

ENGINEERING REPORT

2012 THERMOGRAPHIC SURVEY AND EQUIPMENT INSPECTION

HIGH VOLTAGE MAINTENANCE

April 19, 2012

3149091



BOSTON

508/668-9205
508/668-2142 FAX

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847/228-9595
847/228-9094 FAX

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859/371-5399 FAX

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614/410-8500 FAX

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203/949-2646 FAX

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262/784-5124 FAX

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215/579-0830 FAX

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412/747-0550
412/747-0554 FAX

April 19, 2012

Fermi Lab
P.O. Box 500
Batavia, IL 60510-5011

SUBJECT: Engineering Report
2012 Thermographic Survey and Equipment Inspection
Project 3149091 Customer P.O.# 2732409

Enclosed is the Technical Report detailing the project recently completed at the Fermi Lab Facility on Kirk Road and Pine Street. HVM is a full service independent testing company and we appreciate the opportunity to provide your electrical maintenance, testing, and engineering services.

Our mission is to provide an independent technical service to enhance the safety, reliability, and efficiency of energy systems and provide a one-stop solution for quality energy services worldwide; from electrical commissioning and start up to large-scale operation and maintenance services. We will help you plan and execute projects efficiently and reduce project risk. We consolidate a vast array of engineering, consulting, monitoring, maintenance and professional services to dramatically improve the operational performance of industrial, commercial, and process customers.

Thank you for the opportunity to provide this service. If you have any questions, or we may be of further assistance, please call Lee Smith at (847) 640-0005 or mobile number (630) 352-8851.

Respectfully Submitted,

High Voltage Maintenance
Chicago Area Service Center



CHARTER MEMBER

RELIABILITY THROUGH ELECTRICAL TESTING, MAINTENANCE AND ENGINEERING SERVICES

TECHNICAL REPORT

2012 Thermographic Survey and Equipment Inspection
April 19, 2012 **Project 3149091**

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SECTION 2	THERMOGRAPHIC SURVEY AND EQUIPMENT INSPECTION LOG
SECTION 3	THERMOGRAPHIC DEFICIENCY DATA

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**2012 Thermographic Survey and Equipment Inspection
April 19, 2012**

Project 3149091

SECTION 1 – PROJECT OVERVIEW

SCOPE:

On March 20th to April 4th, 2012 a thermographic survey and inspection of electrical equipment was performed at the Fermi Lab located on Kirk Road and Pine Street. Listings of equipment (identification/name, manufacturer, model) inspected during this project are included in Section 2, Thermographic Survey and Equipment Inspection Log. Additionally, inspection observations and test data (load conditions, temperature differences, pictures, and thermograms) of equipment found to contain deficiencies observed during this project are contained in Section 3, Thermographic Deficiency Data.

In addition to the thermographic inspection and equipment inventory, this project also includes verification of:

- ✓ Working Clearances
- ✓ Accessible and Accurate Electrical One-Line Diagram
- ✓ Equipment Safety Labels

PURPOSE:

Recommended by ANSI/NFPA 70B Electrical Equipment Maintenance Standard and most insurance companies, annual thermographic inspections can identify potential problems before an incident or failure occurs, avoiding costly unscheduled downtime and business interruption. Test results are evaluated and necessary repairs are assessed that will extend equipment life and improve system reliability.

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PROCEDURE:

Thermographic inspections should be performed during periods of maximum possible loading and are executed in accordance with standard procedures including, but not limited to, selected specifications from the following: InterNational Electrical Testing Association (NETA), National Electrical Code (NEC), National Fire Protection Association 70B-Electrical Equipment Maintenance (NFPA 70B), Institute of Electrical and Electronic Engineers (IEEE), American Society for Testing and Materials (ASTM), National Electrical Manufacturer's Association (NEMA), manufacturer's instruction manuals and/or project specifications, unless otherwise noted.

