

SNL/CA Agency Update

Gordon Gibbs

**JOWOG 28 Joining Subgroup
Sandia National Lab.
October 10 2011**



Sandia National Laboratories

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000.

Welding Operations at SNL/CA

✱ 8200 California Weapons Systems Engineering

✱ 8224 Gas Transfer Systems

- **Manager - Paul Spence**

- ♦ **Joe Puskar (1822)**
- ♦ **Gordon Gibbs**
- ♦ **Tony De Sousa**
- ♦ **Rich Campiotti**
- ♦ **Annette Newman**
- ♦ **Mike Gutzler ***
- ♦ **Logan Kucerak ***



Joining Activities

*Gordon Gibbs, Tony De Sousa,
Annette Newman and Logan
Kucerak*

- ✦ Weapons Support
- ✦ Aluminum Pressure Vessel Welding
- ✦ GTS PRT Activities
- ✦ Hardware Fabrication
- ✦ Equipment Characterization
- ✦ Weld Acceptance using Data Acquisition



FY12 Joining Activities

Joe Puskar

- ✦ GTS PRT Activities
- ✦ Joining Lab Coordination
- ✦ JTA Weld Processes
- ✦ WR Production Liaison
- ✦ Equipment Characterization
- ✦ Aluminum welding
- ✦ Forging HAZ Recrystallization




Current Focus of the Aluminum Welding Project

- ✦ GTA Welding
- ✦ EB Welding
- ✦ Resistance Welding
- ✦ Variable Polarity Plasma Arc Welding



FY12 Joining Activities

8222 Hydrogen & Metallurgy Science

-  **Beryllium (S-65C) to Copper Alloy (Cu-Cr-Zr) diffusion bonding for ITER fusion reactor in Cadarache France via hot isostatic pressing (Steve Goods and Joe Puskar)**



New Equipment

- ✦ In Process of upgrading Low Voltage EB welder to next generation of Lab View Real Time/FPGA system
- ✦ Laser Star Welder
- ✦ Welding Expert Microscope
- ✦ Exploring Weld Computer's inverter/wave synthesis technology with a frictionless, pneumatic ram for pinch welding and resistance forge welding applications

