U.S. Department of Energy

Finding of No Significant Impact

Center for Molecular Electronics

University of Missouri, St. Louis

AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact

SUMMARY: The Department of Energy has prepared an Environmental Assessment (DOE/EA-0931) evaluating the construction and operation of the proposed Center for Molecular Electronics on the campus of the University of Missouri at St. Louis, Missouri. The objective of the proposed project is to conduct multidisciplinary research in two of the fastest developing and increasingly commercially significant fields of molecular electronics and synthetic metals. Another very important goal of the proposed project is that of technology transfer. Based on the analysis in the EA, the DOE has determined that the proposed project does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (NEPA). Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this Finding of No Significant Impact.

PROPOSED ACTION: The proposed action is to authorize the University of Missouri - St. Louis to proceed with the design, construction, and equipping of the proposed Center for Molecular Electronics. The proposed Center would consist of laboratories and offices housed in a multi-story, 21,000 ft.^{2} building on the University campus. The

proposed Center would be situated on the north side of Benton Hall. The building would be constructed of reinforced cast-in-place concrete supported on drilled piers bearing on rock. Proposed project equipment would include high technology equipment such as electron microscopes, diffraction spectrometers and various laser devices.

ALTERNATIVES: Under the no-action alternative, no Federal funding would be provided. However, since the University is committed to implementing the proposed project with or without the DOE grant, the minor impacts evaluated in the EA would still be expected to occur commensurate with the University's ability to implement the action. Prior to Federal appropriations, the University considered other sites and locations on their campus for the proposed facility in the early planning for the project, but found none that meet their need to consolidate existing research in an area where similar research was already being performed.

ENVIRONMENTAL IMPACTS: No sensitive resources (historical/ archeological, protected species/critical habitats, wetlands/floodplain, national forests/parks/trails, prime farmland and special sources of water) would be affected by the proposed project as they do not occur on or near the site. Routine construction waste would be managed according to appropriate state and local regulations. Air quality impacts associated with delivery trucks and on-site construction machinery would be low-level and transient. Noise levels would be those conventionally associated with daytime construction activities for a low-rise building

and are not likely to disturb residences, workers or outdoor recreation. Impacts to local traffic and parking would be minor.

Domestic and sanitary wastes would meet local requirements and can be readily accommodated by existing municipal services. The increase in hazardous wastes due to the proposed Center would total less than 200 kg per year, consisting of corrosives, heavy metals, solvents, and photochemical wastes. These would be managed in accordance with the University's existing hazardous waste management program under an existing interim Resource Conservation and Recovery Act permit.

Workers may be exposed to potential radiation from use of the X-ray machine and a laser device. Both the X-ray machine and laser device would be operated under the supervision of the University's Radiation Safety Program pursuant to applicable federal and state regulatory programs (specifically 10 CFR 34, Part B). Lead shielding for equipment would maintain exposures of personnel well within safe limits as established by state and federal criteria.

Noise generated indoors or outdoors would be insignificant. Toxic air emissions, consisting mainly of silanes and methane, would be well below the threshold limit values of public exposure as defined by the American Council of Governmental Industrial Hygienists. Due to the research nature of the facility, the risk of a reportable accident is expected to remain low, consistent with the low risk of a worker injury over the past five years at the University.

DETERMINATION: Based on the analysis in the environmental assessment, DOE has determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, an Environmental Impact Statement is not required.

PUBLIC AVAILABILITY: Copies of this EA (DOE/EA-0931) are available from:

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Issued in Washington, D.C., this 22d day of July, 1994

for Tara O'Toole, M.D., M.P.H.
Assistant Secretary
Environment, Safety and Health