



**Arkansas Electric
Cooperative Corporation**

AECC Hydroelectric Generation Facilities



Arkansas Electric Cooperative Corporation

- Generation and Transmission Cooperative headquartered in Little Rock
- Wholesale power provider for 16 distribution cooperatives
- Serves about 62% of Arkansas with over 400,000 consumers
- Owns about 2,600 MW of generation at 12 different facilities.



Arkansas Electric Cooperative Corporation

2009 Generation by Energy Source for AECC Owned and Co-Owned Plants

- Natural Gas and Oil 4.0%
- Wyoming Coal 88.8%
- Water 7.2%

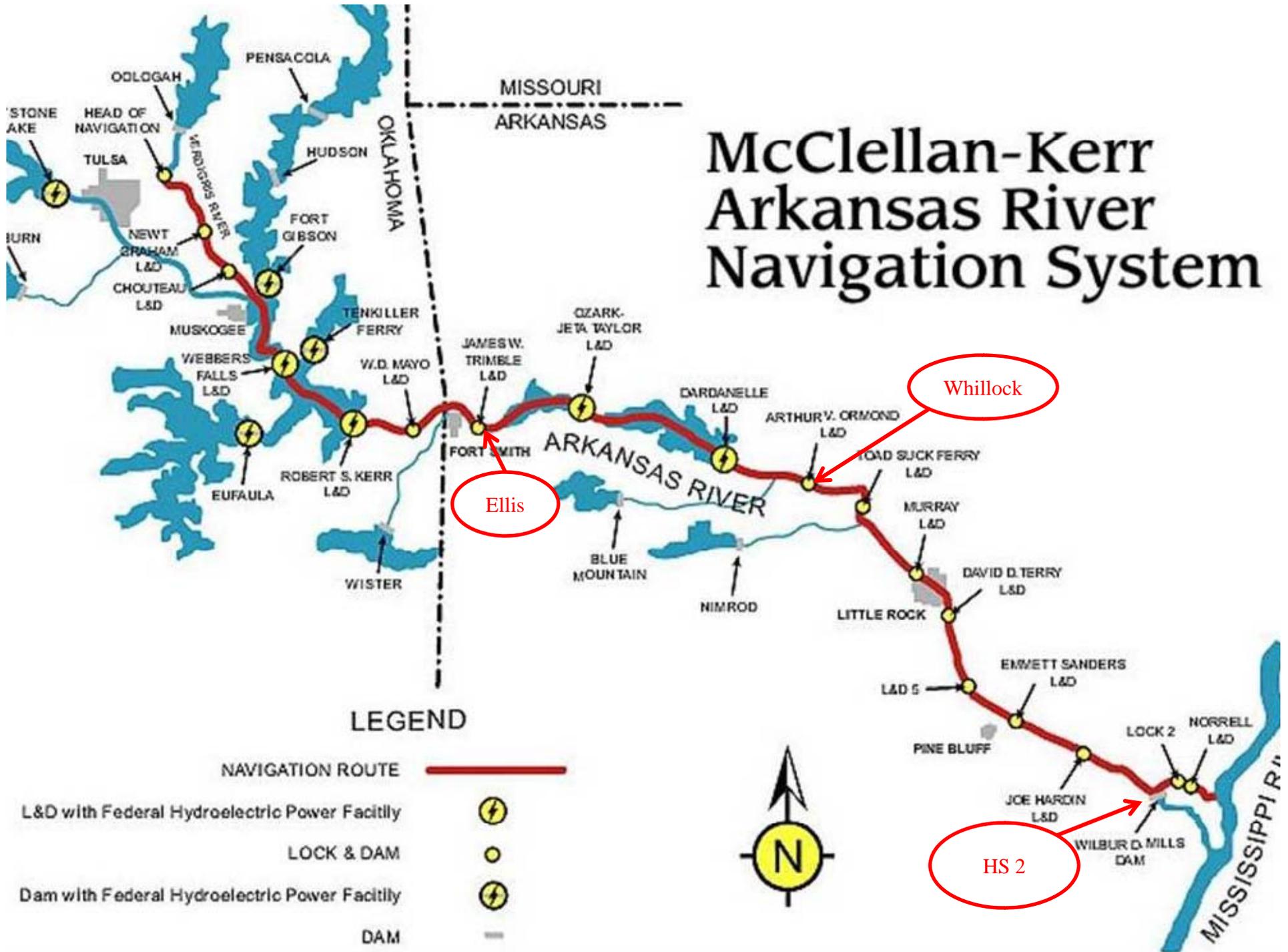


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Existing Hydroelectric Generating Resources

