



SDI Review Form 1.6

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_5733
Title of the Manuscript:	Markers of Environmental Health: Nickel and Chromium Levels in Soil and Vegetation around a Steel Recycling Facility in Southwest Nigeria
Type of the Article	Research Paper

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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



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PART 1: 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	Abstract Aim is what the researcher intends to do and not what has been done, so the aim should be rewritten. Methodology should be clearly stated so that one can try it. Under the result “Nickel concentrations were increasing up to 200m and then decreased”, this statement is not clear, does it mean Ni levels increase from the Factory to a distance of 200m and then starts decreasing. If so, I doubt the result because it is expected that the levels will be more at the factory and decreases as one moves away so as to tarry with the electrical conductivity and also to prove that steel recycling is the source of the metals.	Aim: The aim had been re-written following the journal template. Methodology: Specific methods of analyses as indicated in the materials and methods of the full test have been included here as well. Results: The statement has been re-written for clarity. The concentrations of both metals first increased with increasing distance from the factory. This is probably because the air-borne metal particles in the fumes emitted from the furnaces were carried and deposited on the soils closer the factory than farther away. However, higher concentrations were observed where the direction of the wind was prevalent during the period of the study i.e. in the northern and eastern side of the fenced recycling facility. This fact was stated in the discussion in agreement with the observation of some researchers.



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	Introduction Lines 42 – 45, should be properly written. The English is poor. The entire introduction is poorly written, very scanty in information. More information on public health should included, so as to conform with the title. Material and methods 1. Lines 63 – 65 may be due to simple dilution. 2. 2.2 should read “soil analysis” since 2.1 is “sample collection” 3. Drying for 8 days must have introduced some error into the result as some metals must have volatilized. Sine the sampling was done in dry season; it means that the soils were already semi dry, only small weight is needed since it is a micro analysis, 24- 48hrs drying is enough.	Introduction Line 42 – 45 had been re-written and the omissions corrected. This has been revised and included. Materials and Methods 1. Comment is noted. 2. Corrected 3. The soils were moist especially at lower depth as collected by the auger. So they were air-dried to constant weight at room temperature under shed to make grinding and sieving easier. Comment is however noted.
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	Result and discussion 1. Who is to carry out lines 99 –101? 2. Lines 105 – 106, Explain the difference between “moderately to slightly” and also between “acidic” and “pH” condition. 3. Lines 106, “This is typical of most African soils”, how is Asian, European, American soils are? , the statement is not scientific, it sounds political. 4. Lines 106 – 108, the pH of 7-5-9.0 is still moderate alkaline, if you call pH of 8.80, strong alkaline, then what do you call pH of 10 – 14? 5. Lines 114, is there any type of soil known as “sandy clay loamy”? 6. Lines 118 – 119, type of soil micro organism studied was not stated, to authenticate the claim of decreasing microbial activity with increasing heavy metal level as some microbes has been utilized in bioremediation of heavy metal contaminated soil.	Results and Discussions 1. The error has been deleted. 2. The classification of the soil pH values is given by the United States Department of Agriculture Natural Resources Conservation Service. The classification is retained. 3. Reference has been included. 4. As explained in comment 2 above by the United States Department of Agriculture, soil pH > 9.0 is regarded as Very Strongly alkaline. So the comment is retained. 5. Yes. The soil textural triangle according to United States Department of Agriculture was used in the classification and was retained. 6. No micro organism was used in this study. Hence, the statement has been modified to quote a research work of this fact.
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	7. Lines 150 – 151, the metals once in the soil are embedded within the soil matrix and not on the surface hence the necessity of digestion before analysis, so wind direction cannot have significant effect on the metal concentration. 8. Line 168, “were very variable” conveys no meaning, so re-write. 9. Tables 1 and 2 can be merged into one table while tables 3 and 4 can be merged into a single table. References 1) Lines 119 “Huang et al 2009” is not in uniformity with others. It should be referenced as [5] 2) Lines 119 – 120, Huang et al, year of publication is 2009, but in lines 235 – 237, year of publication is 2008, so clarity properly 3) Most references under discussion were not properly cited.	7. Yes. The metals could have been volatilized as observed in the thick untreated fumes from the furnaces of the factory. This study attributed the increased concentration of the metals outside the factory to deposition of the metal particles on the soils as carried by the wind. 8. Corrected. 9. The authors prefer to separate the tables for clarity. References 1. Corrected 2. Corrected 3. Corrected
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	e.g Line 127 – 122, “... Reported by [13]”, line 139,, “.. Observations of [16, 17]”, line 172, “... reported by [13]” line 173, “.... Those of [193]” It should be stated as “reported by Akpoveta et al, 2010 [13]”, observation of Cartwright et al, 1997, Al – khashman and shawabkeh 2006 [16, 17], and those of Brigden et al, 20008[19]. Digit numbers cannot report or observe, they are none living. 1. The manuscript is poorly written. 2. English language expert to revise after correction. 3. Other common metals such as lead, cadmium,iron and manganese should also be studied for comprehensiveness. 4. The scientific and technical quality should be greatly improved.	Corrected Corrected Corrected Re-written Comment was noted and appropriate corrections has been effected. This study only serve as a marker and a comprehensive study on the study area is been conducted. All the comments and suggestions have been effected to address the quality of the research.
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<u>Minor</u> REVISION comments	Include more write up in environmental and public health to conform to the title	Corrected.
<u>Optional/General</u> comments		