

# Laurel Ridge Pump Station

## General Site and Safety Considerations

Tuesday, December 01, 2015

### GENERAL SITE CONDITION/ACCESS

Vehicle Entrance and Exit to Site	Driveway access off of NW Crown St.
Parking	On-street
Sight lighting Fixture	Street light, opposite side of street

### SAFETY CONSIDERATIONS

General Site Safety Issues	No issues noted
----------------------------	-----------------

### SITE SECURITY

Facility Fenced	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Privacy Fence	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Fence Material	Steel, architectural	Height of Fence	5 feet
Method of Securing Access Gates	Chain and padlock	Fence Topping	none
Adequate security for keeping public off site?	Deterrent, but less than other fenced sites. Limited risk with highly visible site and numerous neighbors		

Notes:

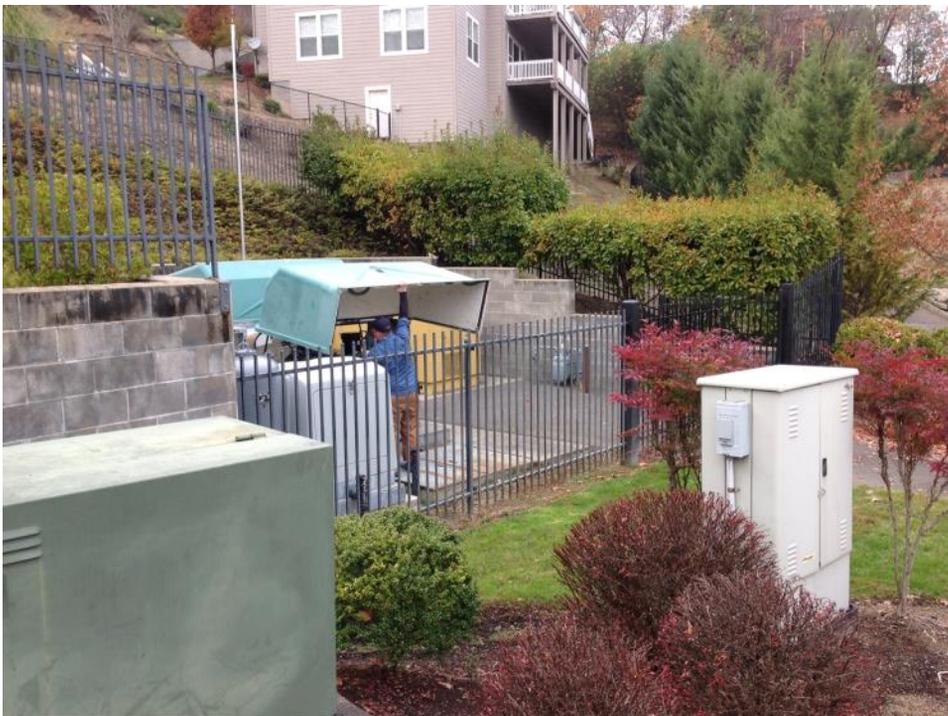


# General Site Photos

Tuesday, December 01, 2015



Site entrance



Site frontage

# Equipment Housing

Tuesday, December 01, 2015

<b>Equipment Housing</b>	<input 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 checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Serviceability	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Structural Materials	2 fiberglass clam shells, one supports small pump				
Age	Unknown original, newer enclosure installed 2014				
Locking Doors	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Intrusion Alarm	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			

## Dimensions (main structure):

Length	9	ft
Width	9	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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Fan	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

## Notes:



# Equipment Housing Photos

Tuesday, December 01, 2015



Main enclosure, east face



Main enclosure, west face



Pumping System No. 4 housing and pressure tank (in background)

# Flow Meter and Vault(s)

Tuesday, December 01, 2015

<b>Flow Meter</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
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 Nos.					
Location.					
Type/Manufacturer					
Age					

<b>Vault</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Description	Surge anticipator		
Structural Materials	Concrete w/ steel hatch doors		
Dimensions	4' x 4'		
Age	Unknown		
Access Hatch Fall Protection	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Access Hatch Lock	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Intrusion Alarm	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