- Ellis Hydroelectric Generating Station
- Whillock Hydroelectric Generating Station
- HS 2 Hydroelectric Generating Station

McClellan-Kerr Arkansas River Navigation System





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Ellis Generating Station

- Commercial in 1988
- 32.4 MW installed capacity
- Run of river hydro
- Built at existing COE Lock and Dam #13
- Unmanned, operated and maintained from Ozark
- Located near Barling, AR





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Ellis Generating Station

- Three 10.8 MW horizontal Kaplan pit type units
- Voest Alpine (now Andritz) turbines
- Elin generators
- Philadelphia Gear speed increasers
- Average annual energy production 125,000 MWH
- Average annual payments to FERC \$335,000











**Arkansas Electric
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Whillock Generating Station

- Commercial in 1993
- 32.4 MW installed capacity
- Run of river hydro
- Built at existing COE Lock and Dam #9
- Unmanned, operated and maintained from Ozark
- Located near Morrilton, AR





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Whillock Generating Station

- Three 10.8 MW horizontal Kaplan pit type units
- Voest Alpine (now Andritz) turbines
- Elin generators
- Philadelphia Gear speed increasers
- Average annual energy production 129,000 MWH
- Average annual payments to FERC \$250,000







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HS 2 Generating Station

- Commercial in 1999
- 102.6 MW installed capacity
- Run of river hydro
- Built at existing COE Dam # 2
- Operated and maintained from Camden with 1 technician on site
- Located near Dumas, AR





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HS 2 Generating Station

- Three 34.2 MW horizontal Kaplan bulb units
- Sulzer (now Andritz) turbines
- ABB (now Alstom) direct driven generators
- Average annual energy production 356,000 MWH
- Average annual payments to FERC \$1,060,000
- Recently certified as low impact by LIHI









