



ELECTRICAL INFRARED INSPECTION REPORT

Your Company

April 8, 2023

SITE INFORMATION

Site name

Address 1

Address 2

REPORT PREPARED BY:

Michael Fitzpatrick

Level II Thermographer/ Licensed Electrician

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ABOUT THE INSPECTION REPORT

Recently, an electrical infrared inspection was conducted at your facility. This inspection was performed to evaluate the condition of your electrical distribution system and identify any potential issues that could affect its performance and safety. The inspection was conducted under normal operations. Not all equipment may be under load at the time of the scan.

Using advanced thermal imaging technology, we focused on detecting temperature anomalies within your electrical components, which could indicate problems such as loose connections, overloaded circuits, or failing equipment. Early identification of these issues is crucial for preventing unexpected failures and ensuring the reliability of your electrical infrastructure.

Enclosed, you will find a detailed report that outlines our findings, including specific areas of concern, visual inspection comments, and tailored recommendations for corrective actions. I encourage you to review this information carefully, as it provides actionable insights necessary for maintaining the efficiency and safety of your electrical system.

If you have any questions or would like to discuss the findings further, please do not hesitate to reach out. I am here to assist you in any way possible. It was a pleasure working with you.

Thanks, Mike.

Priority Rating Chart

Rating	Temp. Range (F)	Recommendation
1	1-20 (F)	Investigate/monitor
2	21-40 (F)	Schedule repair
3	41-60 (F)	Prioritize repair
4	Above 60 (F)	Immediate action

Ratings based on industry standards

Mike Fitzpatrick

Owner

Thermal Recon LLC.



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ERROR SUMMARY

LOCATION	EQUIPMENT NAME	EQUIPMENT TYPE	STATUS	ERROR #
MCC ROOM	AC (DP2)	BRANCH PANEL	Error	1
MCC ROOM	MCC-1 (REAR) SECTION 2	MCC	Error	2
OUTSIDE BUILDING	HTDP#2	CONTROL PANEL	Under repair	3



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INVENTORY LIST

LOCATION	EQUIPMENT NAME	EQUIPMENT TYPE	STATUS	ERROR
MCC ROOM	DP-CB1	TRANSFORMER	No problem	
MCC ROOM	AC (DP-CBI)	BRANCH PANEL	No problem	
MCC ROOM	UPS	BRANCH PANEL	No problem	
MCC ROOM	AC (DP2)	BRANCH PANEL	Error	1
MCC ROOM	DP2	TRANSFORMER	No problem	
MCC ROOM	DP1	TRANSFORMER	No problem	
MCC ROOM	AC (DP1)	BRANCH PANEL	No problem	
MCC ROOM	BOC PLC	CONTROL PANEL	No problem	
MCC ROOM	MSB-1 #6	STARTER-DISCONNECT	No problem	
MCC ROOM	MSB-1 #22	STARTER-DISCONNECT	No problem	
MCC ROOM	OUTSIDE LIGHTS	CONTACTOR	No problem	
MCC ROOM	INSIDE LIGHTS	CONTACTOR	No problem	
MCC ROOM	CP-1105	CONTROL PANEL	No problem	
MCC ROOM	VFD-1	VFD	No problem	
MCC ROOM	VFD-2	VFD	No problem	
MCC ROOM	VFD-3	VFD	No problem	
MCC ROOM	VFD-4	VFD	No problem	
MCC ROOM	VFD-5	VFD	No problem	
MCC ROOM	VFD-6	VFD	No problem	
MCC ROOM	VFD-7	VFD	No problem	
MCC ROOM	VFD-8	VFD	No problem	
MCC ROOM	VFD-9	VFD	No problem	
MCC ROOM	VFD-10	VFD	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 1	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 2	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 3	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 4	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 5	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 6	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 7	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 8	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 9	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 10	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 11	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 12	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 13	MCC	No problem	
MCC ROOM	MCC-1 (FRONT) SECTION 14	MCC	No problem	
MCC ROOM	MCC-1 (REAR) SECTION 1	MCC	No problem	
MCC ROOM	MCC-1 (REAR) SECTION 2	MCC	Error	2
MCC ROOM	MCC-1 (REAR) SECTION 3	MCC	No problem	
MCC ROOM	MCC-1 (REAR) SECTION 4	MCC	No problem	



