

PUERTO RICO WATER RESOURCES AND ENVIRONMENTAL  
RESEARCH INSTITUTE

104B SECTION RESEARCH PROGRAM

2<sup>nd</sup> Quarterly Progress Report

**Date of the report:** September 15th, 2005

**For Quarter Ending:** September 2<sup>nd</sup>, 2005

**Project Title:** 'Removal of Inorganic, Organic and Antimicrobials Contaminants from Aqueous Solutions by Waste Tire Crumb Rubber'

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**Names of Co-PI's:** Felix Roman, Marco A. Arocha

**Percentage of work completed in this period (%):** 10%

**Accumulative Percentage of work completed (%):** 25%

**Completion Date:** February 28<sup>th</sup>, 2006

**Project status:** Schedule \_\_\_ Suspended X Delayed \_\_\_ Cancelled \_\_\_ Completed  
Activities progress: (according to work schedule submitted with application)

<b>Task #</b>	<b>Major Activity</b>	<b>Date started</b>	<b>% Completed</b>	<b>Estimated date of completion</b>	<b>Date Completed</b>	<b>Dependant on task(s)</b>
01	Sorption tests of Xylene	April 1 <sup>st</sup> , 2005	100	June 30 <sup>th</sup> , 2005	June 30 <sup>th</sup> , 2005	
02	Sorption tests of Toluene	April 1 <sup>st</sup> , 2005	90	October 15th, 2005		
03	Sorption tests of Etilbencene	April 1 <sup>st</sup> , 2005	90	October 15th, 2005		
04	Sorption tests of Tetracycline at different pH's	April 1 <sup>st</sup> , 2005	20	October 30 <sup>th</sup> , 2005		

**Summary of Progress on Project this Quarter:** The progress can be summarized as follows

- Completion of the sorption tests with Xylene.
- Continuation of sorption tests with Toluene.
- Starting of sorption tests with Etilbencene.
- Continuation of sorption tests with Tetracycline.
- Standarizationof HPLC-method for tetracycline determination.
- A new undergraduate student, Mr Jose A. Martines from Civil Engineering joined the research group.
- A couple of papers are under preparation, one related to inorganic contaminants, the other concerning the organics.

**Problems encountered and/or assistance need:**

- Uv-Vis instability represented reproducibility problems when sorption of tetracycline was evaluated.
- HPLC method is under development for a more precise determination of tetracycline contents and speciation.

**Certifications:**

*As the Principal Investigator, I certify that the information contained within this quarterly report accurately reflects the status of this project.*



Dr Oscar Perales-Perez, PI  
Associate Professor

September 15th, 2005