

# Solid State Protection System Printed Circuit Card Upgrades

## Background

Westinghouse has developed new printed circuit cards for use in the solid state protection system (SSPS). The replacement printed circuit cards are the same in form, fit and function as the original cards, but also address obsolescence of the Motorola High Threshold Logic (MHTL) devices, which are designed to enhance reliability and include improvements for maintenance.

## Description

- Solves MHTL obsolescence issue
- Is physically interchangeable with existing cards
- Has enhanced reliability
  - Redundant drivers added to under-voltage driver card
  - Safeguard driver card output circuit improvements
- Has improved maintainability
  - Additional test points
  - Status indications for all inputs and outputs added
  - Continuous self-testing
- Meets or exceeds the electrical specifications of the existing cards

Description	New Design	Replaces
Universal Logic Card	6D30225G01	6056D21G01 6081D70G01
Safeguards Driver Card	6D30252G01	6056D32G01
	6D30252G02	6069D15G01 6081D73G01
Under-Voltage Driver Card	6D30350G01	6058D45G01 or G02 6101D27G01 or G02 6081D74G01 or G02
Semi-Automatic Tester Card	6D30520G01	6056D33G01 6081D75G01
	6D30520G02	1048F43G01
Clock Counter Card	6D30687G01	6056D27G01 6081D72G01
Decoder Card	6D31031G01	6056D25G01 6081D71G01
Isolation Card	6D31033G01	6056D23G01 1049F37G01 1469F31G01
Memory Card	6D31035G01	6056D30G01 6081D79G01



New SSPS Universal Logic Card

## Qualification

The replacement printed circuit cards are qualified for use in accordance with the following:

Environmental – IEEE 323-1983

Seismic – IEEE 344-1987

Electromagnetic compatibility (EMC) and radio-frequency interference (RFI) – Regulatory Guide 1.180, Revision 1



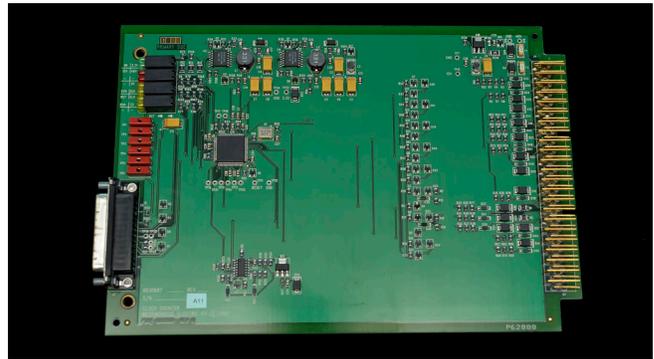
New SSPS Under-voltage Driver Card



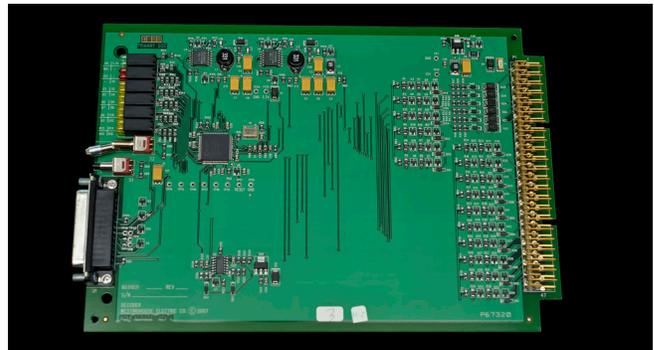
New SSPS Safeguards Driver Card



New SSPS Semi-Automatic Tester Card



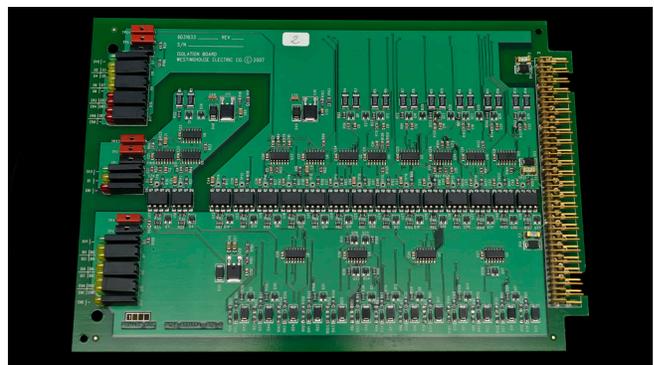
New SSPS Clock Counter Card



New SSPS Decoder Card



New SSPS Memory Card



New SSPS Isolation Card

Westinghouse Electric Company  
1000 Westinghouse Drive  
Cranberry Township, PA 16066

[www.westinghousenuclear.com](http://www.westinghousenuclear.com)