

Hefley Pump Station

General Site and Safety Considerations

Tuesday, December 01, 2015

GENERAL SITE CONDITION/ACCESS

Vehicle Entrance and Exit to Site	Driveway on Hefley Street
Parking	On-site and on-street
Sight lighting Fixture	Street light over site

SAFETY CONSIDERATIONS

General Site Safety Issues	No issues noted
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SITE SECURITY

Facility Fenced	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Privacy Fence	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Fence Material	N/A	Height of Fence	N/A
Method of Securing Access Gates	N/A	Fence Topping	N/A

Adequate security for keeping public off site?	No
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Notes:



General Site Photos

Tuesday, December 01, 2015



Site, looking north





Electrical service at south end of structure



Site, looking east

Equipment Housing

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Equipment Housing	<input checked="" type="checkbox"/> Building	<input checked="" type="checkbox"/> Enclosure	<input type="checkbox"/> Other		
Condition	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Criticality	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	
Serviceability	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	

Structural Materials	CMU and concrete - mostly buried
Age	Installed in 1996

Locking Doors	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Intrusion Alarm	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Dimensions:

Length	~18	ft
Width	~11	ft

HVAC:

Heat	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Cooling	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Humidity Control	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Fan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Notes:



Equipment Housing Photos

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Station entrance, looking east



Station entrance, stairs down into partially buried structure



Stairway down into pump station structure



View of top of pump station structure



Structure in close proximity to Interstate 5 bridge pier



Interior of facility



Electrical cabinet, lighting, and rail system



Electrical cabinet

Flow Meter and Vault(s)

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Flow Meter	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Condition	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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Criticality	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
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Serviceability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
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Asset Nos.	FI-7-9-5-2
Location.	Common discharge main - no metering on large pumps
Type/Manufacturer	Hersey, Retrothrust MHR/4"
Age	Unknown

Vault	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
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Description	
Structural Materials	
Dimensions	
Age	

Access Hatch Fall Protection	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Access Hatch Lock	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Intrusion Alarm	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Notes:

- Hefley Flowmeter Discharge Isolation Valve Kennedy 4" Gate valve
- Hefley Pressure Relief Inlet Isolation Valve Kennedy 2 1/2" Gate valve
- Hefley Pressure Relief Outlet Isolation Valve Kennedy 2 1/2" Gate valve



Flow Meter and Vault(s) Photos

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Flow meter on domestic service with upstream flow straightener



Flow meter on domestic service showing upstream and downstream piping

HEFLEY PUMP #1

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Suction Zone	1240	Discharge Zone	1520
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Pumping System No. 1

Condition 1 2 3 4 5

Criticality 1 2 3 4

Serviceability 1 2 3 4

Pump Type Vert. Turb. End Suction Split case In-line centrifugal

Mounting Horizontal Vertical

Pump from Piping Can Basin/Clearwell

Pump to Closed zone Pressure tank Reservoir

Asset no.	P-7-9-1
Manufacturer	Grundfos
Model	CR45-3-1 A-G-A-E-KUBE
Serial #	A96419123-P11033569
Age	18-NOV-2010

Rated Design Pt 238 gpm @ 264 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Overhead rail system to door - offset pick

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 25 Voltage Phase rpm

Manufacturer	
Model	
Serial #	
Age	

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:



Valves and Gauges

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Check/Control Valve <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Reported/Exterior Condition	No issues noted.
Asset Nos.	FCV-7-9-1-2
Type/Manufacturer	Cla-Val, 60-11-97H, 2 1/2-60-11A
Age	Unknown
Isolation Valve(s) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Reported/Exterior Condition	No issues noted.
Asset Nos.	FV-7-9-1-1, FV-7-9-1-3
Type/Manufacturer	Kennedy gate valves - 2.5" & 2.5"
Age	Unknown
Pressure Gauge(s) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Asset Nos.	Suction: PIT-7-9-1, Discharge: PIT-7-9-2
Type/Manufacturer	Suction PIT: Dwyer, Discharge PIT: CE Comp. Electronics
Age	Unknown

Notes:

PRV-7-9-6-2 Hefley Pump Station Pressure Cla-Val 52-03-169E 2 1/2-52-03 Control Valve Relief Valve



