

PUERTO RICO WATER RESOURCES AND ENVIRONMENTAL  
RESEARCH INSTITUTE

104B SECTION RESEARCH PROGRAM

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

**Date of the report:** September 1<sup>st</sup>, 2004      **For Quarter Ending:** September 30<sup>th</sup>, 2004

**Project Title:** 'Investigation of Sorbing Behavior of Crumb Rubber to Remove Inorganic and Organic Contaminants from Aqueous Solutions'

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

**Percentage of work completed in this period (%):** 30%

**Accumulative Percentage of work completed (%):** 40%

**Completion Date:** February 28<sup>th</sup>, 2005

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

Task #	Major Activity	Date started	% Completed	Estimated date of completion	Date Completed	Dependant on task(s)
01	Verification tests: chemical stability crumb rubber	June 1 <sup>st</sup> , 2004	100	July 30 <sup>th</sup> , 2004	July 15 <sup>th</sup> , 2004	
02	ICP-AOS calibration and sorption tests: Copper	June 15 <sup>th</sup> , 2004	90	August 30 <sup>th</sup> , 2004	August 30 <sup>th</sup> , 2004	

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

- Completion of verification tests on chemical stability of crumb rubber.
- ICP calibration for inorganic quantitative analyses: Copper.
- Beginning of experimental work on sorption of copper ions.
- Visit to Dr. Guillermo Riera, Director, 'Autoridad de Desperdicios Solidos (ADS)', to present our project.
- Rotamix set-up for organic sorption test arrived within this quart.
- Vials for organic sorption tests have been ordered.
- Mr. Luis Alamo, MS student in Chemistry Department registered his thesis theme as: Removal of toxic species from aqueous solutions by using crumb rubber.

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

None. The great support provided by Miss Elsa Arce is deeply acknowledged.

**Note.-** Sorption tests for Cadmium and Lead are scheduled for this coming quarter. We expect to start with preliminary sorption tests for organic compounds right after receiving the corresponding vials for organic sorption tests. The standardization and calibration of the GC-MS set-up for quantitative analyses of organic solvents will be started.

**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  
Assistant Professor

September 1<sup>st</sup>, 2004