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INVENTORY LIST

LOCATION	EQUIPMENT NAME	EQUIPMENT TYPE	STATUS	ERROR
MCC ROOM	MCC-1 (REAR) SECTION 5	MCC	No problem	
MCC ROOM	MCC-1 (REAR) SECTION 6	MCC	No problem	
MCC ROOM	MCC-1 (REAR) SECTION 7	MCC	No problem	
MCC ROOM	MCC-2 SECTION 1	MCC	No problem	
MCC ROOM	MCC-2 SECTION 2	MCC	No problem	
MCC ROOM	MCC-2 SECTION 3	MCC	No problem	
MCC ROOM	MCC-2 SECTION 4	MCC	No problem	
MCC ROOM	MCC-2 SECTION 5	MCC	No problem	
MCC ROOM	MCC-2 SECTION 6	MCC	No problem	
MCC ROOM	MCC-2 SECTION 7	MCC	No problem	
OUTSIDE BUILDING	45 KVA (FRONT)	TRANSFORMER	No problem	
OUTSIDE BUILDING	45 KVA (REAR)	TRANSFORMER	No problem	
OUTSIDE BUILDING	HTDP#1	CONTROL PANEL	No problem	
OUTSIDE BUILDING	HTDP#2	CONTROL PANEL	Under repair	3
OUTSIDE BUILDING	UTILITY (LEFT)	TRANSFORMER	No problem	
OUTSIDE BUILDING	UTILITY (RIGHT)	TRANSFORMER	No problem	
OUTSIDE BUILDING	OVERHEAD UTILITY FEED	UTILITY	No problem	
OUTSIDE BUILDING	FLARE GAS SKID	CONTROL PANEL	No problem	
OUTSIDE BUILDING	CP-1	CONTROL PANEL	No problem	
OUTSIDE BUILDING	EQUILIBRIUM	CONTROL PANEL	No problem	
OUTSIDE BUILDING	DX0 PLC	CONTROL PANEL	No problem	
OUTSIDE BUILDING	H2S SCRUBBER	CONTROL PANEL	No problem	
OUTSIDE BUILDING	MOLEGATE	CONTROL PANEL	No problem	
OUTSIDE BUILDING	CHILLER	CONTROL PANEL	No problem	
INSIDE BUILDING	COMPRESSOR B	CONTROL PANEL	No problem	
INSIDE BUILDING	COMPRESSOR A	CONTROL PANEL	No problem	
INSIDE BUILDING	BOOSTER B	CONTROL PANEL	No problem	
INSIDE BUILDING	BOOSTER A	CONTROL PANEL	No problem	
INSIDE BUILDING	EQ VAC B	CONTROL PANEL	No problem	
INSIDE BUILDING	EQ VAC A	CONTROL PANEL	No problem	
INSIDE BUILDING	RECYCLE B	CONTROL PANEL	No problem	
INSIDE BUILDING	RECYCLE A	CONTROL PANEL	No problem	
INSIDE BUILDING	FEED B	CONTROL PANEL	No problem	
INSIDE BUILDING	FEED A	CONTROL PANEL	No problem	
INSIDE BUILDING	GREEN COMP B (DO NOT OPEN)	CONTROL PANEL	No access	
INSIDE BUILDING	GREEN COMP A (DO NOT OPEN)	CONTROL PANEL	No access	