Testing Processes:

1. Scan each accessible load current carrying piece of equipment using a thermographic camera.
 - a. Verify actual temperature of problem areas relative to ambient temperatures and/or similar equipment noted during thermographic survey.
 - b. Document instantaneous current measurements of all safely accessible problem areas.
2. Verify proper working clearances in accordance with NEC 110-16 and 110-34 as applicable.
3. Verify existence of current electrical one-line diagrams
4. Verify applicable electrical equipment have the correct electrical safety labeling to identify:
 - a. Shock hazards
 - b. Arc flash hazards
 - c. Approach boundaries

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RESULTS AND CONCLUSIONS:

Based on the results of the inspections and tests performed, except as described below or detailed in Sections 2 and 3 of this report, equipment included in this project meets applicable standards as outlined in the Procedures section of this report. All discrepancies and recommendations for repair are outlined in Section 2, Thermographic Survey and Equipment Inspection Log, and in Section 3, Thermographic Deficiency Data. Additional descriptions of issues and corrective recommendations are provided, as necessary, in the Recommendations section in this report.

Infrared Survey:

- No deficiencies found.
- Deficiencies found. See details of specific deficiencies in Sections 2 and 3 of this report.

Safe Working Clearances

- All electrical equipment inspected was found with **acceptable** safe work clearances in accordance with the National Electrical Code, sections 110-16 and 110-34 as applicable.
- Electrical equipment inspected was found with **inadequate** safe work clearances in accordance with the National Electrical Code, sections 110-16 and 110-34 as applicable. Areas with inadequate safe work clearances are identified in Section 2 of this report.

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RESULTS AND CONCLUSIONS (cont.):

Electrical One-Line Diagram:

- An electrical one-line diagram of the applicable electrical distribution system and equipment included in this project **was provided** and found to be essentially accurate.
- An electrical one-line diagram of the applicable electrical distribution system and equipment included in this project **was not provided**. Accurate one-line diagrams of electrical distribution systems are essential for efficient maintenance and management of electrical system assets. ***An Emerson Network Power Representative will contact the customer to assist in developing and maintaining an accurate one-line electrical system diagram for your facility.***
- An electrical one-line diagram of the applicable electrical distribution system and equipment included in this project was provided and determined to **contain some inaccuracies**. Inaccuracies are described in Section 2 of this report. ***An Emerson Network Power Representative will contact the customer to assist updating these files and providing accurate, up-to-date one-line drawings.***

Equipment Labels:

- Electrical equipment inspected during this project **contain** shock hazard, arc flash, and approach boundary labels and associated information required in accordance with the National Electrical Code and National Fire Protection Association 70E – Standard for Electrical Safety in the Workplace.
- Electrical equipment inspected during this project **do not contain** shock hazard, arc flash, and approach boundary labels and associated information required in accordance with the National Electrical Code and National Fire Protection Association 70E – Standard for Electrical Safety in the Workplace. ***An Emerson Network Power Representative will contact the customer to assist in meeting these safety requirements.*** Equipment not containing the required labels are described in Section 2 of this report.

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APPRAISALS AND RECOMMENDATIONS:

HVM recommends annual infrared inspections of electrical equipment to assist in identifying deteriorated connections and abnormal operating temperatures prior to equipment failure.

The enclosed Thermographic Inspection Report contains pictures and recommendations for equipment that was identified as having elevated temperatures and requires corrective actions. The enclosed Thermographic Inspection Log contains a listing of all equipment inspected during this project. Some equipment may be noted as not operating at the time of the inspection or not accessible because of interlocks. This equipment should be inspected during a scheduled outage. HVM tightened loose connections found as practical.

HVM has assigned "Repair Priority" ratings to each deficiency identified in the Thermographic Inspection Report. These ratings are based on two primary factors: (1) The InterNational Electrical Testing Association (NETA) table 100.18 identifying the various temperature differentials between similar equipment and/or ambient temperature; and (2) The type and critical nature of the equipment and the effect the elevated temperature may have on continued reliable service.