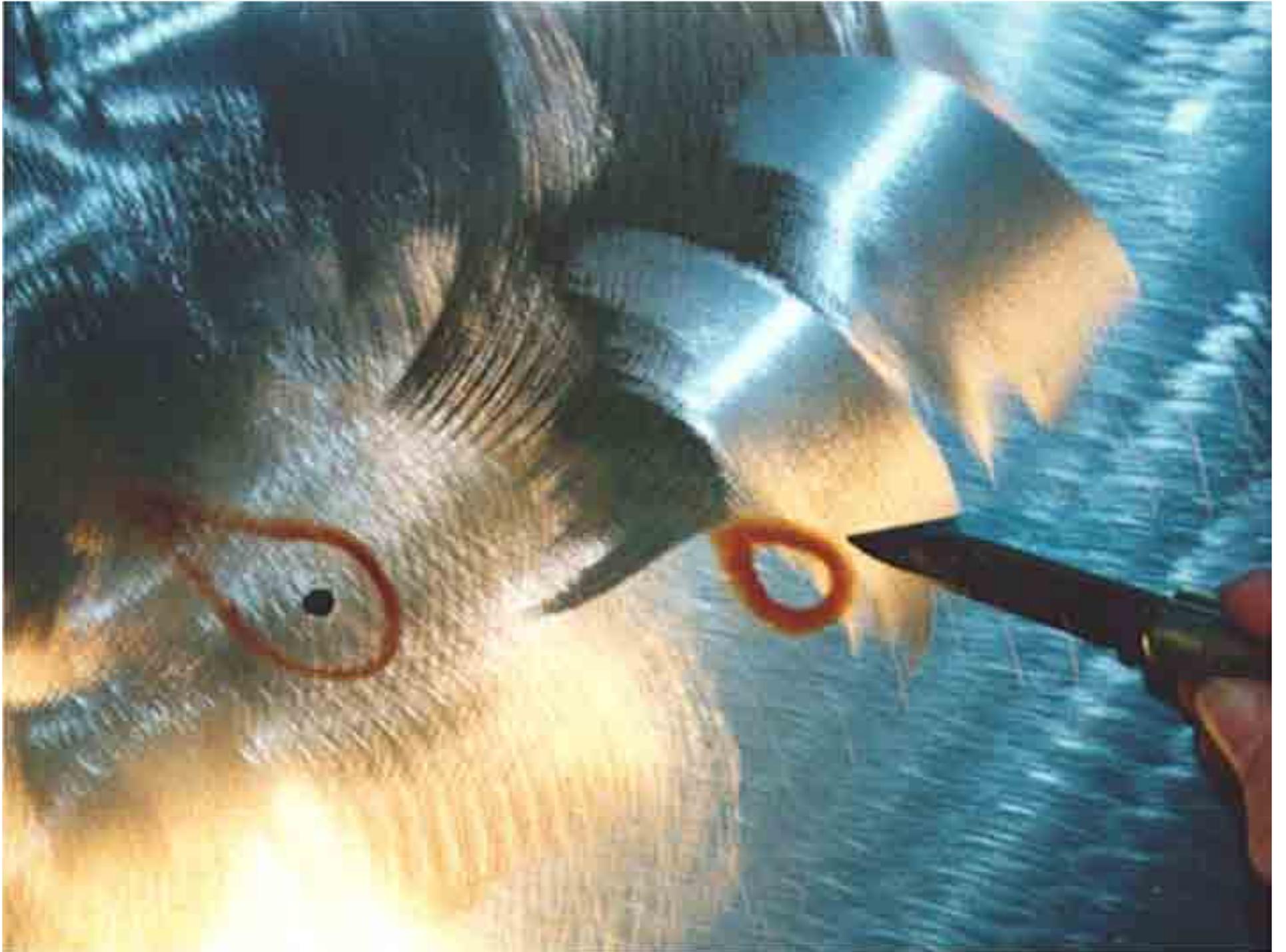
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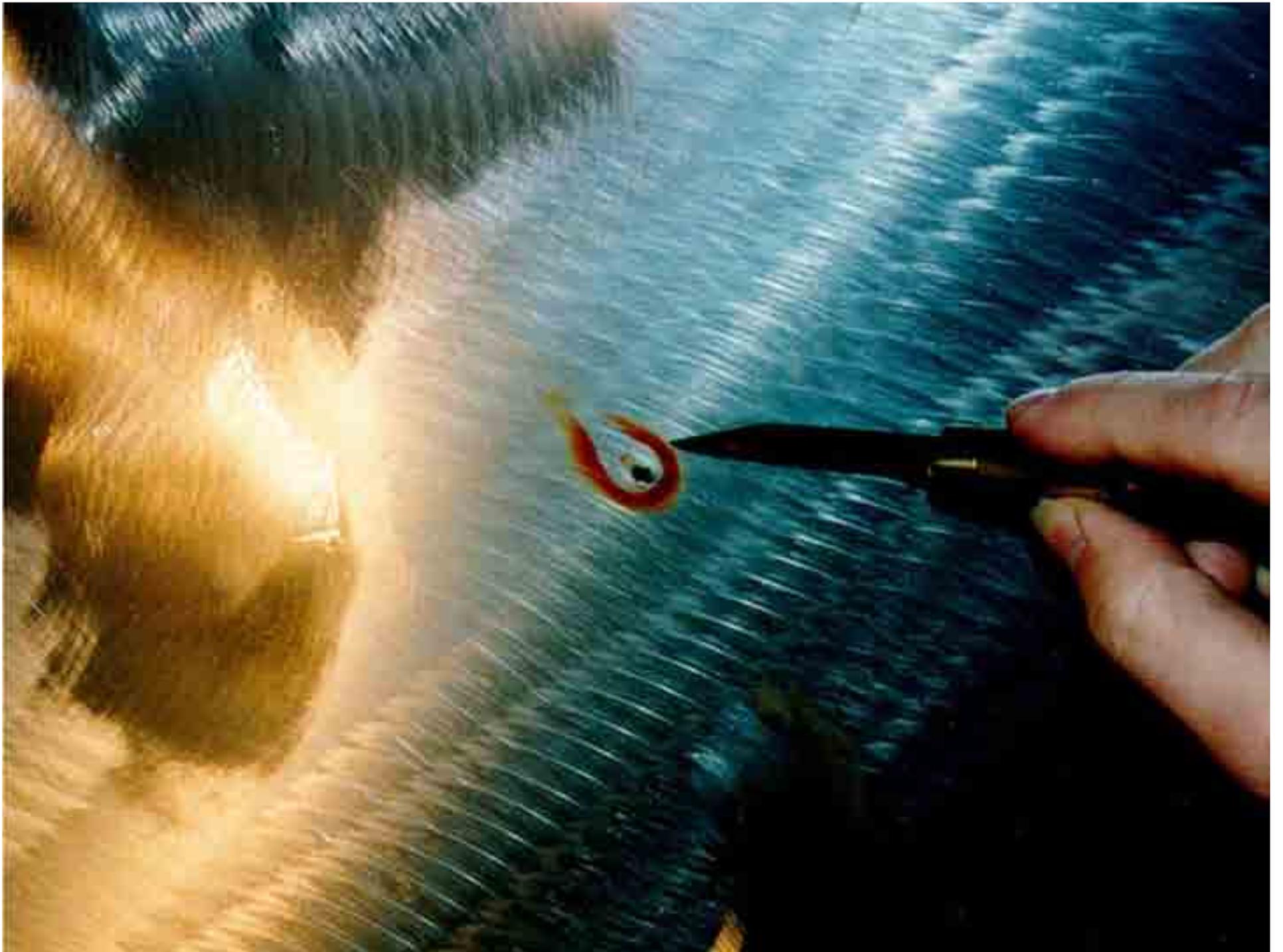
AECC Hydro Operating Statistics

