**BUDGET JUSTIFICATION**

**PERSONNEL**

Dr. NAME, PI, effort = one month summer. Dr. NAME is an Assistant Professor in the Voinovich School of Leadership and Public Affairs at Ohio University. Her areas of expertise are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. She will coordinate the project among all personnel, directly supervise the work of one graduate student and one undergraduate student, and communicate with collaborators and interested parties to ensure progress and successful completion of the project.

Dr. Name, Co-PI, effort = one month summer. Dr. Name is a Professor in the Civil Engineering Department in the Russ College of Engineering and Technology at Ohio University. Her areas of expertise are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. He will assist the PI in the technical management of the project and will work with collaborators to ensure technical progress and successful completion of the project.

Dr. Name, Co-PI, effort = one month summer. Dr. Name is an Assistant Professor in the Civil Engineering Department in the Russ College of Engineering and Technology at Ohio University. Her areas of expertise are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. She will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

To be determined, M.S. graduate students in Civil Engineering, effort = 6 months, 5 years. These students will be given level-appropriate research assignments in support of Project Tasks 1 and 2. Graduate student work will encompass \_\_\_\_\_\_\_\_\_\_ according to assignments within either of the Project Tasks.

**FRINGE BENEFITS**

Fringe benefits are calculated at 16.189% for faculty and staff. This includes retirement (14%), Medicare (1.45%) and workers compensation (0.739%). The graduate and undergraduate student benefit rate is calculated at 0.739% for workers compensation only. Health insurance is currently $11,220 and increases by 10% each year, but is only charged during the academic year for faculty and calendar year for staff, and is prorated to the percent of effort.

**EQUIPMENT**

No funding for equipment is requested.

**SUPPLIES**

Chemicals Various solvents must be purchased for preparation of samples for inverse propagation techniques.

Glassware and Plastics Consumable glassware is needed for laboratory assays and fermentation distillation testing. Approximately 30% of supplies funds will be dedicated to glassware and plastics.

Miscellaneous Supplies This includes laboratory consumables used in the conduct of research experiments.

**TRAVEL**

Domestic travel support ($750 per year in years 2, 3, 4, 5) is requested for the PI and the students to disseminate scientific results at national meetings.

Foreign travel support is not requested for this project.

**PUBLICATION**

Costs include page charges for publication of research results ($1000/publication, minimum of 3 anticipated).

**INDIRECT COSTS**

Indirect costs on modified total direct costs (excluding capital equipment, tuition, participant support, and sub-awards over $25,000) are calculated at the federally negotiated rate of 48.5% for on-campus research at Ohio University following NSF guidelines. This rate was negotiated January 13, 2012 with the US Department of Health and Human Services.