PUERTO RICO WATER RESOURCES AND ENVIRONMENTAL RESEARCH INSTITUTE

104B SECTION RESEARCH PROGRAM

__4th_ Quarterly Progress Report

Date of the report: March 2, 2009 **For Quarter Ending:** February 28, 2009

Project Title: Open Pit Quarry Restoration to Bio-Viable Land

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Names of Co-PI:

Percentage of work completed in this period (%): 25%

Accumulative Percentage of work completed (%): 100%

Completion Date: Feb. 28, 2009 (for 1st year milestone)

Project status: Scheduled _X_ 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	Soil sampling and preparation	Mar. 1	100	Mar. 31, 2008	Mar. 31	Isomar Latorre, Imiraily Hernandez
02	Statistical experimental design, operation, analysis, & interpretation	Mar. 20	100	Aug. 31, 2008	Aug. 31	Isomar Latorre
03	Plant germination in various experimental conditions	Jul. 1	70	Feb. 28, 2010 (will be continued during 2nd Yr)	-	Imiraily Hernandez
04	Plant growth in various experimental conditions	Jul. 1	50	Feb. 28, 2010 (will be continued during 2nd Yr)	-	Imiraily Hernandez
05	Long term water quality monitoring: Exp. 1	Aug. 15	25	Feb. 28, 10 (will be continued during 2nd Yr)	-	Isomar Latorre

06	Soil sampling and preparation	Sep. 1	100	Sep. 14, 2008	Sep. 14	Isomar Latorre, Imiraily Hernandez
07	Long term water quality monitoring: Exp. 2	Jan. 1, 09	5	Feb. 28, 2010 (will be continued during 2nd Yr)	-	Isomar Latorre

Summary of Progress on Project this Quarter: Soil samples were collected from the site to be restored in the future. A water quality experiment was set up in a statistical manner and operated. Infiltrated water samples were monitored and analyzed in order to see the cause and effect of backfilling on water quality. Plant (vegetation) experiments were also performed to assess feasibility of bio-viable land use after restoration. Plant germination and growth have been monitored. A Temperature-controlled recirculation bath was purchased and extensively used for the water quality column experiment. A chlorophyll A analyzer was purchased and used for the plant experiment. Long-term water quality monitoring columns were set up and started to operate to collect samples. For more information, please refer to the enclosed quarterly report.

Problems encountered and/or assistance need: The cost of chemicals vital to the analysis is much more expensive than estimated or shown in the catalog, due mainly to the extraordinary shipping and handling costs in PR. The PI hopes to be able to get further financially support for the two graduate students working in the project.

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

Sangchul Hwang
PI Name/Signature

March 2, 2009
Date

Enclosed