

Review Form 1.7

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| Journal Name: | Archives of Current Research International |
| Manuscript Number: | Ms_ACRI_104119 |
| Title of the Manuscript: | RADIOLOGICAL SAFETY ASSESSMENT OF AGRICULTURAL SOIL WITHIN THE BITUMEN BELT OF ONDO STATE NIGERIA, USING RESRAD-ONSITE AND RESRAD-BIOTA CODES |
| Type of the 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:

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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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| <p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p> | <p>RADIOLOGICAL SAFETY ASSESSMENT OF AGRICULTURAL SOIL WITHIN THE BITUMEN BELT OF ONDO STATE NIGERIA, USING RESRAD-ONSITE AND RESRAD-BIOTA CODES</p> <p>The introduction is complete and capable of attracting the reader's interest. It is not over-the-top and emphasizes the essentials. With regard to the investigations, it was clearly clarified in which direction this investigation is pointing due to the influences on radiation, here mainly gamma-ray.</p> <p>Furthermore, it becomes clear how 'Betumen' creates the radiation exposure paths. Already in the introduction, the geographical location – located close to the hygric equator – is given exactly. The data measured in the study were compared very precisely – also with the estimated data – emerging in the evaluation. The connection risk of cancer and the effects of radiation have already been emphasized there. In addition the authors refer to the US-DOE for evaluating contaminated substances.</p> <p>Since the bitumen belt across Ondo, Ogun, Lagos, and Edo states has over 42 billion tonnes of deposits it is the second-largest in the world and significant. The communities where the research took place are explicitly mentioned and given precisely geographically.</p> <p>Performance</p> <p>Here the authors introduce a reference to the attributed to the decay of natural radionuclides of the 238U – Uranium and 226Ra – Radium in 232-nd series and 40K – Sodium-series – present in the earth's crust, soil, air, water, building materials, human body, and food.</p> <p>The writers do not forget to point out the increased risk as very important for medical professionals. As known already radio-activity is reportedly in Nigeria's Ondo state and much of the coastal land was reportedly considered unsuitable for crop production, compounding the existing economic plight of local farmers</p> <p>It was given, Bitumen-treated lands in Nigeria's Ondo state are reportedly radioactive and much of the coastal land was reportedly considered unsuitable for crop production, compounding the existing economic plight of local farmers unit Gy – Gigayear? (J / kg ≡ m2 / s2) what does the question mark mean ?</p> <p>The 'Gray' with symbol Gy is the unit of ionizing radiation dose in SI, defined as the absorption in the, generally strange appearing for physicians, (J / kg ≡ m2 / s2) comparable to Sievert, Sv.</p> <p>Materials and Methods</p> <p>The Samples Collection together with the preparation were presented extensively and very understandingly; the Figures (called "maps") underline exactly the situation, the abbreviations i., e, NIRPR, NNRA are well indicated. The spectroscopy of gamma-ray – is forcefully and the amplified detector and its</p> | |

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| | <p>calibration rational.</p> <p>Equations and Models for Terrestrial Systems</p> <p>An evaluation with the computer program is essential and necessary to evaluate the results due to the equations. A calibration on Cesium and Cobalt – generally ^{27}Co – as a basis and the stated energies are correct and all displayed in eV.</p> <p>Results and Discussions</p> <p>The presentation of the extensive tables fully meets the reader's expectations.</p> <p>This paper represents a very valuable contribution to current medicine, human and the world's community, regarding the impact of radioactivity. It is clear, never "boring" and fluent.</p> <p>Prof. Dr. Dr. Dr. Tom George Manfred de la Rue-Gerlitz</p> <p>Vicerector, The University of Panamá</p> | |
| <p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p> | | |
| <p>Optional/General comments</p> | | |

PART 2:

| | 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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| <p>Are there ethical issues in this manuscript?</p> | <p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p> | |

Reviewer Details:

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|---|---|
| <p>Name:</p> | <p>Tom George Manfred de la Rue-Gerlitz</p> |
| <p>Department, University & Country</p> | <p>University of Panamá, Panamá</p> |