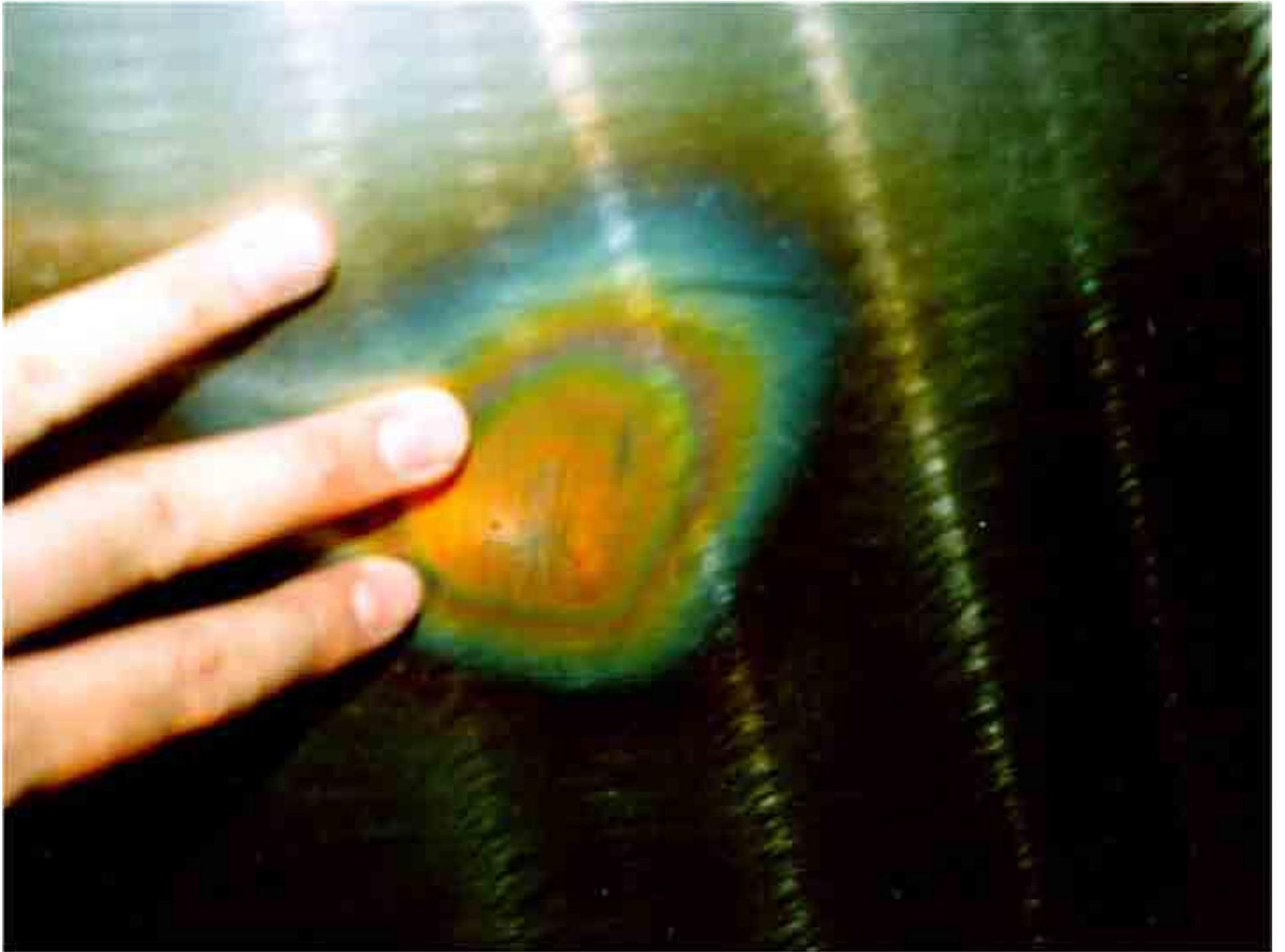
| | Availability 2005 – 2009 | Forced Outage Rate 2005-2009 |
|--------------|-----------------------------|---------------------------------|
| Ellis | 92.01% | 0.78% |
| Whillock | 93.69% | 0.79% |
| HS 2 | 89.12% | 1.31% |
| Industry Ave | 86 to 88% | 2 to 5% |



