LS # <sup>7</sup>\_\_\_\_\_

### **Roth Professional Solutions**

### LIFT STATION CONDITION ASSESSMENT FORM

Assessment Date: 25 April 2023

Location:	2302 O	old Hwy 51, K	ronenwetter, WI	<u> </u>	Municipalit	ty: Village	of Kronenwetter	LS Type: Duplex Submersible			
Engineer:	Ingineer: Roth Professional Solutions Technical & Equipment Assistance: B&M Technical Services										
House Ke	House Keeping: Good N/A Poor Lighting Tripping Hazards Present No Fall Protection Exposure to Raw Wastewater in Dry Well Sump Pump Inoperable Electric Space Heater Inoperable Potential for Shock or Electrocution Other										
Health aı	nd Safety	Issues:									
Other Observations: Wastewater Process Timing / Hydrogen Sulfide Issues											
	Asset (	Class	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Field Observations/Co	mments			
				Si	te Improv	ement (	SIM)				
* Acc	cess Driv	eway	X								
* Pai	rking		X								
* Gat	te and Fe	encing									
	e Drainag		X								
* Gro	ounding S	System	X								
* Site	e Lighting	3	X								
	Alarm H Lighting		X								
Genera	l Site Elec	ctrical Observa	tions								
Acces	s Drivew	ay Details:	Gravel or	aggregate base	course only	Conci	rete Pavement 🔲 Bitu	uminous Pavement			
Parkii	ng Details	S: None	Gravel	Pave	d						
Fence	Details:	Chain	Link Other	Fencing Height	(ft):	F	encing Length (ft):				
Gate 1	Гуре:	Single	Double								
Traffi	c:	Other		Site too Close	to Traffic						
Grounding System Present Grounding Rings Grounding Rods Details:											
If app	licable, a	pproximate pa	rking area:								
Ifapp	licable, a	pproximate sit	e area:								
	Notes:										
			os, No Screen; F		ed 2023						
Son	Some Moisture Corrosion Forming in Dry Valve Vault										





Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments			
Structure and Wetwell (PST)										
* Building		~					(2 Structures: LS & Generator Bldg)			
Building Structures: None Concrete Walls Concrete Floor  Doors Total Floor Area: Plan Floor Area:										
Field Observations: Good	d N/A R	oof Dograded	Doors and So	ocurity Eailir	ng 🗆 N	leeds Paint				
	Field Observations: Good N/A Roof Degraded Observations: Needs Paint Cracks on the Wall Cracks on the Floor Other Hydrogen-Sulfide Corrosion Portection									
* Odor Control		<b>V</b>								
Odor Details: Ven	t Pipe	Other	Details							
Field Observations: Op	erational and in use ner	On site,	but not required	Do	es not oper	ate, needs r	repair			
* Crane/Hoist		<b>✓</b>					Portable / Off-Site			
Crane Details: Man	ufacturer:		Model:		Se	rial Number	:			
Field Observations: Goo	d operating conditio	n Does r	not operate, requ	ires repair	Mou	nting Hard	ware intact			
☐ Oth	er									
* Bar Screen or Com minuter	N/A									
System Description: N	lo Bar Screen	Manually Raked	Bar Screen	Mechanio	cally Raked	Bar Screen	Screen Bypass Provided?			
Mechanical Bar Screens: Manufacturer: Model: Serial Number: Power Requirements (hp):										
Odor Details: N/A	Odor Details: N/A Screens need frequent cleaning Short repsonse time Odor fly nuisance Screens not in use									
* Flow Meter		<b>~</b>					Altronex Control			
Type: N/A	A Type: MAG 500	00 M	anufacturer: Sie	mens	Model:	Sitrans	Serial Number: N1M6150031			
Flow Meter Field Observation	ons: Operationa	al		L	ocation					
	Other									
* Wet Well		~								
Walls: Concre	te Steel [	Fiberglass		II.	I	ll .				
Slab/Cover: 🔳 Reinfor	ced Concrete	Steel Pu	mps, motors and	d electric p	oanel are n	nounted or	n cover/slab directly over wet well			
Pump Control System: 🔳 I	Floats Bubble	r System	Ultrasonic & Tra	nsducer						
Measurement (PPM): MPC 0-5 PSI										
Wet Well Field Observations: 🔳 Good 🔲 PN/A 🔲 Hatch Damaged or Difficult to Open 🔲 Wet Structure Spalling or Cracked										
Evidence of Concrete Corrosion Wet Well Needs Cleaning - Solids/Grease Other										
Hatch Field Observations: Good Fair: Minor Corrosion to Hatches, Hinges, or Latches Poor:Corroded or Broken Hatches, Hinges, or Latches										
Other										
Wet Well Ladder Observations:  Good Fair: Surface Corrosion; Steps Intact and Solid; Minor Anchor Bolt Corrosion  Poor: Corroded or Broken Steps; Corroded or Broken Wall Anchors Other										
Wet Well Wall Observations:	Wet Well Wall Observations: Good Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface									
			te; Exposed/Missi				n Protection needs to be reapplied			
Slab/Cover Observations:	<u> </u>		ninum Grate Sligh	•						
Poor: Concrete Aggregate Missing/Exposed; Grate Corroded or Warped; Debris Over Platform Other										





Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments			
Influent Pipe Observations:	Good Fair:	Slight Corrosion; F	Pipe Intact	Poor: Sev	ere Pipe Co	rrosion [	Other			
Alarm Float Observations: Good Fair: Some Grease But Operating Properly Poor: Covered in Grease or Broken Other										
Pump Vent Line Observations:	Good	Fair: Slight Corrosic	n But Operates	Properly; N	eeds Sealar	nt Around (	Opening			
Poor: Any One Vent Does Not Operate; Corroded or Broken Off at Wall Other										
Dry Well Valve Vault										
Location Type:	None Un	derground pump v	vault with acces	s tube and I	adder	Locat	ed below grade inside Lift Station building			
Lighting:	Yes No									
Cathodic Protection	Not Required	None Y	'es							
Access Tube and Ladder Field	Observations:	N/A Good	Fair: Sur	face Corros	on; Steps I	ntact and S	olid; Minor Anchor Bolt Corrosion			
	Poor: Corroded or	Broken Steps; Cor	roded or Brokei	n Wall Anch	ors 🗌 O	ther				
Underground Vault Observation	ons:	□ N/A ■ Good	fair: Sur	face Corros	ion	Poor: Corr	rosion Other			
Building Floor Slabs: N	/A Good	Fair: Concrete Seal	ant Peeled or Ci	racked; Con	crete Soft a	t Surface				
Po	or: Exposed/Missing	g Aggregate; Expos	ed/Missing Re-	bar 🗌 Ot	her					
Staircases/Stairwells:	N/A Good [	Fair: Concrete	Cracked; Concr	ete Soft at S	urface					
	Poor: Exposed/Mi	ssing Aggregate; Ex	posed/Missing F	Re-bar	Other					
Building Walls:	N/A Good	Fair: Concrete	Sealant Peeled	or Cracked;	Concrete S	oft at Surfa	ce			
	Poor: Exposed/Mis	ssing Aggregate; Ex	cposed/Missing	Re-bar	Other					
Sump Pump: No Yes Type Model: Power (hp): TDH: Serial:										
Field Observations: Not	t Operational	Poor Floor Draina	age 🗌 Ot	her						
* Cathodic Protection	N/A									
Field Observations: Dis	sconnected (	Other								
			HVAC (HVA	١)						
* Dry Well HVAC	N/A									
Asset Size:										
Field Observations: Go	od N/A	Old Ve	entilation Inope	rable	Makes	Noise	Fans Vibrate			
Ve	ntilation Duct Work	Corroded	Belts Loose or	Torn	Louv	ers	Roof Vents Other			
* Wet Well HVAC	N/A									
Asset Size:										
Field Observations: Good N/A Old Ventilation Inoperable Makes Noise Fans Vibrate Belts Loose or Torn										
Ventilation Duct Work Corroded ☐ Louvers ☐ Roof Vents ☐ Other										
Electrical Systems (ELE)										
* Control Panel		<b>V</b>								
Asset Size (Volts) 208 VAC		Single p	ohase	Three Pha	se					
Manufacturer: Hoffman		Model: 48x36	x12	Serial Nur	mber: 5002	224-K				
Power Supply Manufactu	rer:		Model:				Type: 3R			





