# Assessment of Osmotic Mechanisms Pairing Desalination Concentrate and Wastewater Treatment

PREPARED FOR: Dr. Saqib Shirazi, Texas Water Development Board

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COPIES: Dr. Jorge Arroyo, Texas Water Development Board

DATE: Through May 29, 2009

TWDB CONTRACT NUMBER: 0804830852

Dear Dr. Shirazi,

Please find attached the project update and invoice for activities up to May 29, 2009. Exhibits 1 and 2 summarizes the progress to date and financials for the project. To date, no expenses have been occurred on outside contractor's services or travel. An invoice for the TWDB portion, less retainage, is appended to this report.

Please contact me if you have any questions regarding this progress report.

Sincerely,

Robert P. Huehmer Principal Investigator

CH2M HILL

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## PROGRESS REPORT

## Task 1. Survey of Water Categories and Quality

This task is substantially complete. A small budget reserve is being maintained.

## Task 2. Screening and Selection of Hybrid Forward Osmosis System Configurations

This task is substantially complete. A small budget reserve is being maintained.

#### Task 3. Testing of Novel Forward Osmosis Spiral Wound Membrane Element

We are working to get the CSM contract in place to conduct their portion of the work. CSM has indicated that they have been conducting work that has not yet been contracted on this phase.

## Task 4. System and Process Modeling

Work has been conducted to identify three process flow-sheets that might use forward osmosis for construction of cost models.

# Task 5. Cost Modeling

No work conducted to date on Task 5.

### Task 6. Final Report Preparation

No work conducted to date on Task 6.