Notes:



# Flow Meter and Vault(s) Photos

Tuesday, December 01, 2015



Surge anticipator valve in vault



Surge anticipator valve and piping

# LAUREL RIDGE #1

Tuesday, December 01, 2015

<b>Suction Zone</b>	1370	<b>Discharge Zone</b>	1510
---------------------	------	-----------------------	------

**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-7-20-1
Manufacturer	Grundfos
Model	CR64-2-2
Serial #	A96418848P1 0101 US532
Age	Installed 01-JUL-2000

Rated Design Pt 350 gpm @ 127 feet TDH

Ability to Isolate Pump  Yes  No

How to Remove Pump Remove clam shell and pick

## MOTOR

ODP  TEFC  TENV  TEBC  Diesel Engine  Other

Horsepower 15 Voltage Phase rpm 3450

Manufacturer	Baldor
Model	84.Z00019
Serial #	Unknown
Age	Installed 01-JUL-2000

Inverter duty rated?  Yes  No  Unknown

Motor Driver  VFD  Soft Starter  FVNR Starter  None

Notes:



# Valves and Gauges

Tuesday, December 01, 2015

<b>Check/Control Valve</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.		
Type/Manufacturer	Wafer	
Age	Installed JUL-00	
<b>Isolation Valve(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-20-1-1, FV-7-20-1-2	
Type/Manufacturer	BV/ Grinnell-8000 1/4 turn butterfly valves	
Age	Installed JUL-00	
<b>Pressure Gauge(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos./ Type/Manufacturer	PIT-7-20-1 Laurel Ridge Suction Pressure Transmitter      Dwyer    0-200psi PIT-7-20-2 Laurel Ridge Discharge Pressure Transmitter      Dwyer    0-100psi	
Age	Installed JUL-00	

**Notes:**

PRV-7-20-1 Laurel Ridge Pressure Reducing Valve Val-Matic 1/2"

PRV-7-20-2 Laurel Ridge Pressure Relief Valve Cla-Val cat# 3-520-03



# Piping

Tuesday, December 01, 2015

## Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Galvanized steel
Age	Installed in 2000

## Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Steel
Age	Installed in 2000

## Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Steel
Age	Installed in 2000

## Common Discharge Pipe

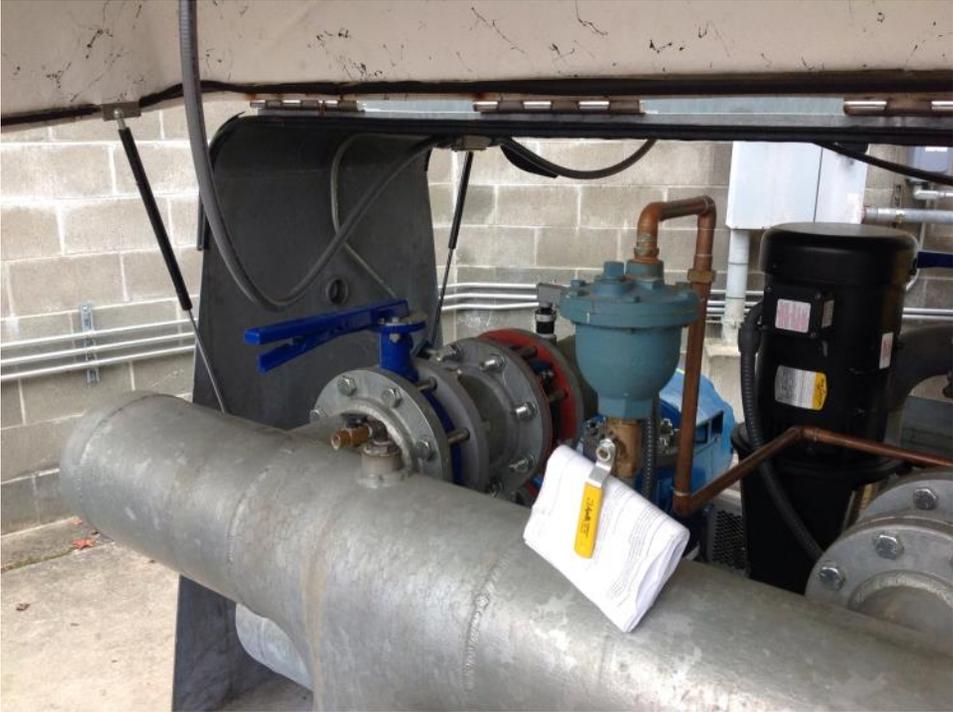
Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Steel
Age	Installed in 2000

