

THE SOURCE

SERVICE LINE LIQUID WASTE PROCESSING

Concentrated Dryer Systems

EnergySolutions' Concentrate Dryer Systems, or CD Systems, are state-of-the-art advanced liquid waste processing systems. Designed to mobilize and set up quickly, our CD System will process and volume reduce a wide variety of water-based radioactive waste material.

Unlike evaporators, CD Systems utilize a low temperate, vacuum-based, mechanical agitation batch feed drying approach to completely remove the water in liquid waste streams. The



View of CD-1000 with Access Ports

maximum volume reduction is achieved by reducing the waste to a dry product representing the solids content of the feed stream.

Applications

CD Systems can process a diversity of radioactive waste material. CD System nameplates (CD-1000, CD-600, etc.) indicate design feed rates in gallons per day (e.g., 1000 gpd, 600 gpd, etc.). Suitable waste streams include:

- Evaporator concentrates
- Membrane reject
- Sump and tank sludge
- Other non-dewaterable sludges and oily wastes

Summary of Advantages

- ALARA engineered to reduce exposure,
- Dramatic volume reduction,
- reduce waste material to its absolute minimum,
- process virtually any waste stream without pretreatment,
- reduce transportation and burial costs,
- produce an approved waste form, and
- produce a retrievable waste form.



View of Internal Dryer Compartment

EnergySolutions has successfully developed many specialty nuclear systems and components for the nuclear marketplace that are skid-mounted and allow for quick ease of deployment and future decommissioning with minimal impact on plant operations.

We also offer full on-demand and emergency support services.

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Thermex™

EnergySolutions' patented technology offers a customized, membrane-based approach for processing contaminated liquid wastes. In operation since 1995, Thermex™ provides unmatched performance to improve areas that directly impact your plant's performance and profitability (water chemistry, curies released, and waste generation).

Developed for on-site operation, the modular Thermex™ design incorporates a multi-stage process of filtration, membrane treatment, and demineralization



for the removal of contaminants. Thermex™-treated water exceeds the strictest water chemistry specifications, providing reactor-grade make-up water.

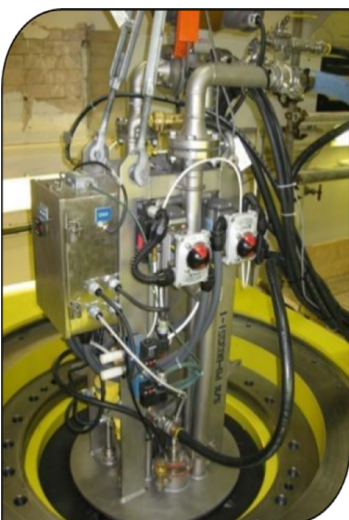
Advanced Liquid Waste Processing System (ALPS) with Advanced Injection Method (AIM)

The Advanced Liquid Waste Processing System's (ALPS™) sluicable pressure vessels are designed to optimize deep

bed flow characteristics, flow distribution, and particulate flow dynamics. The Advanced Injection Method (AIM)

chemical addition system optimizes the chemical injection rate as the waste stream characteristics change. This results in:

- Excellent colloidal and particulate filtration
- Exceptional total organic carbons (TOC) adsorption
- Superior ion exchange media utilization
- Higher sustained decontamination factors are >6,000
- 99.9% spent media removal



Dewatering Systems

EnergySolutions' extensive experience in dewatering radioactive particulate wastes is the basis for development of the Self Engaging Dewatering System (SEDS™) and the Self Engaging Rapid Dewatering System (SERDS™). Designed to be compatible with EnergySolutions' disposal containers, these systems have become the industry

standard. Important benefits of the system include superior volume reduction and very low dewatering times.

The SEDS™ and SERDS™ meets your specific requirements with continuous, reliable service—combined with an NRC-approved Topical Report that meets today's stringent regulatory requirements.

< photo: SEDS/ SERDS Dewatering fillhead

Get to Know Joe



Mr. Joe Pride serves as the Director of Technical Services in the Nuclear Plant Services group for managing the design and fabrication of engineered products. Joe has been with EnergySolutions for almost 24 years and is located in the Charlotte, NC office.

In all the time Joe has been with EnergySolutions, he has been actively involved in the technology development, engineering, and fabrication of liquid/solid processing equipment. His areas of emphasis and strength are in process design, management, and ensuring our customers are delivered with quality products and services.

Joe enjoys spending the majority of his time with his wife and two young sons traveling and swimming.

UPCOMING ISSUES

- Liners and HICS
- Shipping Casks
- Professional Shippers and Brokers
- Hittman Transport Services
- PHTS Logistics
- Memphis Facility—Decontamination Services and Equipment Storage