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Factors Contributing to Dust Emissions in Clark County, Nevada Quarterly Progress Report 2: Period Ending April 15, 2007

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QUARTERLY PROGRESS REPORT

University of Nevada, Las Vegas
Period Ending April 15, 2007

Task Agreement Number FAA010017

Assessing Factors Contributing to Dust Emissions from Public Lands
On Air Quality in Areas of Clark County, Nevada

Executive Summary

- Post-doctoral scholar commenced work
- Discussions with BLM personnel and site assessment necessitate additional project funds through Task Agreement Modification
- Preliminary Fieldwork and data collection initiated.

Hiring

During January, UNLV staff facilitated the hiring of an international scientist, Dr. Dirk Goossens, and in February, facilitated his orientation to the U.S., UNLV, and the project.

Preliminary Project Planning

Project Manager Brenda Buck and Dr. Goossens met with Lisa Christianson at the BLM office (February 26, 2007) to discuss BLM's project-related research questions and to tour the field site.

Ms. Christianson explained that BLM requires the following: (1) an assessment of the dust emissions from the Nellis Dunes Area and (2) a risk map of the area that predicts the potential for dust emissions based on a soils map.

Also discussed were the complexity of the field area and the contributing factors to air pollution in this area. The research site is far more complex than was anticipated. The soils and the topography vary greatly throughout the area, which affects both the emissions and wind speeds. In addition, the area has far more sand in it than expected, which renders useless the inexpensive dust pans that we originally intended to use. Additional funds are required to adequately characterize the research area and answer the specified research questions. An additional consideration is the need for public participation in not tampering with or destroying the dust collectors. Lisa Christianson and Drs. Buck and Goossens suggested the possibility of erecting signs and/or fences to protect equipment used for this project.

Because of the complexity of the field area, Drs. Buck and Goossens require additional assistance to complete the mapping portion of the project. In particular an expert in remote sensing and mapping is needed. Dr. McLaurin, UNLV Geoscience, agreed to participate and assist with completion of the map using numerous satellite data and aerial photo databases. PLI personnel are in the process of determining if some minor salary support can be obtained from the current budget for Dr. McLaurin. Drs. Buck, Goossens, and McLaurin worked with satellite data available from public sources to create better estimates of the scope of this project and required equipment. Drs. Buck and Goossens met with DRI personnel (Drs. Etyemezian, and King) and Dr. Pepper, UNLV Engineering, to find the needed expertise and equipment to determine dust emissions from the site. This information was used to prepare a budget for the additional expenses, and in turn, a potential budgetary modification to the Task Agreement, which is currently under negotiation. The modification might also include changes to deliverables and possibly the UNLV Department of Geoscience may administer the additional funds instead of PLI if the Task Agreement is modified.

Submitted by:

Margaret N. Rees, Principal Investigator

04/15/2007

Date