

**ISM in the Electronics Support Group**

Gary Drake

July 14, 2008

Presentation for ISM Audit

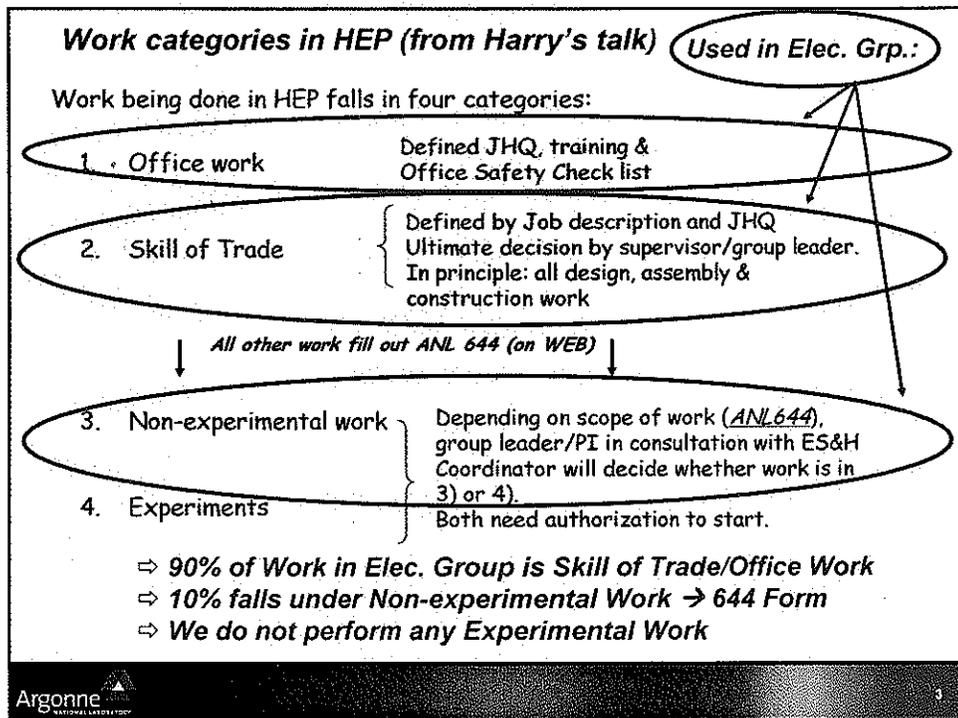
**Electronics Support Group Personnel**

<b>Gary Drake</b>	<i>Group Leader, EE LOTO Trainer</i>	<b>Tim Cundiff</b>	<i>Engineering Assistant</i>
<b>John Dawson</b>	<i>Senior EE (part-time)</i>	<b>Todd Hayden</b>	<i>PCB Layout</i>
<b>John Anderson</b>	<i>Elec. Eng.</i>	<b>Jim Bulka</b>	<i>Inst. Repair, Elec. Safety</i>
<b>Patrick De Lurgio</b>	<i>Elec. Eng. Rad. Source Custodian</i>	<b>Joe Pratl</b>	<i>Instrument Repair (p.t.)</i>
<b>Andrew Kreps</b>	<i>Elec. Eng (Software)</i>	<b>Carolyn Adams</b>	<i>Technician</i>
		<b>Jack Hale</b>	<i>Elec. Equip. Safety</i>
		<b>Ray Lewis</b>	<i>Elec. Equip. Safety</i>

**Total Staff:**

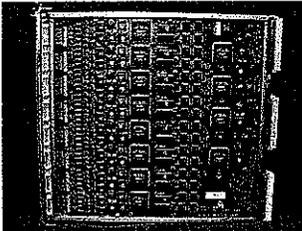
- 3.5 Hardware Engineers
  - 1 Software Engineer
  - 1 Technical Assistants
  - 1 CAD Layout Person (EA)
  - 1.5 Instrument Repair (EA)
  - 1 Technician (Assembly)
  - 2 Elec. Equipment Safety
- ⇒ 12 People Total (11 FTEs)
  - 4 FTEs Support HEP
  - 4 FTEs Support Other Basic Sciences (PHY, CHEM, Mat. Sci., APS)
  - 2 FTEs Support Elec. Equip. Safety
- ⇒ Provides Crucial Electronics Support for ANL Science & Research

- ⇒ **Safety is important in our group, and we embrace ISM**
- ⇒ **All JHQ's are up-to-date, & we aggressively pursue ES&H training**
- ⇒ **Group members have several safety-related responsibilities for the division**
- ⇒ **We have had NO on-the-job injuries in over 12 years**



### Electronics Support Group Activities

- Digital Systems Design
  - Data Acquisition Boards & Systems
  - Trigger Processors
  - Computer Interfaces
  - ⇒ Design, Build, Bench Test, Production Checkout
  - ⇒ 100% Skill of Trade



- Front End Instrumentation Design
  - Amplifiers, Digitizers
  - Discriminators
  - Power Supply Design
  - ⇒ Design, Build, Bench Test, Production Checkout
  - ⇒ 100% Skill of Trade



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## ***Electronics Support Group Activities***

### ■ **Instrument Repair**

- Repair
- Electrical Safety Inspections (NRTL)

⇒ ***Bench Repair,  
Field Inspections***

⇒ ***100% Skill of Trade***

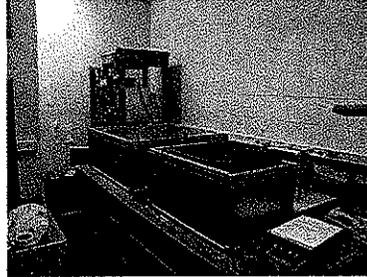
### ■ **Lab Support for Detector R&D**

- Micro-Channel Plates (Fast Timing) →
- Silicon Photo-multipliers
- Ultra-Low Noise Ge Detectors

⇒ ***Long-term Research & Development***

⇒ ***Non-experimental Work***

⇒ ***Have ANL644 Forms in place***



Laser Lab