

Temporary Portable Pump Alarms and Setup Standards

When a project requires a temporary portable pump to be alarmed, the following guidelines need to be followed.

- **When work is performed at station:** If power is available, all alarms are to be routed through existing HRSD's SCADA system. Portable pump manufacture call box is not acceptable unless otherwise approved for site specific situations. If power is not available then, HRSD solar SCADA panel will be provided. A portable generator may be required depending on site specific situations.
- **When work is performed at a manhole:** If power is available, all alarms are to be routed through existing HRSD's SCADA system. Portable pump manufacture call box is not acceptable unless otherwise approved for site specific situations. If power is not available then, HRSD solar Scada panel will be provided. A portable generator may be required depending on site specific situations. Naming of the alarms from a manhole should indicate the location of the manhole (i.e., Pearl and Ligon)
- The name of the site is to be used followed by temporary lead, lag or second lag, depending on the number of pumps. (Example: Arctic Temporary Lead, Arctic Temporary Lag and Arctic Second Lag.)
- Both contractor and HRSD will be alerted in the event of a pump alarm. The contractor is responsible to be primary responder with the support of HRSD staff.
- All pump maintenance and fuel requirement are the contractor's responsibility.
- Pump maintenance records are to be provided monthly through the duration of the project by contractor, depending on length of project.
- Battery chargers are required with all pumps. In situations where power is not available a portable generator may be required.
- All discharge piping is to be pressure rated flanged or fused pipe. Isolations valves are required at each pump along with an additional external swing check valve. A means to bleed air off the discharge piping is required.
- Float balls, level transducers and pressure transducers are acceptable. In a Lift station or manhole application, level transducers are used. If float balls are used for control, a two float setup is required per pump. All floats are to be secured in manhole or wet well so as not to become tangled, hindering pump operation. In a temporary PRS setup, owner furnished sensor valve will be provided to allow contractor to connect pressure transducers for control. An isolation valve is required to be furnished by contractor at this location.
- If work is to be performed during cold weather, the contractor is responsible for providing freeze protection on pumps and controls, specifically transducers.
- Depending on location and duration of job, concrete protective barrier wall may be required.
- All manholes and wet wells where temporary pumps are being used must be secured to

prevent trip hazards, fall risks and odor issues.

The following standard alarms are required. Site specific alarms will be evaluated on a as need basis.

I. Two Pump Lift station Or Manhole (Diesel Pumps)

Lead	Fail / Normal
Lag	On / off
High well alarms cannot be used)	Alarm / Normal (HRSD furnished float ball if station
Overflow length of Job. HRSD furnished float ball if station alarms cannot be used.)	Alarm / Normal (Determined necessary according to

II. Three Pump Lift station Or Manhole (Diesel Pumps)

Lead	Fail / Normal Lag
On / off Second La	
On / Off	
High well alarms cannot be used)	Alarm / Normal (HRSD furnished float ball if station
Overflow length of Job. HRSD furnished float ball if station alarms cannot be used.)	Alarm / Normal (Determined necessary according to

III. Two Pump Lift Station or Manhole (Diesel Pumps) New Prime Guard Controller

Lead	Fail / Normal
Lag	On / off and Fail / Normal
High well alarms cannot be used)	Alarm / Normal (HRSD furnished float ball if station
Overflow length of Job. HRSD furnished float ball if station alarms cannot be used.)	Alarm / Normal (Determined necessary according to

IV. Two Pump Lift Station or Manhole (One electric one diesel pump) New Prime Guard Controller

Dominion Power On / OFF

Lead Fail / Normal (Electric)

Lag On / off and Fail / Normal

High well Alarm / Normal (HRSD furnished float ball if station
alarms cannot be used)

Overflow Alarm / Normal (Determined necessary according to
length of Job.

HRSD furnished float ball if station alarms cannot be used.)

(For HRSD monitoring purposes only, provide well level.)

V. Three Pump Lift Station or Manhole (One electric two diesel pump) New Prime Guard Controller

Dominion Power On / OFF

Lead Fail / Normal (Electric)

Lag On / off and Fail / Normal Second Lag On / off and
Fail / Normal

High well Alarm / Normal (HRSD furnished float ball if station
alarms cannot be used)

Overflow Alarm / Normal (Determined necessary according to
length of Job.

HRSD furnished float ball if station alarms cannot be used.)

(For HRSD monitoring purposes only, provide well level.)

VI. Two Pump PRS (Diesel Pumps) New Prime Guard Controller

Lead Fail / Normal

Lag On / off and Fail / Normal
(For HRSD monitoring purposes only, provide Suction and Discharge pressures.)

VII. Three Pump PRS (Diesel Pumps) New Prime Guard Controller

Lead Fail / Normal
Lag On / off and Fail / Normal Second Lag On / off and
Fail / Normal

(For HRSD monitoring purposes only, provide Suction and Discharge pressures.)

VIII. Two Pump PRS (One electric one diesel pump) New Prime Guard Controller

Dominion Power On / OFF

Lead Fail / Normal (Electric)
Lag On / off and Fail / Normal

(For HRSD monitoring purposes only, provide Suction and Discharge pressures.)

IX. Three Pump PRS (One electric two diesel pump) New Prime Guard Controller

Dominion Power On / OFF

Lead Fail / Normal (Electric)
Lag On / off and Fail / Normal Second Lag On / off and
Fail / Normal

(For HRSD monitoring purposes only, provide Suction and Discharge pressures.)

Required Contractor Supplied Bypass Pumping Alarm Outputs for HRSD SCADA System Interface

Pump Alarms				Level Alarms			Analogs		
LEAD PUMP RUNNING/ OFF	LEAD PUMP NORMAL/ FAIL	1 st LAG PUMP ON/OFF	1 st LAG PUMP NORMAL/ FAIL	2nd LAG PUMP ON/OFF	2nd LAG PUMP NORMAL/ FAIL	FLOATBALL HIGH LEVEL	FLOATBALL OVERFLOW	FLOATBALL LOW LEVEL	LEVEL TRANS- MITTER
Alarm (OPEN) On Lead Pump OFF	Alarm (OPEN) On LEAD PUMP FAIL	Alarm (Open) On LAG PUMP ON	Alarm (OPEN) On 1 st LAG PUMP FAIL	Alarm (Open) On LAG PUMP ON	Alarm (OPEN) On 1 st LAG PUMP FAIL	Alarm (Open) On HIGH LEVEL	Alarm (Open) On OVERFLOW	Alarm (Open) On LOW LEVEL	4-20 mA Isolated Output

A normally **CLOSED** contact state is required during normal operation

Any **OPEN** contact will generate an Alarm Condition