

## Jacky Chan Keung-Ngai

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**From:** wallaceng@epd.gov.hk  
**Sent:** Friday, May 24, 2013 5:39 PM  
**To:** raymondlai@epd.gov.hk  
**Cc:** lokfaichan@cedd.gov.hk; Jacky Chan Keung-Ngai; gretam@epd.gov.hk  
**Subject:** Re: Fw: 209840: LMC Loop EIA - Proposed Acceptance Criteria for Sediment Reuse

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Raymond,

We refer to the consultant (Arup)'s email on 23 May 2013 enclosing the part report "Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation, EIA Report - Section 7.5.1.5: Sediments from Meander" regarding the captioned project.

From the perspective of sediment management framework, we support the beneficial reuse of treated sediment as fill material for in-situ backfilling. We have no objection to the Arup's proposal on sediment treatment methodology (i.e. cement stabilisation/solidification remediation method) and testing requirements (i.e. Universal Treatment Standards (UTS) and Unconfined Compressive Strength (UCS) Standard) making reference to the acceptance criteria as described in the "Practice Guide for Investigation and Remediation of Contaminated Land", provided the proposal would not result in any environmentally unacceptable impact giving due consideration of all relevant environmental ordinances.

Regards,

Wallace Ng  
Environmental Protection Officer  
Water Policy and Science Group  
Environmental Protection Department

Jacky Chan Keung-Ngai <[keung-ngai.chan@arup.com](mailto:keung-ngai.chan@arup.com)>

23/05/2013 12:15

To "gretam@epd.gov.hk" <[gretam@epd.gov.hk](mailto:gretam@epd.gov.hk)>  
cc "lokfaichan@cedd.gov.hk" <[lokfaichan@cedd.gov.hk](mailto:lokfaichan@cedd.gov.hk)>, Sam Tsoi <[sam.tsoi@arup.com](mailto:sam.tsoi@arup.com)>, Thomas Chan <[thomas.chan@arup.com](mailto:thomas.chan@arup.com)>, Alex Ngai <[alex.ngai@arup.com](mailto:alex.ngai@arup.com)>, Shirley Ho <[shirley.ho@arup.com](mailto:shirley.ho@arup.com)>

Subject 209840: LMC Loop EIA - Proposed Acceptance Criteria for Sediment Reuse

Dear Ms Tam,

As discussed, we are the consultant preparing the EIA of Lok Ma Chau Loop. As presented in the Waste chapter of EIA, sediment would be generated from the Project. Sediment sampling and testing had been carried out according to the approved Sediment Sampling and Testing Plan (SSTP). Sediment quality Category H is classified (Detailed please refer to enclosed EIA – waste

chapter, Section 7.5.1.5, "Sediments from Meander").

As part of the sediment is proposed to be reused on-site after cement stabilization/solidification, the acceptance tests Toxicity Characteristic Leaching Procedure (TCLP) and Unconfined Compressive Strength (UCS) is proposed. The acceptance criteria are also proposed and are shown below.

Acceptance criteria of TCLP and UCS tests

Parameter	Criteria <sup>Note 1</sup>
<b>TCLP Test</b>	
Copper (Cu)	Note 2
Nickel (Ni)	11mg/L
Zinc (Zn)	4.3mg/L
Arsenic (As)	5mg/L
<b>UCS Test</b>	
UCS	≥1000kPa

Note: (1) Reference to EPD's "Practice Guide for Investigation and Remediation of Contaminated Land".

(2) According to the Table 4.6 of EPD's "Practice Guide for Investigation and Remediation of Contaminated Land". The criteria for Copper must be reduced by at least 90 percent in mobility for metal through cement stabilisation/solidification remedial treatment. The reduction of mobility of metal contaminants (leachable metals contaminants) should be confirmed through TCLP tests (i.e. to carry out TCLP test for the untreated soil and for the soil after treatment and to compare the concentrations of the metals in the leachate).

Due to the tight schedule of EIA submission, it would be much appreciated if you could advise your comment, if any, by tomorrow (24 May 2013).

Should you have any further information, please feel free to contact us.

Thanks!

Regards,

**Jacky Chan**

Consultant | Consulting

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[attachment "S7.5.1.5 - Waste\_Sediment.pdf" deleted by Wallace HW NG/EPD/HKSARG]