Temperature difference (ΔT) based on comparisons between similar components under similar loading.	Temperature difference (ΔT) based upon comparisons between component and ambient air temperatures.	Recommended Action	Repair Priority
1°C - 3°C	1°C - 10°C	Possible deficiency; warrants investigation	4
4°C - 15°C	11°C - 20°C	Indicates probable deficiency; repair as time permits	3
-----	21°C - 40°C	Monitor until corrective measures can be accomplished	2
>15°C	> 40°C	Major discrepancy; repair immediately	1

Temperature specifications vary depending on the exact type of equipment. Even in the same class of equipment (i.e., cables) there are various temperature ratings. Heating is generally related to the square of the current; therefore, the load current will have a major impact on ΔT . In the absence of consensus standards for ΔT , the values in this table will provide reasonable guidelines.

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APPRAISALS AND RECOMMENDATIONS (cont.):

Because each thermographic picture is adjusted for maximum clarity, the temperature scales of the various pictures are not consistent. Pictures with very slight elevated temperatures may appear to be serious deficiencies based solely on the color gradient of the picture. HVM has provided isometric charts and temperature differential listings to assist in the evaluation of each picture.

Some equipment scanned appeared to have elevated temperatures but the variances are due to uneven circuit loads. For power quality and to prevent unintentional over loading of breakers and panels, we recommend loading your facility more evenly. When equipment is added or relocated in your facility, an effort should be made to add these loads to minimally loaded circuits.

Following all repairs, a thermographic inspection should be scheduled to assure the deficiencies have been adequately repaired. Please contact our office to schedule a follow-up infrared inspection.

NATIONAL ELECTRICAL CODE (NEC) VIOLATIONS:

- 1.0 **Building FCC; Floor 3; Room 374; PP-CCF-3G-A** – This panel cannot be opened. The NEC defines a minimum working distance of 30 inches wide by 36 inches deep shall be maintained at all time in front of electrical equipment. (See Page 76)
- 2.0 **Building GCC; Electrical Room A; DHP-GCC-13AA; Breakers PP-GCC-13AA-1 to PP-GCC-13AA-11** – There are two conductors terminated to a lug which is listed for single conductor application on these 11 breakers. The NEC required that listed or labeled equipment shall be installed, used or both in accordance with any instructions included in the listing or labeling. It is recommended that the additional conductors be relocated to separate breakers or single conductor applied at the breaker lug with a splice to connect to multiple conductors. (See Example on Page 80)
- 3.0 **Building LCC; Room 107; Panel PP-NL30-1; Circuit 11** – There are two conductors on this single pole 15 Amp breaker. It is recommended that the additional conductor be relocated to a separate breaker. (See Page 91)

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PRIORITY ONE DEFICIENCIES:

- 1.0 **Building FCC; Lower Level; MCC-BLDG-FCCF; RW-1 Contactor** – C Phase line side and load side is exhibiting elevated temperature. We recommend investigation, re-torquing the connections and measuring contact resistance. (See Page 69)
- 2.0 **Building LCC; Room 107; Panel PP-NL30-1** – There is excessive dust and debris in the bottom of this panel. The contamination of insulation barriers, insulating bushing or conductor surfaces can degrade the insulating or current carrying properties, resulting in premature insulation failure and overheating. We recommend scheduling this panel for maintenance cleaning. (See Page 92)
- 3.0 **Building LCC; Room 107; LP-NL-15B-3A1-10; Circuits 7, 9 and 11** – The conductors for these breakers have exposed copper. We recommend re-terminating these conductors. (See Page 93)

PRIORITY TWO DEFICIENCY:

- 1.0 **Building FCC; Floor 2; Computer Room; UPS-PP-11; Breakers 27 and 29** – These breakers are exhibiting elevated temperature when compared to the ambient temperature. The breakers may have a loose connection or may be bad/failing. We recommend investigation. (See Page 70)

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PRIORITY THREE DEFICIENCIES:

- 1.0 **Building FCC; Lower Level; UPS-PHP-1-01; MCCB UPS PP2-5 &6 and MCCB UPS PP2-7&8** – These breakers are exhibiting an abnormal thermal pattern due to an unbalanced load. We recommend investigation to determine the cause of the unbalance and we recommend distributing the load more evenly.
 - 1.1 Duct tape affixed to the breakers label them differently than they are labeled on the panel mat as shown in the digital photos on these pages. We recommend determining how the breakers should be labeled and correcting the panel mat or the tape on the breakers. (See Pages 67 to 68)
- 2.0 **Building FCC; Floor 2; Computer Room; UPS-PP2-06 CB Disc** -- This disconnect is exhibiting an abnormal thermal pattern due to an unbalanced load. We recommend investigation to determine the cause of the unbalance and we recommend distributing the load more evenly. (See Page 72)
- 3.0 **Building GCC; Room CRB; PP-GCC-21A-16** – A Phase is exhibiting elevated temperature consistent with a loose or dirty connection. We recommend clean and re-torquing the connection. (See Page 87)
- 4.0 **Building GCC; Room CRB; PP-GCC-21A-1** – There is an unused opening in this panel. The NEC states that unused cable or raceway openings in boxes and conduit bodies shall be effectively closed to afford protection substantially equivalent to that of the wall of the box. We recommend installing an approved sealing device such as a knock out seal. (See Page 88)
- 5.0 **Building LCC; Room 107/108; PDU-22; PP-NL-15B-22A** -- This equipment is exhibiting an abnormal thermal pattern due to an unbalanced load. We recommend investigation to determine the cause of the unbalance and we recommend distributing the load more evenly. (See Page 96)

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REFERENCE ONLY IMAGES:

- 1.0 The following images were taken for reference only. Many Panels shown in these images appear to have elevated temperatures. The variances may be due to how the load is distributed on the panels. Some breakers may have minimal or no load while other breakers have a load of 70% of the breaker rating. No action is required.
 - 1.1 Building FCC; Floor 2; Computer Room; UPS-PP2-02 (See Page 71)
 - 1.2 Building FCC; Floor 2; Computer Room; PDU-FCC-3-2-C (See Page 74)
 - 1.3 Building FCC; Floor 3; Computer Room; PDU-FCC-2-2-D; PP-PDU-2-D1 (See Page 77)
 - 1.4 Building FCC; Floor 3; Third Floor Computer Room; DPU-FCC-2-2-D (See Page 78)
 - 1.5 Building GCC; Electrical Room A; DHP-GCC-14A; CRAC-11 (See Page 79)
 - 1.6 Building GCC; Electrical Room A; SWBD-GCC-13A; CB-D2 (See Page 81)
 - 1.7 Building GCC; Electrical Room A; SWBD-GCC-21; UPS Main (See Page 82)
 - 1.8 Building GCC; Electrical Room B; DHP-GCC-22; CRAC-25 (See Page 83)
 - 1.9 Building GCC; UPS Room A; DCDS-GCC-13 (See Page 84)
 - 1.10 Building GCC; Network Room A; PP-GCC-14AA-2 (See Page 85)
 - 1.11 Building GCC; Room CRA; PP-GCC-13AA-7 (See Page 86)
 - 1.12 Building GCC; Room CRC; TRPP-GCC-23A-3 (See Page 89)
 - 1.13 Building GCC; Room CRC; PP-GCC-23A-3D (See Page 90)
 - 1.14 Building LCC; Room 107/108; SWBD-DH-NL-15B; AC-4 (See Page 94)
 - 1.15 Building LCC; Room 108; PP-NL-15B-6-45 (See Page 95)
- 2.0 Building FCC; Floor 2; Computer Room; UPS-PP2-21 – Concrete dust and debris was found in the bottom of the panel and was removed. (See Page 73)
- 3.0 Building FCC; Floor 3; Fan Room; PP-CCF-3 – It is unsafe to remove the cover from this equipment while energized. A digital photo of the arc flash approach boundary equipment label is shown. (See Page 75)

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SECTION 2

THERMOGRAPHIC SURVEY AND EQUIPMENT INSPECTION LOG



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High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

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Customer LIEBERT SERVICES
Owner FERMI LAB
Location/Plant INTERSECTION OF KIRK RD & PINE ST

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Deficiency Summary

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Customer LIEBERT SERVICES

Owner FERMI LAB

Location/Plant: INTERSECTION OF KIRK RD & PINE ST

Page: 1

Substation: BUILDING FCC

Date: 04/03/2012

Equipment I.D.: LOWER LEVEL

Equipment: 52103 - IR & EQUIPMENT SURVEY (01)

Deficiencies: PCP-MCC-1 is labeled CGS-03172-MCC.

