



**SDI Review Form 1.6**

**PART 1:**

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| Journal Name:            | <a href="#">British Journal of Applied Science &amp; Technology</a>                                                      |
| Manuscript Number:       | <b>MS: 2013_BJAST_3244</b>                                                                                               |
| Title of the Manuscript: | <b>EVALUATION OF NATURALLY OCCURRING RADIONUCLIDE MATERIALS FROM SOLID MINERALS PROCESSING IN ZAMFARA STATE, NIGERIA</b> |

**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 9 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compulsory</b> REVISION comments | <p><b>The significant figures of the experimental results for the activity concentration and absorbed dose rate should be reviewed throughout the text.</b></p> <p><b>The "Introduction" section is too long and contains parts that are not strongly related to the objectives of the paper. Example: line 79 to 84 of page 3 gives non-relevant information.</b></p> <p><b>The objectives of the paper are not presented in the "Introduction" section.</b></p> <p><b>In the "Material and Methods" section the authors should give identification of the soil sampling location (geographical coordinates).</b></p> | <p>Experimental results for the activity concentration and absorbed dose rate reviewed to 2 d.p. throughout the text.</p> <p>Lines 79 to 84 deleted and replaced with "The main objective of this study is to identify and quantify prominent gamma emitting-NORMs associated with mining activities in Zamfara State, Nigeria using gamma spectroscopy system at Centre for Energy Research and Training, Ahmadu Bello University, Zaria Nigeria."</p> <p>The "Material and Methods" section now begins with "The study site is located in Zamfara State, northwest Nigeria between 006°30'11" – 007°00'03" E of the longitude and 12°39'18" – 12°46'01" N of the latitude"</p> |
| <b>Minor</b> REVISION comments      | <p>The title of the paper is not accurate, since what the authors are measuring are radionuclides in soil samples and not in materials from solid minerals processing.</p> <p>Abstract: The first paragraph should be rewritten. The word "absorbed" should be excluded.</p> <p>The text needs a thorough language revision. For example: Rephrasing is needed from line 76 to 78 on</p>                                                                                                                                                                                                                               | <p>Title of the paper "BASELINE MEASUREMENT OF NATURAL RADIOACTIVITY IN SOIL SAMPLES COLLECTED FROM SOME MINE SITES IN ZAMFARA STATE, NIGERIA"</p> <p>The word "absorbed" excluded.</p> <p>Rephrased.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



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|  | <p>page 3, and from line 69-70 on page 3.</p> <p>Units should be given in lower-case letters, for example “cps” instead of “CPS”, “Bq kg<sup>-1</sup>” instead of Bq/Kg.</p> <p>In Table 2, it is not necessary to present “gross counts” and “net counts”; it is enough to give the final results of activity concentration (Table 3), but the significant figures should be reviewed.</p> <p>The dimensional analysis of equation 2 is not correct. <math>A_c</math> is not given in Bq kg<sup>-1</sup>.</p> <p>Figures 2, 3 and 4 are not necessary and should be excluded, since they do not add any important information.</p> <p>In the “Results and Discussion” section, line 247, page 12, the U-238 concentration of 18.980 Bq kg<sup>-1</sup> should not be considered as a high value, since it is lower than the soil world average activity concentration reported from UNSCEAR (2000).</p> <p>In the “Results and Discussion” section, it is not necessary to repeat in the text the result of activity concentration for all samples analysed. I suggest a more comprehensive discussion taking into account mean values and corresponding standard deviations for K, U and Th, respectively.</p> <p>In the “Conclusion” section, the results of annual effective dose should be presented as a range and not as an average dose.</p> | <p>Rephrased.</p> <p>Units are now given in lower-case</p> <p>Table 2 deleted and figures on table 3(now table 2) reviewed to 2 d.p.</p> <p>The unit of <math>\sigma</math> on table 2 is cps/Bqkg<sup>-1</sup>. It follows that the unit of <math>A_c</math> is Bqkg<sup>-1</sup>.</p> <p>Figures 2, 3 and 4 excluded.</p> <p>Treated</p> <p>Treated</p> <p>The annual effective dose rates in air at the study area range from 0.052 - 0.106 mSv.y<sup>-1</sup>.</p> |
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| <b><u>Optional/General</u></b> comments |  |  |