



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_4500
Title of the Manuscript:	HEAVY METAL POLLUTION OF IN-SITU AND SURROUNDING SOILS PROFILES AT MUNICIPAL SOLID WASTE DUMPSITE
Type of the Article	Research paper

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	This is a prospective study that analyzed the factors associated with heavy metals. The arguments constructed for introduction requires more updated articles to be included. No standards like BS or HS mentioned here to run the test. (this needs to be clearly mentioned). The authors mentioned or tried to show that limitations of the research does not exist. So extra efforts to make it manifested in the write up. The authors performed insightful conclusions and managed with limited effort to describe his or her future research plans. But unfortunately it is not clear in some areas where the research described in this article will lead and what the next step will be. I suggest little effort can progress it positive towards proper output. So use the results to strength the output of the work and use the graphs to support the argument. Looking at the Assessment of heavy metal (HM) Contamination in Soil Profile, the CF drive to confuse the figure of HM concentration of natural local background soil (mg/kg). As the HM concentration of natural local background soil (mg/kg) is required to set and clearly should be given. Authors' conclusion significant and it is just a rehash of the paper. It provide insights and leaves the reader look forward to the research domain. This suggests professionalism in the way of presentation. So no further comments on conclusion. The concentrations of the nine heavy metals (Cu, Mn, Ni,	These were added ASTM standard was used Limitation definite lyexisted The comment is noted although the explanation was not specific for clearer comprehension. However the purposes of the article have been advanced to clearer, definite conclusion. To plot means of HM @ WDS and CS Since CF is based on prestine values from a clearly unpolluted soil, HM properties from an entirely new site was used to demonstrate the HM concentration in polluted and control soils to obtain required unbiased CF for comparison. Mg/kg was used Typographical errors were discovered and corrected both in table and in text. Line 165n : Cd has been added (it was missed out in enor);



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	Fe, Pb, Ar, Cr, and Bo) in line 165 that looks to me the Cd is missing. Some figures in table 1 that standard deviation is 75.98 for Table 1: Heavy Metal Contents of the Polluted and Control Soils at Old Stadium Road Dumpsite, Uyo. This statement in line 190 “Values for Manganese (Mn) ranged from 1024.0 – 1059.0 mg/l with a mean of 1426.8mg/l in WDS” requires recalculation of the mean The authors had to recalculate the following “Boron (Bo) which values in line 216, 217,218,219 ranged from 0.05 -0.15mg/l with a mean of 0.96mg/l in WDS, and between 0.01 and 0.08mg/l with a mean of 0.03mg/l in CS was significantly higher in WDS than in CS, suggesting that the waste could cause Botoxicity in the soi”	line 18. an Former lines 180 – 185:(All units in mg/kg except Cv in %) Data entries in table 1 were rechecked with original manuscript and corrections were made. Under line 182 (Table 1),BO under polluted “mean” was corrected to 0.0096 and rounded up to 0.01mg/kg (not 0.096). In line 190, “Manganese range have replaced the Nikel values placed there in error of duplication. (Ni values are given below (former Ln 193-196).
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<u>Minor</u> REVISION comments	1. Kindly recalculate the “Table 2: Pearson Correlation Coefficients of Heavy Metals themselves and with Particle Sizes and Soil pH at Dumpsite Soil ” in line 242 as pearson correlation coefficients is not following normal pearson pattern when axial and horizontal are exchanged. 2. Table 3 I suggest to rename it as t-values 3. Regarding 3.6 Essential of HM to Crop Production all para was not justified its output. I suggest to add two lines of their opinion to make the paragraph reflecting justification. As it looks it could be dissolve in 3.4 4. No comments on conclusion	Line 241 (242 – former) Correlation. Re-calculation was made for HM in two sites between the lower and the upper layers of soil profile polluted (soil WDS). Representationwere made in new Table 2 (soil WDS and control CS. Correlation with soil particle sizes was re-evaluated or discussed. The pH was left out in the corrections table, since insitu WDS soil was observed to be alkaline earlier and had negative coefficient except with sand and BO. Cu which was mistakenly left out previously was included. Table 2 was changed to table 3 to allow new table 2 (former table 3) to be close to table 1 for easy cross-reference in discussing significance and HM variability together. Line 259 (former table 3) was re-named as suggested and changed to table 2, next to table 1 for easy cross reference in discussing values of HM in table 1 w.r.t. significant differences in HM.Recommendation is added.
<u>Optional/General</u>comments	Recommendations for further study is missing and accordingly it is ideal to add small paragraph to combine it with conclusion. Any reader would like to know about Nigeria, Uyo. Then little information is required with special idea about the sampling.	GENERAL COMMENTS 1. Abstract was reduced. 2. New 2.1 section was added on information on study site. 3. References: New, more relevant references were added and some old ones deleted (including former nos. 3, 6, 18, 19, 20, 23, 28, 30, 31 and 32).



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		4. The scope or limitations were inserted in the introduction. 5. The objective specified the target distance of the surrounding area (100 – 120m based on Fig. 1) to be compared. 6. Fig. 1 (new) is the study site map, added as required by the Reviewer. 7. Former Fig. 1 was changed to Plate 1. 8. Standard for soil particle analysis – ASTM D422 was added. 9. Equation 3 was made to stand out from the text under sub-section 2.3. 10. Correlation was elaborated and new Table 3 added. 11. New Table 3 gave HM correlations for both layers of the profile. 12. New Table 2 was the t-values, moved up from old Table 3. 13. New 3.3 was elaborated. 14. Background values use for elemental CF was added. 15. New Fig. 2 was a graph of mean HM at both sites, replacing the Bar charts of old Fig. 2. 16. HM was elaborated to emphasize
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		results or effects of the HM or justify suggestions. 17. Former section 3.6 was made redundant and information relating to HM pollution effect on agriculture at WDS and CS were merged with new 3.5, which section title was modified. 18. Conclusion was made more poignant with facts observed. 19. Relevant recommendations were made. 20. Sentences were generally reconstructed to emphasize the points or justify suggestions.
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