Location/Plant: INTERSECTION OF KIRK RD & PINE ST

Page: 23

Substation: BUILDING FCC

Date: 04/02/2012

Equipment I.D.: FLOOR 3

Equipment: 52103 - IR & EQUIPMENT SURVEY (3)

Deficiencies: Room 386 & Room 390 have unidentified panels. We recommend investigation to determine the panel identification and updating the One-Line Diagram.



Comment Summary

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Customer LIEBERT SERVICES

Owner FERMI LAB

Location/Plant: <u>INTERSECTION OF KIRK RD & PINE ST</u>	Page: <u>3</u>
Substation: <u>BUILDING FCC</u>	Date: <u>04/04/2012</u>
Equipment I.D.: <u>LOWER LEVEL</u>	
Equipment: <u>52103 - IR & EQUIPMENT SURVEY (05)</u>	
Comments: <u>Room 146, UPS-PP1-11, Main Breaker is off.</u>	

Location/Plant: <u>INTERSECTION OF KIRK RD & PINE ST</u>	Page: <u>5</u>
Substation: <u>BUILDING FCC</u>	Date: <u>04/04/2012</u>
Equipment I.D.: <u>LOWER LEVEL</u>	
Equipment: <u>52103 - IR & EQUIPMENT SURVEY (07)</u>	
Comments: <u>The following equipment in MCC-BLDG-FCCF is not in use: Chiller 1; CWP-1; CWP-2; Chiller 2</u>	

Location/Plant: <u>INTERSECTION OF KIRK RD & PINE ST</u>	Page: <u>27</u>
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Equipment I.D.: <u>MEZZANINE</u>	
Equipment: <u>52103 - IR & EQUIPMENT SURVEY</u>	
Comments: <u>The following are no longer in use: UPS-PPM-02 and CB DISC; UPS-PPM-01 and CB DISC; UPS-PP2-14 CB DISC; UPS-PP2-15 CB DISC</u>	

Location/Plant: <u>INTERSECTION OF KIRK RD & PINE ST</u>	Page: <u>61</u>
Substation: <u>BUILDING GCC</u>	Date: <u>03/26/2012</u>
Equipment I.D.: <u>ROOM CRC</u>	
Equipment: <u>52103 - IR & EQUIPMENT SURVEY (3)</u>	
Comments: <u>PHP-GCC--20 - Panel circuits were off at time of inspection.</u>	



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 1
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 04/03/2012 TEMPERATURE 25 °C HUMIDITY 30 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
EAST SIDE	PCP-MCC-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. MCC LABELED CGS-03172-MCC			
CENTER	UPS-EM	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PHP-CCF-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PHP-CCF-1C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PHP-CCF-1C DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-TR-01	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-MBC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PP-CCF-1	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unsafe to remove covers. Incident energy is 298.7 CAL			
CENTER	UPS-SCC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

PCP-MCC-1 is labeled CGS-03172-MCC.

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 2
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 04/03/2012 TEMPERATURE 25 °C HUMIDITY 29 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
CENTER	UPS-PHP-1-01	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Unbalanced loads found on 2 Breakers: MCCB UPS PP2-5&6 A Phase 68A; B Phase 128A; C Phase 83A MCC UPS PP2-7&8 A Phase 111A; B Phase 82A; C Phase 60A See Pages 67 & 68	DC_0652	IR_0651	3
CENTER	UPS-480-02	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-02-A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-02-B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-02-C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-01	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-01-A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-01-B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-480-01-C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 3
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/04/2012 TEMPERATURE 22 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
WEST	LP-CCF-1B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
WEST	PP-CCF-1B	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unsafe to remove covers while energized. Incident energy is 121.2 CAL			
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
ROOM 146 RISER CLOSET	PP-CCF-1A	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unsafe to remove covers while energized. Incident energy is 121.2 CAL			
ROOM 146 RISER CLOSET	LP-CCF-1A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 146	UPS-PP1-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Main Breaker is Off			
ROOM 146	UPS-PP1-12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

Room 146, UPS-PP1-11, Main Breaker is off.

