



FAMU – FSU COLLEGE OF ENGINEERING  
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING  
2525 Pottsdamer Street  
Tallahassee, Florida



### **Tag Meeting No. 1**

**Thursday, August 20**

**2:00 – 4:00, Room B202**

## **MINUTES OF MEETING**

**Project Title:** Usage of Microbial Fuel Cell Technology to Prevent Iron Release nearby Landfills in Northwest Florida

**Tag Members:** Lee Martin, Peter Grasel, Casey Taylor, Jim Langenbach, Subramanian Ramakrishnan, Michael Watts, and Clayton Clark

**Principle Investigators:** Gang Chen, Amy Chan Hilton, and Kamal Tawfiq

In attendance: Rhonda Rogers-Bardsley, Lee Martin, Peter Grasel, Michael Watts, Clayton Clark, Kamal Tawfiq, Gang Chen, Amy B. Chan Hilton, Sandip Patil and Jim Langenbach (via teleconference call).

### **Agenda**

1. Project Overview — presented by Gang Chen (Detailed information will be available at [www.eng.fsu.edu/~gchen](http://www.eng.fsu.edu/~gchen))
2. Landfill leachate collection and *Shewanella putrefaciens* culturing  
— Preliminary data
3. Laboratory scale MFC experiments
4. Pilot scale MFC experiments
5. Discussion

The TAG members discussed the batch scale reactor setup and recommend field scale evaluation, which may lead to landfill practices.

A pilot scale MFC experiment will thus be conducted. Iron rich soil collected from the landfills in Northwest Florida will be introduced in the reactions. The optimal conditions from the laboratory scale experiments such as the anode and cathode selections as well as the optimal DO concentration if  $O_2$  is chosen as the electron acceptor, will be provided in the cathodic chamber. Ferrous iron concentration will be monitored in both the anodic chamber and the cathodic chamber.

The TAG members also concern about other compounds associated with landfills such as arsenic. They recommend research ideas such as handling arsenic nearby landfills be transmitted to the Hinkley center as future research topics.

6. Possible publications through this project

One conference presentation and one journal papers are to be generated from this research.

7. Potential funding sources for the continuation of related research

NSF, DOE, USDA

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