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DEPARTMENT OF ENERGY

FINDING OF NO SIGNIFICANT IMPACT FOR THE LOUISIANA STATE UNIVERSITY

WASTE-TO-ENERGY INCINERATOR

**AGENCY:** U.S. Department of Energy

**ACTION:** Finding of No Significant Impact

**SUMMARY:** The Department of Energy has prepared an environmental assessment (DOE/EA-0952) to identify and evaluate the potential environmental impacts of a proposed action at Louisiana State University (hereafter referred to as "the University") in Baton Rouge, Louisiana. The proposed action involves the construction of a waste-to-energy incinerator for the University, using funds provided from a grant under the Department's State Energy Conservation Program (hereafter referred to as "the Program").

Based on the analyses in this environmental assessment, the Department of Energy has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act. Therefore, preparation of an environmental impact statement is not required, and the Department of Energy is issuing a finding of no significant impact.

**COPIES OF THE ENVIRONMENTAL ASSESSMENT ARE AVAILABLE FROM:**

Mr. Robert Gabour  
Dallas Support Office  
U. S. Department of Energy  
1420 W. Mockingbird Lane, Suite 400  
Dallas, TX 75247  
(214) 767-7248

**FOR FURTHER INFORMATION ON THE DEPARTMENT OF ENERGY NATIONAL ENVIRONMENTAL  
POLICY ACT PROCESS CONTACT:**

Ms. Carol Borgstrom, Director  
Office of NEPA Oversight (EH-25)  
U.S. Department of Energy  
1000 Independence Avenue, S. W.  
Washington, DC 20585  
(202) 586-4600 or leave a message at (800) 472-2756

**SUPPLEMENTARY INFORMATION:** Louisiana State University is located in Baton Rouge, Louisiana, and lies just east of the Mississippi River, northwest of New Orleans. The site of the proposed action is a 4,000 square foot plot adjacent to the University School of Veterinary Medicine and overlaps a current service area and pasture. An incinerator is currently located next to the site of the proposed facility; however, the incinerator is old (built in 1976) and is used only for burning animal carcasses that cannot be sent to a rendering plant.

A new incinerator is needed due to the rising cost of landfill disposal and the need to reduce the cost for steam in the School of Veterinary Medicine. The steam is provided by a natural gas system, which is becoming more expensive due to recent increases in natural gas prices.

**PROPOSED ACTION:** The proposed action would involve the following activities:

- Purchase and install a 12-ton-per-day waste incinerator and heat recovery boiler.
- Connect the incinerator's heat recovery system to the School of Veterinary Medicine heating system.

- Operate the incinerator and heat recovery boiler on a 7-day, 24-hour-per-day basis.

A recycling program is already in place to handle all recyclable campus wastes. The proposed incinerator would burn combustible non-recyclable, non-hazardous office wastes, combustible non-renderable biological waste, and potentially infectious waste (less than 0.05% of the total volume incinerated) from the University. The proposed unit would be a 1,000 lb/hr dual chamber, fixed hearth modular incinerator utilizing starved air combustion technology. The proposed action would reduce the volume of waste presently going to landfill and the associated transportation costs.

As the waste is burned, the heat that would be generated would be recovered in a waste heat boiler that would produce steam to be used in the School of Veterinary Medicine. Producing steam this way would reduce natural gas consumption, so that after the initial expenditure on plant and equipment, the project is expected to save \$134,000 per year of operation.

**ENVIRONMENTAL IMPACTS:** Implementing the proposed action would not affect any natural areas or wildlife habitats. No vegetation would be cleared during construction, and no endangered or threatened species nor any wildlife cycles would be affected during the construction or operation phases. No wetlands would be affected. The incinerator's operating equipment would be above the 100-year floodplain.

Upon completion of the proposed action's construction phase, the final appearance of the facility would be consistent with the existing campus buildings and the character of the surrounding neighborhood. The proposed action would not affect existing recreation areas. No negative impacts to occupational health and safety are expected to result from routine operations. The proposed action would not cause a significant local increase in traffic during either its construction or operational phases. The proposed action would have no impact upon historic or archaeological resources.