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 1



Pumping System No. 1 pump nameplate



Pumping System No. 1 pump control valve nameplate

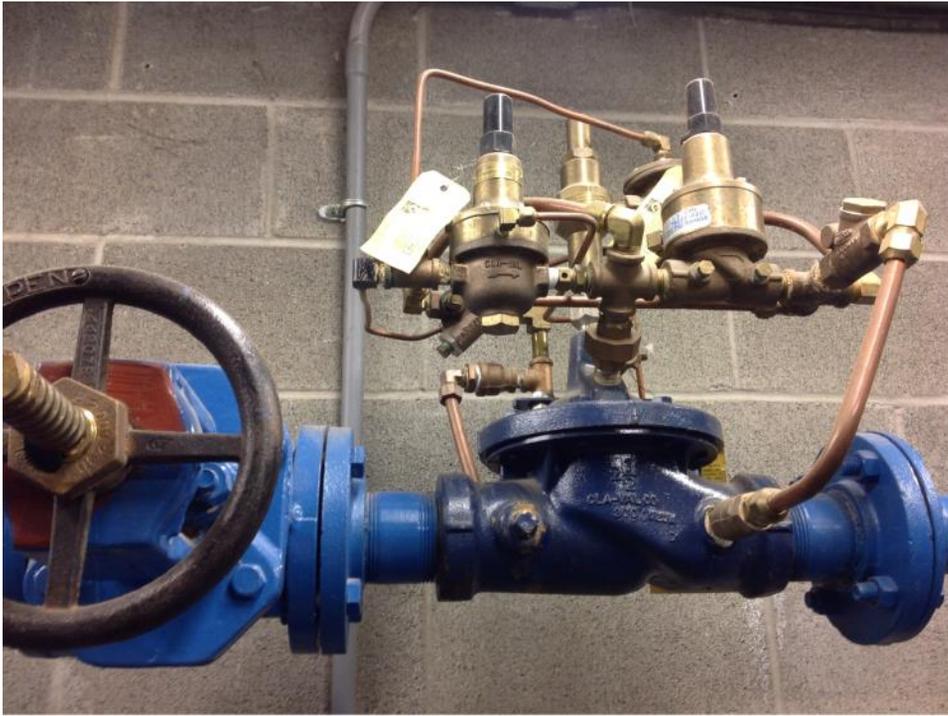


Pumping System No. 1 pump control valve



BALDOR • RELIANCE		INDUSTRIAL MOTOR	
CAT. NO.	84Z00021		
SPEC.	39E169W639G1		
HP	25		
VOLTS	208-230/460		
AMPS	64-59/29.5		
R.P.M.	3525		
FRAME	284TSCZ	HZ	60
SER. F.	1.15	CODE	G
NEMA NOM. EFF.	91	%	P.F.
RATING	40C AMB-CONT		87
CC	USABLE AT 200V		64
BEARINGS	DE	7311	ODE
ENCL.	OPEN	SN	Z1007151876
SFA 74-67/33.5			
BALDOR ELECTRIC CO. FT. SMITH, AR. MFG. IN U.S.A. Np/1256L			

Pumping System No. 1 motor nameplate



Common surge relief valve



Common surge relief valve nameplate (against wall)

HEFLEY PUMP #2

Tuesday, December 01, 2015

Suction Zone	1240	Discharge Zone	1520
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Pumping System No. 2

Condition 1 2 3 4 5

Criticality 1 2 3 4

Serviceability 1 2 3 4

Pump Type Vert. Turb. End Suction Split case In-line centrifugal

Mounting Horizontal Vertical

Pump from Piping Can Basin/Clearwell

Pump to Closed zone Pressure tank Reservoir

Asset no.	P-7-9-2
Manufacturer	PACO
Model	38-15701-7345611821
Serial #	RL96B00156
Age	Installed 1996

Rated Design Pt 120 gpm @ 250 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Overhead rail system to door - offset pick

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 15 Voltage Phase 3 rpm 3490

Manufacturer	Baldor
Model	M3314T
Serial #	Unknown
Age	Installed 1996

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:



Valves and Gauges

Tuesday, December 01, 2015

Check/Control Valve	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FCV-7-9-2-2	
Type/Manufacturer	Cla-Val, 60-11-97H, 2 1/2-60-11A	
Age		

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-9-2-1, FV-7-9-2-3	
Type/Manufacturer	GV/Kennedy - 4"	
Age		

Pressure Gauge(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos.	See Pump 1 valves and gauges sheet for info on pressure gauges	
Type/Manufacturer		
Age		

