

Panoramic Loop Pump Station

General Site and Safety Considerations

Wednesday, December 02, 2015

GENERAL SITE CONDITION/ACCESS

Vehicle Entrance and Exit to Site	Driveway access off of Panoramic Loop at intersection with Robertson Crest
Parking	On site or on driveway
Sight lighting Fixture	None

SAFETY CONSIDERATIONS

General Site Safety Issues	Vegetation growing around generator exhaust could pose a potential fire hazard under the right conditions
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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	Height of Fence	6 feet
Method of Securing Access Gates	Chain and padlock	Fence Topping	None
Adequate security for keeping public off site?	Yes		

Notes:



General Site Photos

Wednesday, December 02, 2015



Site entrance, looking north across Panoramic Loop



Downhill, west side of site

Equipment Housing

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Equipment Housing	<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 type="checkbox"/> 2	<input checked="" 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	Trailer
Age	Installed 2006

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

Dimensions:

Length	~35	ft
Width	~10	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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South end of structure



East face of structure, the only access doors



View of inside of structure from access door



View of inside of structure, looking south



View of inside of structure, looking north

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 type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" 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.	FM-7-22-1
Location	Vault adjacent to pump station
Type/Manufacturer	Siemens, Magflow 600
Age	Installed 2006

Vault	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
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Description	Meter vault
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Structural Materials	CMU w/ steel lids
Dimensions	~6' x ~15'
Age	Installed 2006

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

Notes:

Flow meter and bypass line



Flow Meter and Vault(s) Photos

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Heavy steel doors are not locked but are within fence



Flow meter and bypass line

PANORAMIC LOOP #1

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Suction Zone	1250	Discharge Zone	1350
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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-7-22-1
Manufacturer	DEMING/CRANE
Model	3132-103144-20500
Serial #	DC-939915
Age	Installed 2006

Rated Design Pt 70 gpm @ 316 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Bridge crane

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 25 Voltage Phase 3 rpm 3520

Manufacturer	US Motors
Model	C528A
Serial #	Unknown
Age	Installed 2006

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
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Reported/Exterior Condition	No issues noted.
Asset Nos.	
Type/Manufacturer	Wafer
Age	Installed 2006

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Reported/Exterior Condition	No issues noted.
Asset Nos.	FV-7-22-1-1, FV-7-22-1-2
Type/Manufacturer	BV/Keystone-4", Hammond-621-1010400
Age	Installed 2006

Pressure Gauge(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Asset Nos.	PIT-7-22-1 Panoramic Loop Suction Pressure Transmitter	Dwyer	0-100psi
Type/Manufacturer			
Age	Installed 2006		

Notes:

- PRV-7-22-1-1 Panoramic Loop Booster Pump #1 Pressure Reducing Valve Cla-Val
- PRV-7-22-2 Panoramic Loop Suction/Discharge Pressure Relief Valve Cla-Val



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	4"
Pipe material	Steel
Age	Installed 2006

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 1 in front of pressure tanks



Pumping System No. 1



Pumping System No. 1 motor nameplate





Pumping System No. 1 pressure tank connection and PRV



Pumping System No. 1 PRV nameplate



Pumping System No. 1 discharge and common discharge piping in background

PANORAMIC LOOP #2

Wednesday, December 02, 2015

Suction Zone	1250	Discharge Zone	1350
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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-7-22-2
Manufacturer	DEMING/CRANE
Model	3132-1514 1420 500A
Serial #	DC 939914
Age	Installed 2006

Rated Design Pt 150 gpm @ 138 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Bridge crane

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 10 Voltage Phase rpm

Manufacturer	US Motors
Model	Unknown
Serial #	Unknown
Age	Installed 2006

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.		
Type/Manufacturer	Wafer	
Age	Installed 2006	

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-22-2-1, FV-7-22-2-2	
Type/Manufacturer	BV, Keystone - 4"	
Age	Installed 2006	

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

Notes:

FV-7-22-2	Panoramic Loop Station Main Outlet Isolation Valve	Keystone Valve	8 in.	23-Mar-06	Butterfly Valve
PT-7-22-2	Panoramic Loop Discharge Pressure Transmitter	U.S. Filter			



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 2



Pumping System No. 2 suction and discharge piping

PANORAMIC LOOP #3

Wednesday, December 02, 2015

Suction Zone	1250	Discharge Zone	1350
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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-7-22-3
Manufacturer	DEMING/CRANE
Model	3132-240-218-420- 500A
Serial #	DC939916
Age	Installed 2006

