds the CT2 threshold of 400mg/kg. In accordance with Table 1, a classification of RSW can only be given if the total Pb concentration is equal to or below 400mg/kg. Alternatively, in accordance with Table 2, a classification of RSW can only be given if the total Pb concentration is equal to or below 6,000mg/kg and the leachable concentration of Pb is equal to or below 20mg/L. At present the impacted soil shows significant Pb concentrations and therefore to conclude the waste to be RSW

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assumes that the highest concentration of Pb in the soil has been found, yet does not account for the uncertainty associated with other soil materials being highly leachable or containing a concentration of Pb higher than 6,000mg/kg. This would be a significant issue and may only become apparent from additional sample analysis or during earthworks to remove impacted soil.

The reports do not discuss the source of the Pb contamination nor do the reports recommend delineation of the Pb impacted area to quantify the contamination. Sources of Pb could be from paint, slag-type waste or spent batteries (to name a few common sources) that may be legacy issues from historic activities. These sources are common at industrial sites and typically show a propensity to leach. The reports provide an estimated quantity of 100m^3 of Pb impacted soil, however this value is not justified nor are any calculations provided on how this value was estimated.

If the estimated quantity of 100m^3 is used as provided in the reports; then 100m^3 would total approximately 170 tonnes (at 1.7 tonnes per cubic metre). The disposal rate at a licenced landfill for RSW is approximately $450/tonne (excluding loading and haulage) and will increase on 1st July 2015 by approximately 5%-10%. Therefore the disposal of 170 tonnes of RSW would be approximately $76,500 (ex GST) at today's rate and potentially $84,000 after 1st July 2015.

In our opinion, the Pb impacted area needs to be delineated and the leachability of Pb needs to be verified to provide accurate information for the estimation of remediation costs.

Groundwater Quality

The Stage 1 and 2 report states that groundwater would flow in a northwest direction. If this is the case then any leakage from the underground tanks (USTs) from the former service station at the southwest corner of the site would not be intercepted by the groundwater wells BH3 and BH4 because groundwater would flow away from these wells. The groundwater results may not be a true indication of potential groundwater impacts because the existing wells are located up-gradient or cross-gradient of the old USTs. More suitable locations would be down-gradient of the former service station area. This may be a significant information gap that may need to be further investigated.

Other Issues

The chemical benzo(a)pyrene (B(a)P) was concluded in the reports to require remediation because it was presenting a risk to ecological receptors. The reports should have taken into account that statistical analysis to calculate the 95%UCL of the mean of B(a)P would make the risk a redundant issue and therefore remediation to address this issue would not be warranted.

For waste classification purposes, the leachability of B(a)P, as well as Pb suggested above, must be analysed to reflect an accurate waste classification.

The reports have overlooked other important contamination sources from current and historical activities that may have an overall bearing on the condition of the site, including:

- Demolition of building structures containing asbestos and other hazardous materials including Pb paint that can remain onsite in the surface fill material under concrete slabs.
- The electrical substation present at the eastern boundary of the site containing oils that may leak and impact local soils with PCBs and hydrocarbons.

Review Limitations

This report has been prepared solely for the use of Statewide Planning, and only Statewide Planning is entitled to rely upon the findings in this report within the scope of work described in this report.

Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

The investigations carried out for the purposes of the report have been undertaken, and the report has been prepared, in accordance with normal prudent practice and by reference to applicable environmental regulatory authority and industry standards, guidelines and assessment criteria in existence at the date of this report.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Sullivan-ES for use of any part of this report in any other context.

This report was prepared on 18 May 2015 and is based on the information reviewed during the time of preparation. Sullivan-ES accepts no responsibility for any changes in site conditions or in the information reviewed that have occurred after this period of time.

Where this report indicates that information has been provided to Sullivan-ES by third parties, we have made no independent verification of this information except as expressly stated in the report. We assume no liability for any inaccuracies in or omissions to that information.

No sampling or laboratory analysis has been undertaken as part of this investigation, and as such we do not guarantee that contamination does not exist at the site.

Yours Sincerely
Sullivan Environmental Sciences Pty Ltd

Adam Sullivan
Principal Scientist
BSc, PG Cert. Env. Law