

# Intermediate System Chemical Decontamination Skid

## Background

Nuclear utilities have a need to decontaminate hot spots and small systems/components at a reasonable price. Westinghouse is addressing this need by developing a variety of chemical decontamination processes and delivery systems.

In addition to Westinghouse's standard system decontamination (SSD) and full system decontamination (FSD), its lineup of decontamination equipment/services now includes:

- Mini system decontamination (MSD)
- Intermediate system decontamination (ISD)
- Primary system decontamination (PSD)

## Description

Intermediate System (ISD) – For ISD services, the targets include small plant systems and parts of larger systems with volumes of up to 1,000 gallons. This system is ideal for decontamination of pipes, letdown lines, small systems and components such as heat exchangers. Individual components of the ISD consist of a pump skid, a chemical mix tank with in-line heater and ion exchange columns. A flow reversal skid is also employed, where necessary, to provide optimum flow characteristics. This equipment is accompanied with the required one-inch and two-inch hoses and process instrumentation.

The ISD is shipped in one or two Sea-Land containers (one truck) depending on project requirements, such as hoses and shielding. The equipment is set up by an engineer and

technician, and an engineer and technician perform continuous (per shift) operations. The equipment consists of individual components arranged to suit customer site conditions.

## Benefits

Westinghouse customers benefit from this ISD skid in the following ways:

- Helps plants reduce radiation exposure and meet ALARA goals
- Compact design allows for cost-effective operation
- Allows for easy setup because the system is comprised of only a few components
- Allows for quick setup because ion exchange columns can be pre-loaded
- Targets small components and piping systems
- Generates only a small amount of radwaste
- Ion exchange columns can be sluiced in place or transferred to radwaste

## Experience

Westinghouse has nearly 30 years of experience supporting nuclear power plants with chemical decontamination services. Its variety of processes and now its variety of system sizes allows Westinghouse to meet specific customer needs. Westinghouse has performed hundreds of chemical decontaminations from small components to full-system decontamination.



Intermediate decontamination system mix tank provides for chemical mixing and system heat.



Dual pump skid provides system flow.



Ion exchange column on skid.