Corrosion Pitting









HS 2 Scour Hole Repair 2004

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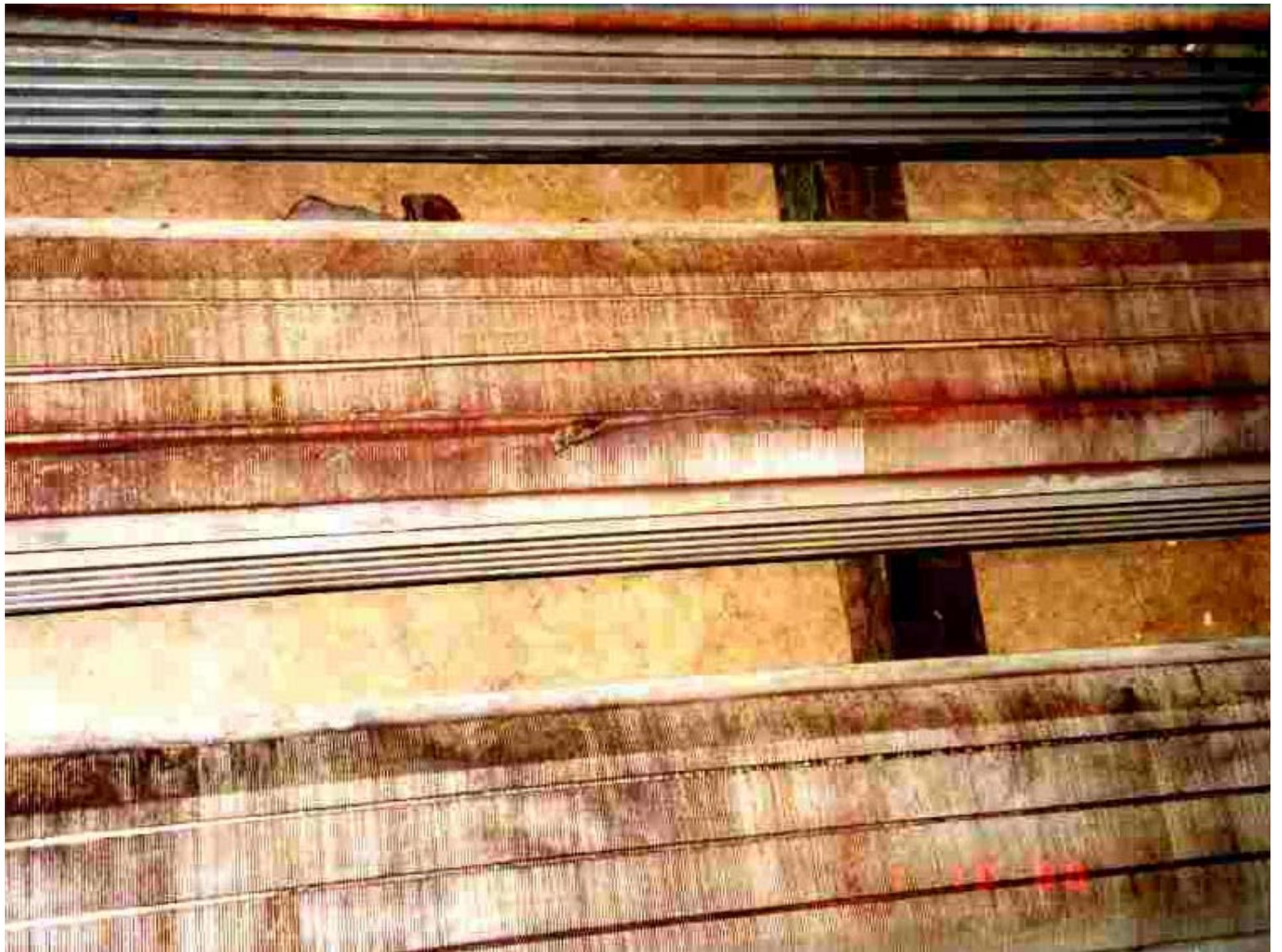


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HS 2 Rotor Pole Failure







Water Hyacinths