Notes:



Piping

Tuesday, December 01, 2015

Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	2"
Pipe material	Ductile iron pipe/steel
Age	Installed in 1996

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	1" increases to 2-1/2"
Pipe material	Steel/Ductile iron pipe
Age	Installed in 1996

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 2



Pump System No. 2 pump



Pumping System No. 2 pump control valve



Pumping System No. 2 motor

HEFLEY PUMP #3

Tuesday, December 01, 2015

Suction Zone	1240	Discharge Zone	1520
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Pumping System No. 3

Condition 1 2 3 4 5

Criticality 1 2 3 4

Serviceability 1 2 3 4

Pump Type Vert. Turb. End Suction Split case In-line centrifugal

Mounting Horizontal Vertical

Pump from Piping Can Basin/Clearwell

Pump to Closed zone Pressure tank Reservoir

Asset no.	P-7-9-3
Manufacturer	PACO
Model	11-30955-1A62011911
Serial #	RL96B00158-A
Age	Installed in 1996

Rated Design Pt 600 gpm @ 300 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Overhead rail system to door - offset pick

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 60 Voltage Phase rpm

Manufacturer	Baldor
Model	Unknown
Serial #	Unknown
Age	Installed in 1996

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:



Valves and Gauges

Tuesday, December 01, 2015

Check/Control Valve	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.
Asset Nos.	FCV-7-9-3-2
Type/Manufacturer	Cla-Val, stock no. 60-11-12G, size & cat no. 6-60-11AB
Age	Installed in 1996

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.
Asset Nos.	FV-7-9-3-1, FV-7-9-3-3
Type/Manufacturer	GV/Kennedy - 6"
Age	Installed in 1996

Pressure Gauge(s)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Asset Nos.	See Pump 1 valves and gauges sheet for info on pressure gauges
Type/Manufacturer	
Age	

Notes:



Piping

Tuesday, December 01, 2015

Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3" increases to 6"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Notes:

