



SDI Review Form 1.6

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| Journal Name: | Current Journal of Applied Science and Technology |
| Manuscript Number: | Ms_CJAST_39145 |
| Title of the Manuscript: | Outdoor gamma dose rates and excess lifetime cancer risks due to exposure rates at Salt Water Lakes, Ebonyi State, Nigeria |
| Type of the Article | Original Research Article |

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) |
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| Compulsory REVISION comments | <ul style="list-style-type: none"> The authors have done a good literature survey and the important results about HBRA have been quoted in the text, which is highly appreciable. Typographical errors throughout the manuscript are to be corrected. Eg. Line Nos. 31, 48, 80 etc.. The original readings taken for this study may be included in this manuscript. The atmospheric condition during the experimental period of 3 months duration will have much influence in the radiations exposure dose and which may also be analysed before arriving a conclusion about societal interested findings like radiations, pollution, etc. Also the 3 months data cannot be compared with the annual dose rate. The suitability of SPSS software package analysis for such scientific findings is not advisable. The authors may use some other method for more effective numerical data analysis technique. Is there any attempt is made to identify the nuclides which causes the said background radiation? | <ul style="list-style-type: none"> Typographical errors have been corrected. For the original readings: the frequency distribution histogram curves in Fig.1 and Fig 2. for Okposi Okwu and Uburu salt lakes environment respectively have provided enough information on the mean and standard deviation of the 31 sampled locations; including the coefficient of variations which describes how data sets are widely or closely dispersed. The coefficient of variation also describes how homogeneous or heterogeneous the data sets are. However, we have included the original readings. The data was gathered in dry season between December to February, regarded as dry season in the study area. One of the major factors is temperature condition which was utmost considered. The readings were taken within a temperature range for each day of measurement. Other atmospheric/environmental conditions were necessary, however, were not considered in our measurement. Our focus is outdoor exposure to ionizing radiations emanating from or within the salt lakes within the NCRP recommended hours of 1300 to 1600 within the temperature range of -10°C to 50°C. December, January and February are the peak of dry season in the sampled locations. The exposure rate monitoring meters have maximum response to environmental radiation within the hours of measurement during these months of the year. This was responsible for the choice of carrying out the investigation within these months. However we hope to carry out comparative study comprising of raining and dry seasons which the next research study intend to explore. The study was considered preliminary subject to further investigation and expansion of the already reported scope. We considered the use of SPSS software package more appropriate for the distribution of frequency histogram among few other. However, we have taken note to use some other methods as suggested for more effective numerical data analyses. Two possible technique of measuring background ionizing radiation in environment are either <i>In situ</i> measurement using nuclear radiation or survey meter or collection of soil samples, prepared and stored in laboratory to determine the radionuclides whose half lives are comparable with the age of the earth and thereafter, determine the gamma dose rates associated with the radionuclides of interest. |



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| Minor REVISION comments | | |
| Optional/General comments | <i>Proper approval from the local administration/ Govt. of the study area must be obtained before publishing the result.</i> | |