Sandia National Laboratories

Waste Disposal
Supercritical Water Oxidation

POTENTIAL MARKET APPLICATIONS

Waste Disposal

Explosives Disposal

BENEFITS

Will convert hazardous materials to relatively benign substances

Expected to produce only trace amounts of NO_x, solving the significant air pollution problem of NO_x emissions

Excellent for treating small quantities of waste

Can be fully contained and controlled

INTELLECTUAL PROPERTY

US PATENT #6,030,587
SD# 8162

TECHNOLOGY SUMMARY

There is a large need for a process that can destroy hazardous wastes, including explosives, fuels, propellants, solvents, and other inorganic and organic materials, that are produced by the military and other industries, while not contributing to the pollution of the atmosphere. Sandia National Laboratories has created an apparatus and method to convert hazardous waste to relatively benign substances or into substances that can be easily treated and disposed of in the environment.

This invention utilizes the Supercritical Wet Oxidation technology. This technology uses more compact equipment that allows for the safe elimination or neutralization of hazardous waste. Due to the size of the equipment, it can even be used for the elimination of waste on site.

TECHNOLOGY READINESS LEVEL

Sandia estimates this technology at approximately TRL 4. Key elements have been demonstrated in a laboratory environment.

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National Nuclear Security Administration

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