



PimaCommunityCollege

Re: Mainland High School ISTF Project
The Vitruvian Plant: Powering the Future

February 28, 2011

To Whom It May Concern,

I have had the privilege and pleasure to work with the current ISTF team from Mainland High School in Daytona Beach, Florida as they developed their ideas and presentation for the 2010-2011 competition. I have been impressed with the team's commitment to their research and the development of a complex and difficult project solution.

The team's project, *The Vitruvian Plant: Powering the Future*, is a sound and logical solution to the pressing need for new ways to utilize the waste products of nuclear generation in a safe and effective manner. This project combines current and projected technologies in a novel approach to the problem. All phases of energy generation, waste recovery and recycling, and reuse of recovered fuel to manufacture new generators are combined into a single multi-use facility. The solution offers not only significant cost savings, but also reduces transport and storage of hazardous wastes and dangerous nuclear fuels to a minimum.

The end result of the process is a product which increases the available energy derived from an original nuclear fuel source, and allows expensive nuclear generation facilities to extend their useful lives. The extended life of facilities, as well as the added manufacturing and re-generation of energy would provide significant job growth, revenue, and economic stability for a wide area around the facility.

Project concepts were drawn from existing state-of-the-art reactor technologies, waste recovery systems, and remote manufacturing technologies. All technologies currently exist or are achievable within the next 50 years.

The Mainland High School project is an elegant solution to an important issue within the Next Generation Nuclear Reactor category of the National Critical Technologies list.

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