SAFETY PROCEDURES MANUAL

Process Control Systems

EMERGENCY RESPONSE PROCEDURES

GENERAL ALARM RESPONSE:

When any process alarm occurs, operators must:

1. Acknowledge alarm within 30 seconds

2. Assess process conditions immediately

3. Take appropriate corrective action per procedures

4. Document all actions in operator log

5. Notify supervision for High-High alarms

SHUTDOWN PROCEDURES:

Emergency shutdown sequence:

1. Reduce all feed rates to minimum

2. Activate emergency cooling systems

3. Isolate process units as required

4. Ensure all safety systems are operational

5. Notify emergency response team

PROCESS VARIABLE LIMITS

Critical operating limits must not be exceeded:

Temperature Systems:

- Maximum operating: 130°C
- Emergency shutdown: 135°C
- Cooling water minimum: 15°C

Pressure Systems:

- Maximum operating: 70 PSI
- Safety relief setting: 75 PSI
- Minimum operating: 30 PSI

ALARM MANAGEMENT:

- Nuisance alarms must be investigated and corrected
- Alarm setpoints require engineering approval to modify
- Bypassed alarms require supervisor authorization
- All alarm changes must be documented

MAINTENANCE SAFETY

Before performing maintenance:

1. Obtain proper work permits
2. Lock out and tag out energy sources
3. Verify zero energy state
4. Use proper PPE for task
5. Have rescue plan in place

Instrument maintenance safety:

- Assume all instruments are energized
- Use proper grounding techniques
- Verify circuits are de-energized
- Use intrinsically safe tools in hazardous areas
- Test circuits before returning to service