Field Observations:	Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments			
Asset Size (Volts)  Manufacturer:	Field Observations:	☐ Dust Inside Panel ☐	Exposed Wires	Shop Dra	wings Availa	able 🗌	UL Listed	Uncovered Holes			
Manufacturer:	* Lighting Panel	N/A									
Field Observations:	Asset Size (Volts)	<u>'</u>			1	1					
Dust Inside Panel   Exposed Wires   Switch Gear Worn   Bus and or lugs corroded   Spare Spaces Available	Manufacturer:		Model:		Serial Nun	nber:					
Asset Size (Volts) 208 VAC Manufacturer: Hoffman	Field Observations:	Dust Inside Panel	Exposed Wires	Switch Ge	ear Worn	Bus ar		=			
Manufacturer: Hoffman   Model: Type 3R   Serial Number: 500224-K	* Main Switch		~								
Field Observations:	Asset Size (Volts) 20	08 VAC									
Dust Inside Panel   Exposed Wires   Switch Gear Worn   Lugs Corroded   Panel Grounded	Manufacturer:	Hoffman	Model: Type 3F	?	Serial Nun	nber: 5002	224-K				
Asset Size (Volts Manufacturer: ONAN Model: OTB-3385605 Serial Number:  Field Observations:	Field Observations:	☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded									
Manufacturer: ONAN	* Transfer Switch		<b>✓</b>								
Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Serial Number:  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Panel Grounded Other  Model: Serial Number:  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Panel Other  Junction Box Serial Number: Switch Gear Worn Lugs Corroded Panel Labelled Other  Junction Box Serial Number: Souz24-K  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Panel Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded  Model: Type 3R Serial Number: 500224-K  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Panel Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded  Model: Serial Number:  Model: Serial Number: Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Other  Model: Serial Number: Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	Asset Size (Volts				1		I.				
Dust Inside Panel   Exposed Wires   Switch Gear Worn   Lugs Corroded   Panel Grounded   Panel Grounded   Panel Labelled   Other    * Motor Control Center   N/A	Manufacturer:	ONAN	Model: OTB-33	885605	Serial Nur	mber:					
Asset Size (Volts)  Manufacturer:  Model:  Serial Number:  Field Observations:  Junction Box  Junction Box  Junction Box  Asset Size (Volts)  Model: Type 3R  Serial Number: 500224-K  Field Observations:  Good Panel Corroded Old / Outdated / Obsolete Contacts Loose  Junction Box  Asset Size (Volts)  Model: Type 3R  Serial Number: 500224-K  Field Observations:  Good Panel Corroded Old / Outdated / Obsolete Contacts Loose  Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded  The panel Labelled Other  Model:  Model:  Serial Number:  Serial Number:  Serial Number:  Contacts Loose Cables Fatigued Checked  Panel Grounded  Panel Grounded  Model:  Serial Number:  Field Observations:  Good Panel Corroded Old / Outdated / Obsolete Contacts Loose  Asset Size  Manufacturer:  Model:  Serial Number:  Field Observations:  Good Panel Corroded Old / Outdated / Obsolete Contacts Loose  Cables Fatigued Checked  Contacts Loose Cables Fatigued Checked  Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	Field Observations:	Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded									
Manufacturer:	* Motor Control C	Center N/A									
Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Labelled Other  * Junction Box	Asset Size (Volts)	'									
Dust Inside Panel	Manufacturer:		Model:		Serial Num	nber:					
Asset Size (Volts) 208 VAC 30  Manufacturer: Hoffman	Field Observations:	Dust Inside Panel	_					=			
Manufacturer: Hoffman	* Junction Box		<b>✓</b>					15 HP			
Field Observations:  Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded Panel Labelled Other  * Miscellaneous Panel 1 N/A Serial Number:  Model: Serial Number:  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	Asset Size (Volts)	208 VAC 30									
Dust Inside Panel	Manufacturer:	Hoffman	Model: Type 3F	?	Serial Num	nber: 5002	224-K				
Asset Size  Manufacturer:  Model:  Serial Number:  Field Observations:  Good  Panel Corroded  Old / Outdated / Obsolete  Contacts Loose  Cables Fatigued Checked  Dust Inside Panel  Exposed Wires  Switch Gear Worn  Lugs Corroded  Panel Grounded	☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded										
Manufacturer: Model: Serial Number:  Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	* Miscellaneous Pa	nel 1 N/A									
Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	Asset Size										
Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded	Manufacturer:		Model:		Serial Nur	nber:					
	Field Observations:	Field Observations: Good Panel Corroded Old / Outdated / Obsolete Contacts Loose Cables Fatigued Checked Dust Inside Panel Exposed Wires Switch Gear Worn Lugs Corroded Panel Grounded									





Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments			
Generator (GEN)										
* Emergency Generator		<b>✓</b>					Onan Cummings; A000048227			
* Emer. Gen. Connector										
Asset Size: 65 KW M	lanufacturer: ONAN		Model: FORD		Serial:	15911-1-(	04-98 Generator Type:			
Field Observations: Good N/A Contacts Loose Cables Fatigued Checked Engine Fluids Low Poor Housekeeping Poor Accessibility Panel Grounded Panel Labelled Diesel Containment Other										
Instrumentation (INS)	SCADA		SD-4				Radio for Kronenwetter			
* Auto Dialer		~	4710				Radio for RMSD			
Manufacturer:		Model:			Phone Nu	mber:				
Alarms: High Level	Low Level	Generator	Running  F	Power Fail	Other	•				
* Float Controls	back up		2 float							
* Bubbler Controls	primary						0-5 PSI			
Manufacturer:	Mercoid		Model:							
* Ultrasonic Controls										
Field Observations: Goo	od N/A Bi	-	or Failing Floats Tan		logged / Ful Controls C		re Other			
			SCADA (	SCA)						
Field Observations: Good N/A Obsolete Other 1400 Allen Bradley Telemetry SD4 Radio for Kronenwetter; 4710 Radio for RMMSD										
Variable Frequency Drive										
* Control Panel - VFD										
* Harmonic Filter										
* Output Filter										
Asset Size:	Manufactu	rer:		Model:			Observed RPM:			
Field Observations: Go	od N/A	Makes Noise	Obsolete	Panel	Corroded/	Dusty / Lea	aky 🗌 Other			
			Motors (N	/ITR)						
* Motor 1		<b>✓</b>								
Asset Size (HP) 15										
Manufacturer: Shinmaywa Model: Serial Number: 4CNXH411T2E2										
Field Observations: Good N/A Makes Noise Vibrates Shaft Bearing Noise Opposite End Bearing Noise Overheating Needs Lubrication Over Lubricated Mount Failing Leaking Emergency Stop Button in Dry Well Inoperable Other										
* Motor 2		<i>V</i>								
Asset Size (HP): 15	Manufactu	rer: Shinmayw	va	Model:	1		Serial Number: 11			
Field Observations:  Good N/A Makes Noise Vibrates Shaft Bearing Noise Opposite End Bearing Noise Overheating Needs Lubrication Over Lubricated Mount Failing Leaking Emergency Stop Button in Dry Well Inoperable Other										





Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments				
Hor/Vert Centrifugal Pumps											
* Pump 1	N/A										
Manufacturer:	ber:										
Discharge Size (in)	Suction D	iameter (in)		Pump Siz	e (GPM)		TDH				
Priming Pump Ma	anufacturer:	N	1odel:		Serial	rial No.: Size (hp):					
Pressure Gauge	anufacturer:		Pressure Rang	ge:			PressureReading:				
	Good N/A Searing Noise M	Seals Leaking ount Failing	☐ Vibrating☐ Evidence of		Deflection Ot	ı 🗌 Cav her	vitating				
* Pump 2	N/A										
Discharge Size (in)	Suction Dia	ameter (in)		Pump Size	e (GPM)		TDH				
Priming Pump Ma	nufacturer:	Mo	odel:		Serial I	No.:	Size (hp):				
Pressure Gauge Ma	nufacturer:		Pressure Range	e:		l	PressureReading:				
Field Observations: Good N/A Seals Leaking Vibrating Shaft Deflection Cavitating Belts Loose  Bearing Noise Mount Failing Evidence of Pipe Strain Other											
		Sub	mersible Pu	mps (SUB)							
* Pump 1		<b>✓</b>									
Manufacturer:	Shinmaywa	Mod	lel:		Seri	al: 11					
Discharge Size (in) 8"	Suction Dia	meter (in)		Pump Size	(GPM) 55	0	TDH 15 HP				
	ood N/A R	ail System Corro	ded Doe	es Not Seat \	Well _	Cables Co	rroded or Failing				
* Pump 2		<b>✓</b>									
Manufacturer: S	hinmaywa	Mod	lel:	<b>"</b>	Seri	al: 11					
Discharge Size (in) 8"	Suction Dia	meter (in)		Pump Size	(GPM) 55	0	TDH 15 HP				
Field Observations: Go	od	ail System Corro	ded Doe	es Not Seat \	Well	Cables Co	rroded or Failing				
Check Valves											
* Pump 1		<b>~</b>									
Size (in): 8"	Manufa	cturer:		Mod	lel:	1	Serial No:				
Field Observations:  Good N/A Valve Operator Stuck Valve Seat Leaking Flanges Leaking Check Valve Not Seating Check Valve Not Operating Strain Other											
* Pump 2		<b>✓</b>									
Size (in): 8"	Manufac	turer:		Mod	el:		Serial No:				
Field Observations:  Good N/A Valve Operator Stuck Valve Seat Leaking Flanges Leaking Other Check Valve Not Seating Check Valve Not Operating Evidence of Pipe Strain											





Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments				
Piping and Valves Suction Isolation Valves											
* Pump 1	N/A										
Size (in):	Manu	facturer:		Mod	del:		Serial No:				
Field Observations:	Good N/A Check Valve Not Seatin Other	Valve Operator St	cuck	e Seat Leakii t Operating	ng	Flanges Leaking Evidence of Pipe Strain					
* Pump 2	N/A										
Size (in):	Manu	facturer:		Mod	del:		Serial No:				
Field Observations:	Good N/A Check Valve Not Seatin Other	Valve Operator St	cuck	e Seat Leakii t Operating	ng		es Leaking nce of Pipe Strain				
		Disch	arge Isolatio	n Valves							
* Pump 1		<b>✓</b>									
Size (in): 8	Manuf	acturer:		Mod	lel:		Serial No:				
Field Observations:	Good N/A Check Valve Not Seatin Other	Valve Operator Sto	uck Valve Check Valve Not	e Seat Leakin t Operating	g		es Leaking nce of Pipe Strain				
* Pump 2											
Size (in):	Manu	facturer:		Mod	del:		Serial No:				
Field Observations:	Good N/A Check Valve Not Seatin Other	Valve Operator St	uck	e Seat Leakir t Operating	ng		es Leaking nce of Pipe Strain				