Notes:



# Pump/Valve/Piping Photos

Tuesday, December 01, 2015



Common discharger header



Pumping System No. 1



Pumping System No. 1 discharge piping



Pumping System No. 1 motor nameplate



Common pumping system pressure

# LAUREL RIDGE #2

Tuesday, December 01, 2015

<b>Suction Zone</b>	1370	<b>Discharge Zone</b>	1510
---------------------	------	-----------------------	------

**Pumping System No. 2**

Condition	<input type="checkbox"/> 1	<input checked="" 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 checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
Serviceability	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

Pump Type	<input type="checkbox"/> Vert. Turb.	<input type="checkbox"/> End Suction	<input type="checkbox"/> Split case	<input checked="" type="checkbox"/> In-line centrifugal
-----------	--------------------------------------	--------------------------------------	-------------------------------------	---

Mounting	<input type="checkbox"/> Horizontal	<input checked="" type="checkbox"/> Vertical	
Pump from	<input checked="" type="checkbox"/> Piping	<input type="checkbox"/> Can	<input type="checkbox"/> Basin/Clearwell
Pump to	<input checked="" type="checkbox"/> Closed zone	<input type="checkbox"/> Pressure tank	<input type="checkbox"/> Reservoir

Asset no.	P-7-20-2
Manufacturer	Grundfos
Model	CR64-2-2
Serial #	A96419848P1 0101 U9534
Age	01-JUL-2000

Rated Design Pt	350	gpm @	127	feet TDH
-----------------	-----	-------	-----	----------

Ability to Isolate Pump	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
-------------------------	---	-----------------------------

How to Remove Pump	Remove clam shell and pick
--------------------	----------------------------

## MOTOR

<input checked="" type="checkbox"/> ODP	<input type="checkbox"/> TEFC	<input type="checkbox"/> TENV	<input type="checkbox"/> TEBC	<input type="checkbox"/> Diesel Engine	<input type="checkbox"/> Other
---	-------------------------------	-------------------------------	-------------------------------	--	--------------------------------

Horsepower	15	Voltage		Phase		rpm	3450
------------	----	---------	--	-------	--	-----	------

Manufacturer	Baldor
Model	84.Z00019
Serial #	Unknown
Age	Installed 01-JUL-2000

Inverter duty rated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
----------------------	---	-----------------------------	----------------------------------

Motor Driver	<input checked="" type="checkbox"/> VFD	<input type="checkbox"/> Soft Starter	<input type="checkbox"/> FVNR Starter	<input type="checkbox"/> None
--------------	---	---------------------------------------	---------------------------------------	-------------------------------

Notes:



# Valves and Gauges

Tuesday, December 01, 2015

<b>Check/Control Valve</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.		
Type/Manufacturer	Wafer	
Age	Installed JUL-00	

<b>Isolation Valve(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-20-2-1, FV-7-20-2-2	
Type/Manufacturer	BV/Grinnell-8000	
Age	Installed JUL-00	

<b>Pressure Gauge(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos.	See pumping system no. 1 for information	
Type/Manufacturer		
Age		

Notes:



# Piping

Tuesday, December 01, 2015

## Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Galvanized steel
Age	Installed in 2000

## Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Steel
Age	Installed in 2000

## Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	3"
Pipe material	Steel
Age	Installed in 2000

## Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Steel
Age	Installed in 2000

Notes:

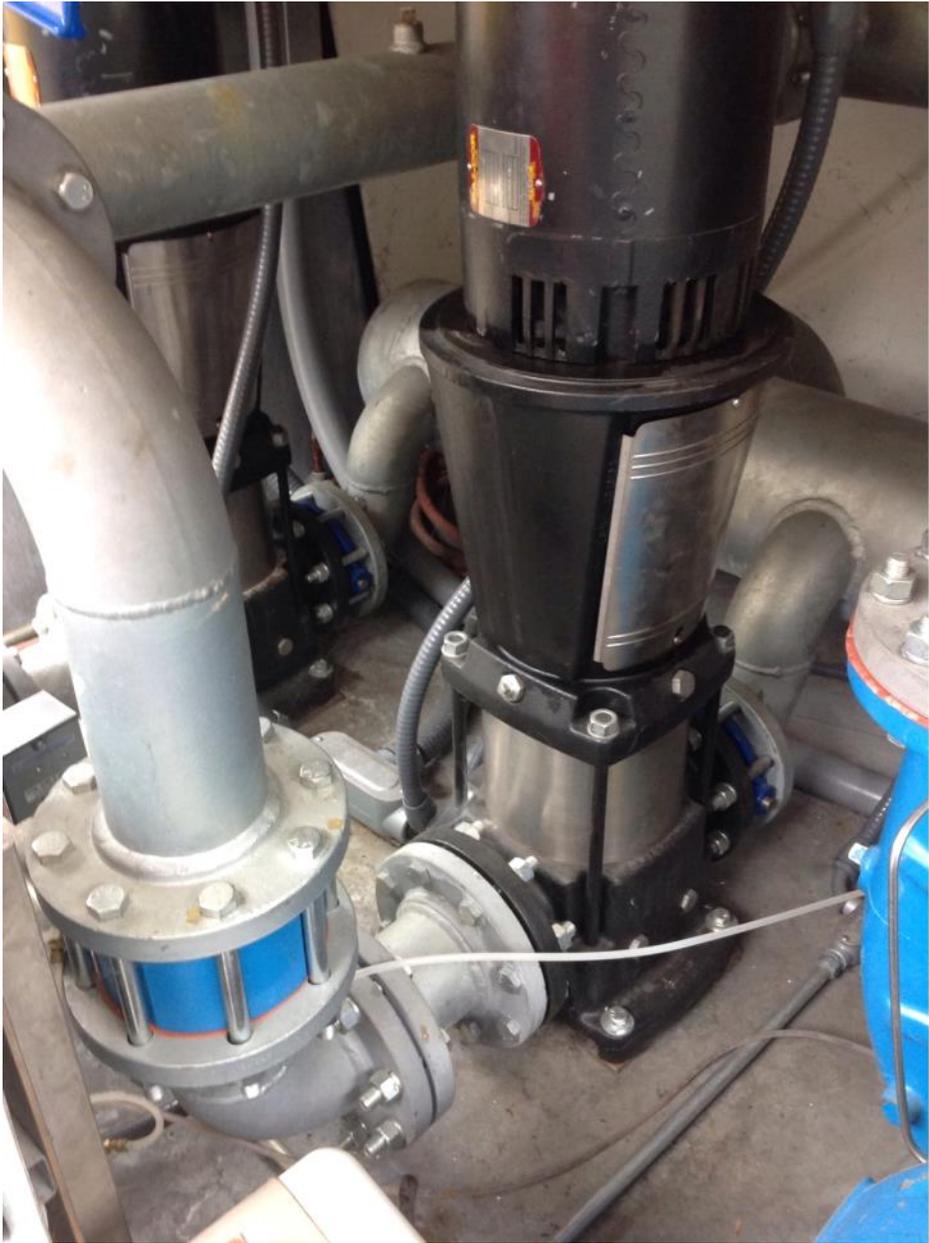


# Pump/Valve/Piping Photos

Tuesday, December 01, 2015



Pumping System No. 2



Pumping System No. 2 pump and discharge check valve



Pumping System No. 2 motor nameplate

# LAUREL RIDGE #3

Tuesday, December 01, 2015

<b>Suction Zone</b>	1370	<b>Discharge Zone</b>	1510
---------------------	------	-----------------------	------