Big pumps have separate common discharge pipe



Pump/Valve/Piping Photos

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Pumping System No. 3



Pumping System No. 3 pump and suction isolation valve

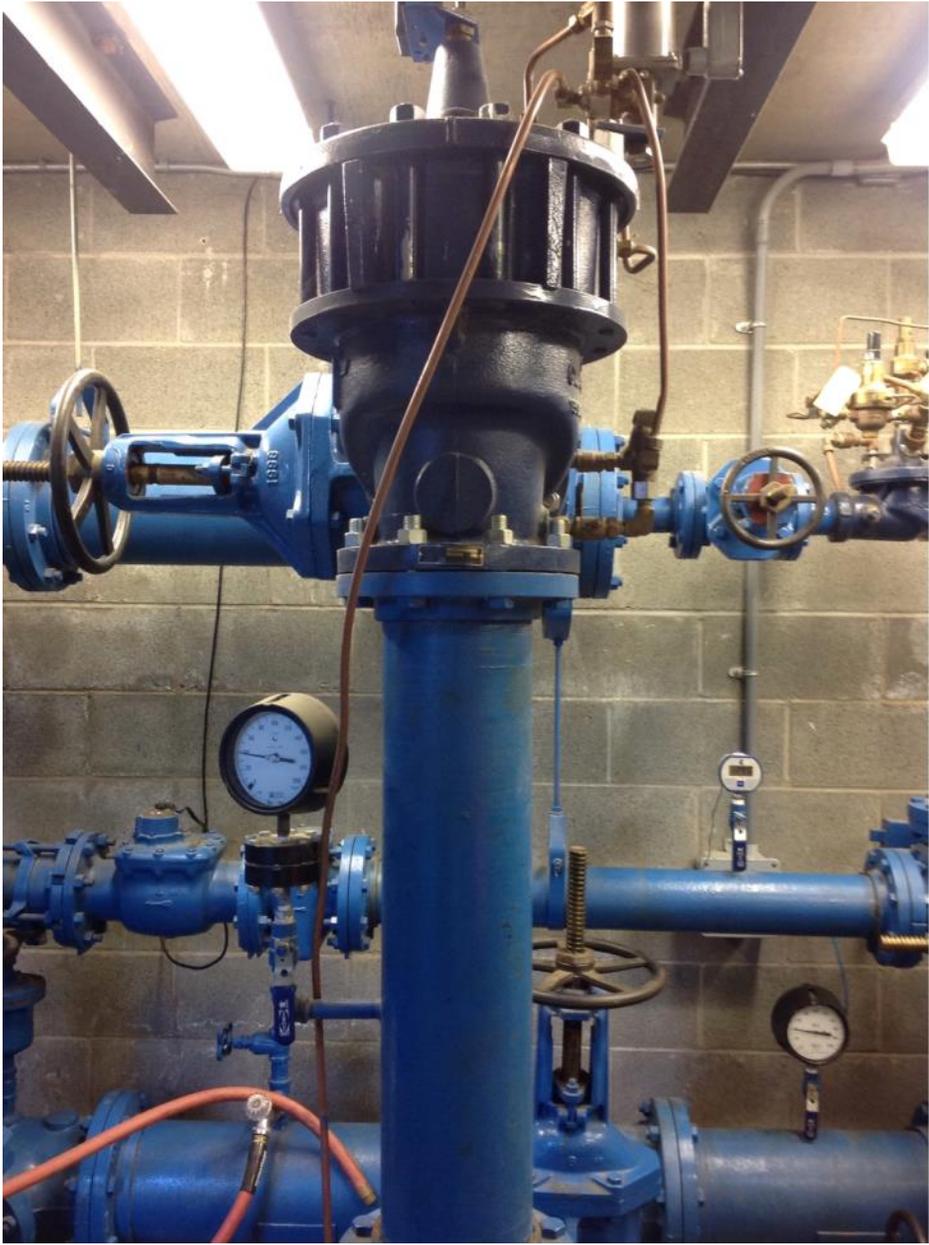


Pumping System No. 3 pump





Pumping System No. 3 suction isolation valve



Pumping System No. 3 pump control valve



Pumping System No. 3 pump control valve

HEFLEY PUMP #4

Tuesday, December 01, 2015

Suction Zone	1240	Discharge Zone	1520
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Pumping System No. 4

Condition 1 2 3 4 5

Criticality 1 2 3 4

Serviceability 1 2 3 4

Pump Type Vert. Turb. End Suction Split case In-line centrifugal

Mounting Horizontal Vertical

Pump from Piping Can Basin/Clearwell

Pump to Closed zone Pressure tank Reservoir

Asset no.	P-7-9-4
Manufacturer	PACO
Model	11-30955-1A62011911
Serial #	RL96B00158-B
Age	Installed in 1996

Rated Design Pt 600 gpm @ 300 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Overhead rail system to door - offset pick

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 60 Voltage Phase rpm

Manufacturer	Baldor
Model	M2546T
Serial #	Unknown
Age	Installed in 1996

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:



Valves and Gauges

Tuesday, December 01, 2015

Check/Control Valve	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FCV-7-9-4-2	
Type/Manufacturer	Cla-Val, 60-11-12G, 6-60-11AB	
Age	Installed in 1996	

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-9-4-1, FV-7-9-4-1	
Type/Manufacturer	GV/Kennedy - 6"	
Age	Installed in 1996	

Pressure Gauge(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos.	See Pump 1 valves and gauges sheet for info on pressure gauges	
Type/Manufacturer		
Age		

Notes:



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3" increases to 6"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Ductile iron pipe
Age	Installed in 1996

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 4



Pumping System No. 4 pump



Pumping System No. 4 suction isolation valve



Pumping System No. 4 pump control valve



Pumping System No. 4 motor



Pumping System No. 4 pump control valve and discharge isolation valve



Pumping System No. 4 pump control valve nameplate

Backup Power

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BACKUP POWER

Source	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Pig tail for portable	<input type="checkbox"/> On-site, permanent
Transfer Switch	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Type	<input type="checkbox"/> Manual	<input type="checkbox"/> Auto	

Notes:

Old pigtail no longer in service. Working on adding new.

STANDBY GENERATOR

Condition	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Criticality	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Serviceability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Asset No.					
Manufacturer					
Model					
Serial #					
Age(s)					
Location					
Electrical capacity	KW		Voltage		Phase(s)
Fuel type	<input type="checkbox"/> Diesel	<input type="checkbox"/> Nat. Gas	<input type="checkbox"/> Propane	<input type="checkbox"/> Gasoline	<input type="checkbox"/> Other
Full load fuel demand			gal/hr		
Fuel stored on-site			gal		

Notes:



Regulator near Hefley

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