

PUMPED STORAGE TECHNICAL GUIDANCE DOCUMENT
TASK GROUP

IMPORTANT OPERATIONAL AND SAFETY ISSUES

Human Factors

- Training
- Manned or Unmanned Operation
- Breadth of Responsibility for each Individual – are they stretched
- Decision making responsibilities
- Staffing – what’s reasonable?
- Support staff to project
- Response to abnormal data

Organizational Processes

- Decision Processes
- Security
- Training
- Succession Planning
- Communication, Internal/External
- Coordination
- Change Mgmt
- Configuration Control
- Third Party Evaluations vs Working as a group
- Maintaining historic info recording history
- Interdisciplinary review of data
- Program for design control
- Response Time
- Cost to implement / cost of failure
- Reporting Process on data with conclusions and evaluation

Over Pump Protection/Water Mgmt

- Spillway (DS hazard / No DS Hazard / Capacity)
- Timing of overtopping - Capacity of pumps vs. capacity of spillway
- Design basis for spillway
- Functional testing vs simulation
- Functional test period
- Performance of dam under overtopping
- Failsafe design
- Time for Response
- Description of alarms, alarm levels
- EAP - Security – sabotage – hacking Public Education
- Coordination with EMS
- Testing
- Alarms versus tripping

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Equipment

Instrumentation and Monitoring

Visual

Instrumentation

Calibration of levels

Control Survey

Visual surveillance

Interrogating data to see if it's real – check vs other data in dbase

Credibility of instruments – do you have what you need? – do you have stuff you don't need

Credibility of data

Controls

Measuring rate of change/trends

System Redundancy

Instrumentation

Power supply

Locale of system operators

Preventative Maintenance aspects