**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-7-20-3
Manufacturer	CORNELL
Model	4HH-60-4
Serial #	119284
Age	Installed 01-JUL-2000

Rated Design Pt 1100 gpm @ 160 feet TDH

Ability to Isolate Pump  Yes  No

How to Remove Pump Remove clam shell and pick

## MOTOR

ODP  TEFC  TENV  TEBC  Diesel Engine  Other

Horsepower 60 Voltage Phase rpm 1775

Manufacturer	Baldor
Model	A15097D-55
Serial #	Unknown
Age	Installed 01-JUL-2000

Inverter duty rated?  Yes  No  Unknown

Motor Driver  VFD  Soft Starter  FVNR Starter  None

Notes:



# Valves and Gauges

Tuesday, December 01, 2015

<b>Check/Control Valve</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.		
Type/Manufacturer	Wafer	
Age	Installed JUL-00	

<b>Isolation Valve(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-20-3-1, FV-7-20-3-2	
Type/Manufacturer	BV/Grinnell-8000	
Age	Installed JUL-00	

<b>Pressure Gauge(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos.	See pumping system no. 1 for information	
Type/Manufacturer		
Age		

Notes:



# Piping

Tuesday, December 01, 2015

## Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Galvanized steel
Age	Installed in 2000

## Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Steel
Age	Installed in 2000

## Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Steel
Age	Installed in 2000

## Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Steel
Age	Installed in 2000

Notes:



# Pump/Valve/Piping Photos

Tuesday, December 01, 2015



Pumping System No. 3



Pumping System No. 3 pump and suction/discharge piping



Pumping System No. 3 motor nameplate

# LAUREL RIDGE #4

Tuesday, December 01, 2015

<b>Suction Zone</b>	1370	<b>Discharge Zone</b>	1510
---------------------	------	-----------------------	------

**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-7-20-4
Manufacturer	Grundfos
Model	CR3-10
Serial #	A96083072P114300143
Age	04-NOV-2014

Rated Design Pt 16 gpm @ 225 feet TDH

Ability to Isolate Pump  Yes  No

How to Remove Pump Remove clam shell and pick

## MOTOR

ODP  TEFC  TENV  TEBC  Diesel Engine  Other

Horsepower 2 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

Tuesday, December 01, 2015

<b>Check/Control Valve</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.		
Type/Manufacturer	Cla-Val	
Age	Installed 2014	

<b>Isolation Valve(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-20-4-1 (suction), FV-7-20-4-2 (discharge)	
Type/Manufacturer	Ball valves	
Age	Installed 2014	

<b>Pressure Gauge(s)</b>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Asset Nos.		
Type/Manufacturer	Wika	
Age	Installed 2014	

Notes:



# Piping

Tuesday, December 01, 2015

## Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Ductile iron pipe
Age	Installed in 2015

## Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	1-1/2"
Pipe material	Copper and sst braid
Age	Installed in 2014

## Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	1-1/2"
Pipe material	Copper and sst braid
Age	Installed in 2014

## Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	6"
Pipe material	Ductile iron pipe
Age	Installed in 2015

Notes:



# Pump/Valve/Piping Photos

Tuesday, December 01, 2015



Pumping System No. 4 skid package system



Pumping System No. 4



Pumping System No. 4 pressure reducing valve and isolation

# Backup Power

Tuesday, December 01, 2015

## BACKUP POWER

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

Notes:

## STANDBY GENERATOR

Condition	<input type="checkbox"/> 1	<input checked="" 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 checked="" 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	Katolight					
Model	N125FRZ4					
Serial #	LM237577 70251					
Age(s)	Installed in 2000					
Electrical capacity	KW	125	Voltage	480	Phase(s)	3
Fuel type	<input type="checkbox"/> Diesel	<input checked="" 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	N/A	gal				

Notes:



# Backup Power Photos

Tuesday, December 01, 2015



Backup power generator





Backup power generator nameplate