Air Quality. An air emissions permit has been granted by the State of Louisiana Department of Environmental Quality, and the project would meet all current State and Federal requirements. Air emissions, including particulate and acid gas emissions, would be reduced by use of dry lime scrubber technology and preprocessing the waste through the campus recycling program, so that hazardous and toxic wastes, chlorinated plastics, and recyclables would be removed prior to incineration. Emissions of dioxins are not expected because precursors such as chlorinated plastics would be excluded from the waste stream and the incinerator would operate at a temperature that would destroy any dioxins.

While the proposed action would be a new source of air emissions, it replaces an existing incinerator. Emissions from the proposed action would be small and would not affect air quality or human health. In combination with other sources, these emissions would neither cause nor contribute to violations of Louisiana Ambient Air Quality Standards. During construction, small

quantities of fugitive dust or occasional smoke would be emitted, but the effects on workers and nearby residents are expected to be negligible.

Water Quality. Because no surface waters cross the site of the proposed action and the nearest surface water to the site is the Mississippi River, 1700 feet to the west, the proposed action would have no impacts on surface waters. The construction of the site may have some minor negative impacts on groundwater quality, as oil and/or other materials used in construction may leach into the ground. Dirt from the proposed site would be removed to prevent runoff and siltation of rivers. Otherwise, the proposed action would have no impact on groundwater quality. Water to be used for the steam heating presently is and would continue to be obtained from the local water company.

Waste Management. A solid waste permit has been applied for and approval is pending. The proposed action would meet all Federal and State requirements concerning solid waste disposal. All construction debris from the proposed action would be disposed of in accordance with Louisiana solid waste disposal regulations that implement Federal requirements. The burning process would reduce the volume of the waste by 90%. The remaining ash would be disposed of in the East Baton Rouge Parish landfill in accordance with State and Federal regulations. The proposed action would not generate hazardous wastes.

Socioeconomics. The economic impact of the incinerator would be negligible. Because of the high stack and prevailing wind characteristics, emitted air pollutants would be spread diffusely and it is unlikely that any single socioeconomic group would be affected adversely.

Noise. Increased sound levels would occur from construction activities associated with the proposed action, but impacts should be negligible. Noise associated with operations under the proposed action would be imperceptible to surrounding residences. Workplace noise exposure from the proposed action would be in compliance with all applicable regulations.

**ALTERNATIVES CONSIDERED:** Alternatives to the proposed action include 1) No Action, 2) Building and Operating a Landfill, 3) Finding Markets for Waste Products, and 4) Reducing Waste. Each of these was analyzed, and except for the No Action alternative, eliminated from further consideration as discussed below:

- o The No Action alternative would involve transporting non-recyclable, combustible wastes to the municipal landfill and potentially infectious waste to a commercial waste disposal/incineration facility. Landfill disposal is not the most efficient or effective means of disposing of this waste.

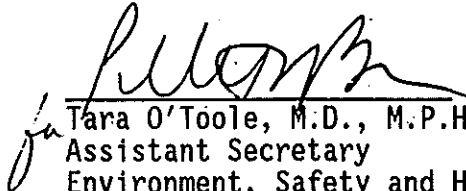
Under the No-Action alternative, the grant application would be denied. No Department of Energy funds would go toward purchase and installation of a waste incinerator/steam generation plant at the University.

- o Building and operating a landfill is not cost effective and there is a lack of appropriate space. Environmentally, the majority of the nearby land that is undeveloped is unsuitable for a landfill; contaminated leachate could be a problem.

- o Finding new markets for waste products is very difficult, and the University is already very active in this area. The University will continue to look for markets for items that currently are not marketed. In the meantime, however, the University must deal with the waste by other means.
  
- o Reducing waste is not a viable option for solving the University's waste problems. The University has been reducing waste as a means of controlling its budget, including the aforementioned recycling program. Having exercised most of the available waste-reduction methods, it would be difficult to reduce wastes much further.

**DETERMINATION:** Based on the analysis in the environmental assessment, the Department of Energy has determined that the proposed installation of a waste-to-energy incinerator at the University School of Veterinary Medicine does not constitute an action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act. Therefore, an Environmental Impact Statement for the proposed action is not required.

Issued at Washington, D.C., this 24<sup>th</sup> day of October, 1994.

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