Site name		Your Company		April 8, 2023		Error:		E1	
EQUIPMENT INFORMATION									
LOCATION:		MCC ROOM		RATED VOLTAGE:				120	
EQUIPMENT NAME:		AC (DP2)		RATED AMPS:				20	
EQUIPMENT TYPE:		BRANCH PANEL		ERROR RATING:				1	
ERROR DATA									
TARGET:		BREAKER 40		REFERENCE:				BREAKER 42	
TEMP:		99		TEMP:				84	
AMPS:		18		AMPS:				0	
LOAD (AMPS) %:		90.0%		LOAD (AMPS) %:				0.0%	
TEMP DIFFERENTIAL:		15.0							
INFRARED IMAGE					DITGITAL IMAGE				
RATINGS CHART									
RATING		TEMP DELTA			RECOMMENDATION				
1		1-20 (F)			Investigate/monitor				
2		21-40 (F)			Schedule repair				
3		41-60 (F)			Prioritize repair				
4		Above 60 (F)			Immediate action				
NOTES:									
<p>The target is breaker 42. Breaker is loaded at 90% of rating. This is a NEC violation.</p>									
RECOMMENDATIONS:									
<p>Investigate load source. Check for correct breaker and conductor sizing.</p>									

Site name		Your Company		April 8, 2023		Error:		E2	
EQUIPMENT INFORMATION									
LOCATION:		MCC ROOM		RATED VOLTAGE:		480			
EQUIPMENT NAME:		MCC-1(REAR) SECTION 2, M-251B		RATED AMPS:		600			
EQUIPMENT TYPE:		MCC/DISCONNECT		ERROR RATING:		2			
ERROR DATA									
TARGET:		C PHASE		REFERENCE:		A PHASE			
TEMP:		122		TEMP:		93			
AMPS:		NA		AMPS:		NA			
LOAD (AMPS) %:				LOAD (AMPS) %:					
TEMP DIFFERENTIAL:		29.0							
INFRARED IMAGE					DITGITAL IMAGE				
RATINGS CHART									
RATING			TEMP DELTA			RECOMMENDATION			
1			1-20 (F)			Investigate/monitor			
2			21-40 (F)			Schedule repair			
3			41-60 (F)			Prioritize repair			
4			Above 60 (F)			Immediate action			
NOTES:									
The target is the C phase connections on the main breaker on disconnect M-251B. Heat source appears to be under the heat shrink on connectors.									
RECOMMENDATIONS:									
Remake connections. Ensure lugs are secure.									

Site name		Your Company		April 8, 2023		Error:		E3	
EQUIPMENT INFORMATION									
LOCATION:		OUTSIDE BUILDING		RATED VOLTAGE:		208			
EQUIPMENT NAME:		HTDP#2		RATED AMPS:		100			
EQUIPMENT TYPE:		CONTROL PANEL		ERROR RATING:		3			
ERROR DATA									
TARGET:		A PHASE		REFERENCE:		C PHASE			
TEMP:				TEMP:					
AMPS:				AMPS:					
LOAD (AMPS) %:				LOAD (AMPS) %:					
TEMP DIFFERENTIAL:		50.0							
INFRARED IMAGE					DITGITAL IMAGE				
<div>Cen 74.8 Max 97.6 <div><div>WARNING</div><div>Appropriate PPE Required Arc Flash Risk</div><div>Incident Energy: 3.04 cal/cm^2</div><div>Working Distance: 18 in</div><div>Nominal Voltage: 208 VAC</div><div>AF Boundary: 32 .n</div><div>Bus Arcing Current: 0.74 kA</div><div>EQUIP: P-HTDP-1</div><div>Cross Canyon Engineering</div><div>Date 05/04/23</div></div><div>HTDP#2</div><div>2025/08/08 08:15</div><div>97.6</div><div>69.2</div><div>°F ε:0.97</div></div>					<div>Cen 70.4 Max 72.2 <div>72.2</div><div>68.8</div><div>°F ε:0.97</div></div>				
RATINGS CHART									
RATING		TEMP DELTA		RECOMMENDATION					
1		1-20 (F)		Investigate/monitor					
2		21-40 (F)		Schedule repair					
3		41-60 (F)		Prioritize repair					
4		Above 60 (F)		Immediate action					
NOTES:									
Visual/mechanical defect. Staff aware of issue. Equipment under repair.									
RECOMMENDATIONS:									
Notated for record. Replace damaged conductors and remake connections.									