Rated Design Pt 1000 gpm @ 157 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Bridge crane

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 60 Voltage Phase rpm

Manufacturer	US Motors
Model	Unknown
Serial #	Unknown
Age	Installed 2006

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:

Shares VFD and RVSS with pump 4



Valves and Gauges

Wednesday, December 02, 2015

Check/Control Valve	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.		
Type/Manufacturer	Wafer check	
Age	Installed 2006	

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Reported/Exterior Condition	No issues noted.	
Asset Nos.	FV-7-22-3-1, FV-7-22-3-2	
Type/Manufacturer	BV, Keystone - 4" & 8"	
Age	Installed 2006	

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

Notes:



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 3



Pumping System No. 3 suction and discharge piping

PANORAMIC LOOP #4

Wednesday, December 02, 2015

Suction Zone	1250	Discharge Zone	1350
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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-7-22-4
Manufacturer	DEMING/CRANE
Model	312402-1.8420-500A
Serial #	DC 939917
Age	Installed 2006

Rated Design Pt 1000 gpm @ 157 feet TDH

Ability to Isolate Pump Yes No

How to Remove Pump Bridge crane

MOTOR

ODP TEFC TENV TEBC Diesel Engine Other

Horsepower 60 Voltage Phase rpm

Manufacturer	US Motors
Model	Unknown
Serial #	Unknown
Age	Installed 2006

Inverter duty rated? Yes No Unknown

Motor Driver VFD Soft Starter FVNR Starter None

Notes:

Shares VFD and RVSS with pump 3



Valves and Gauges

Wednesday, December 02, 2015

Check/Control Valve	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Reported/Exterior Condition	No issues noted.
Asset Nos.	
Type/Manufacturer	Wafer check
Age	Installed 2006

Isolation Valve(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Reported/Exterior Condition	No issues noted.
Asset Nos.	FV-7-22-4-1, FV-7-22-4-2
Type/Manufacturer	BV/Keystone - 4" & 8"
Age	Installed 2006

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

Notes:



Piping

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Common Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Suction Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Pump Specific Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Common Discharge Pipe

Reported/Exterior Condition	No issues noted.
Pipe size	8"
Pipe material	Galvanized steel
Age	Installed 2006

Notes:



Pump/Valve/Piping Photos

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Pumping System No. 4



Common system piping and pressure relief valve



Common system pressure relief valve nameplate

Backup Power

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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 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 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	Cummins				
Model	GGKB-5739173				
Serial #	I050826685				
Age(s)	Installed 2006				
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

Wednesday, December 02, 2015



Backup power generator



Model No. **GGKB-5739173**
 Modele
 Serial No. **I050826685** Spec. **C**
 Serie

IMPORTANT!
 Model & Serial No. Required When Ordering Parts.
 Modele & No. Serie Requis Pour Commander Des Pieces. **99-2433**

CUMMINS POWER GENERATION
 1400 73RD AVE. N.E.
 MINNEAPOLIS, MN 55432 U.S.A.
 MADE IN U.S.A.

SERVICE RATING	60 HZ			
	STANDBY		PRIME	
PHASE	1PH	3PH	1PH	3PH
RATED KW	125.0	125.0	0.0	0.0
POWER FACTOR	1.0	0.8	0.0	0.0
RATED KVA	125.0	156.2	0.0	0.0
I2 CAPABILITY CONNECTION	8pct WYE			
BATTERY 12 VDC	VOLTS		AMPS	
	120/ 208		433.7	
	120/ 240	520.8	375.9	
	127/ 220		410.1	
ROTATING	133/ 230		392.2	
SPEED	139/ 240		375.9	
1800RPM	240/ 416		216.9	
	255/ 440		205	
NOMINAL	266/ 460		196.1	
RATED	277/ 480		187.9	
INSUL: CLASS H AMB 40C				
FUEL: NG				
WIRING DIAGRAM 0612-6738				

UL LISTED
 1IKL
 STATIONARY ENGINE-GENERATOR ASSEMBLY
 File: AU3044 0098-7737-01, C

SP For Electrical Equipment Only
 Pour Material Electrique Seulement

Backup power generator nameplate



Backup power generator information plate



Backup power generator exhaust piping