Review Form 1.6

Journal Name:	**Current Journal of Applied Science and Technology**
Manuscript Number:	**Ms_CJAST_77384**
Title of the Manuscript:	**Eisenia fetida Squirms Biased Bioremediation of Pyrene and Indeno(1, 2, 3–cd)Pyrene Soil and Petroleum Wastewater Contamination**
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://peerreviewcentral.com/page/manuscript-withdrawal-policy)

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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	**Thank you for the opportunity to review this manuscript with a very important theme.** **I really like Bioremediation technology a lot!** **I hope to contribute to the success of this paper!** **Summary: Put an introduction to this topic.** **Introduction: need to talk a little about conventional remediation techniques for this type of pollutant to prove the advantages of bioremediation and compare with chemical and physical methods of remediation. And that's written at the beginning of the introduction. It is important to speak of conventional remediation methodologies to also make a correlation with the discussion and conclusion where bioremediation was also compared with conventional physical chemical remediation methods.** **If I may, here is a guideline: Normally, a good introduction needs at least 4 paragraphs these paragraphs need the 4 elements:** **1- Describe the research topic in a broad way.** **2- Describe the problem that needs to be solved.** **3- Describe a solution to solve the problem (which is the procedure performed at work).** **4- A closing of the introduction stating the objective of the work and how the work will be done..** **I also suggest making three new topics:** **Topic 1 - Write about Bioremediation (subtopic talking about earthworm; vermiaccumulation)** **Topic 2 - write about conventional methods of remediation.** **So that the discussion of the work has arguments to make a comparison between the two technologies.** **Topic 3 – write about pollution by hydrocarbons in the form of petroleum and petroleum products with subtopic talking about the negative impacts on the environment and living beings (carcinogenic and/or mutagenic action, for example).** **Materials and Methods – were items 2.2 through 2.8 based on any references from the literature? Describe what was the basis (where did the idea of procedures come from?) for the methodology used in the research work.** **Item 2.3: As for the petroleum wastewater samples "(acidified) in place with 120 cm3 concentrated H_2SO_4 to bring the pH to ≤ 2" . Why acidify???**	

	How much E. fetida (earthworm) was used in the bioremediation process? **“Pyrene (Pyr) and Indeno (1,2,3–cd) Pyrene (Ind)”. Among the POPs, why were Pyr and Ind chosen to develop this research work?** **Discussion** **There are texts that are not part of a discussion, in a discussion the data from the present research work and the data from the literature are discussed, whether you agree or not.** **The 1st paragraph is not discussion. This paragraph can be taken for introduction or for topic 3 suggested in this review.** **The same for what vermiaccumulation is, this explanation of the vermiaccumulation process should be in topic 1 suggested in this review.** **“These contaminants pose a variety of health and environmental hazards” This part could also go to topic 3 suggested in this review.**	
Minor REVISION comments	**The characterization of environmental contamination by hydrocarbons can be performed by different analytical methodology depending on the sampling strategy. Existing methods are based on chromatography (gas and liquid) with detection by flame ionization (GC/DIC) or associated with mass spectrometry (CG/EM) – the latter is the required method for identifying and quantifying PAHs. Why was gas chromatography mass spectrometry (GC-MSD) used?? Clarify this in the text.** **How to know if in fact it was the earthworms that removed Pyr and Ind from the samples used in the procedure? Since there are microorganisms too. How much did these microorganisms bioremediate compared to earthworms. I could talk a little more about this issue in the discussion.** **NOTE: And as I suggested in topic 1, it will already be clear that microorganisms also do bioremediation when this fact is discussed.**	
Optional/General comments	**Need to put some information in the text. So I left some questions in this review to be clarified in the text of this work.** **Look at the practical procedure done in this work is very good! But, you need to improve your presentation for a scientific article, so I made a review with love to contribute a lot to you.**	

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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Cleide Barbieri de Souza**
Department, University & Country	**Lusíada University Center – UNILUS, Brazil**