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 4
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 04/04/2012 TEMPERATURE 22 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
LOWER LEVEL EAST DOCK GEAR ROOM	DHP-CCF-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
LOWER LEVEL EAST DOCK GEAR ROOM	PHP-CCF-1A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
LOWER LEVEL EAST DOCK GEAR ROOM	PP-CCF-1C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
LOWER LEVEL EAST DOCK GEAR ROOM	FOUNTAIN PUMP CONTROLLER	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
LOWER LEVEL EAST DOCK GEAR ROOM	GEN-ATS-480-01	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 5
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 04/04/2012 TEMPERATURE 22 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
MCC-BLDG-FCCF	CWP-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. NOT IN USE			
MCC-BLDG-FCCF	CWP-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. NOT IN USE			
MCC-BLDG-FCCF	CHILLER-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. NOT IN USE			
MCC-BLDG-FCCF	RW-1	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	C Phase line/load side of the contactor is exhibiting elevated temperature. We recommend re-torquing the connection and measuring contact resistance. A Phase 35.5A; B Phase 34.5A; C Phase 32.5A. See Page 69	DC_0650	IR_0649	1
MCC-BLDG-FCCF	RW-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
MCC-BLDG-FCCF	CHILLER-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Not in use.			
MCC-BLDG-FCCF	CHWP-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
MCC-BLDG-FCCF	CHWP-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

The following equipment in MCC-BLDG-FCCF is not in use: Chiller 1; CWP-1; CWP-2; Chiller 2

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 /IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 6
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 04/03/2012 TEMPERATURE 25 °C HUMIDITY 29 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
CENTER	BYSW-FCC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	SWBD-FCC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	SWBD-FCC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	BYSW-FCC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PP-CCF1C-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PP-CCF1C-1 120/208V MCCB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PP-CCF1C-1 480V XFMR DISC/SW	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	PP-FCC-2-UPS-2-3A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER	UPS-FCC-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 7
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 04/04/2012 TEMPERATURE 25 °C HUMIDITY 29 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. LOWER LEVEL

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
CENTER	UPS-FCC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CENTER UPS BATTERY ROOM	PP-FCC-2-UPS-2-3B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 8
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/15/2010
 DATE 04/03/2012 TEMPERATURE 21 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	UPS-PP2-12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Breaker 27 & Breaker 29 are exhibiting elevated temperature compared to ambient temperature. The breakers have 21 Amp load on 30 Amp Breakers. Investigate. See Page 70	DC_0636	IR_0635	2
COMPUTER ROOM	UPS-PP2-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-17	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-16	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-15	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-14	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-12 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 9
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/15/2010
 DATE 04/03/2012 TEMPERATURE 21 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	UPS-PP2-11 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-10 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-9 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-17 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-16 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-15 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-14 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 217	PHP-CCF-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 217	PP-CCF-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 10
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/15/2010
 DATE 04/03/2012 TEMPERATURE 22 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM 217	PP-CCF-2C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unsafe to open. Incident energy is 304.5 CAL			
ROOM 217	GENERATOR CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 217	PP-CCF-2E	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 217	PP-CCF-2-1	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unsafe to open. Incident energy is 41.4 CAL			
ROOM 217	PP-CCF-2D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-01	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-01 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-02	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. 14 Amps/30 Amp MCCB See Page 71	DC_0641	IR_0640	
COMPUTER ROOM	UPS-PP2-02 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 11
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	PP-FCC-DC-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	PP-FCC-DC-1 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPHP-CCF-2-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPP-CCF-2-1-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPP-CCF-2-1-1-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPP-CCF-2-1-1-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPP-CCF-2-1-1-3 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 12
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 22 °C HUMIDITY 35 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	UPS-PP2-23	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-23 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-22 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-18 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-19	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-19 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-07	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 13
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 34 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	UPS-PP2-07 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-08	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-08 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-05	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-05 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-06	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-06 CB DISC	<input type="checkbox"/>	Infrared Inspection	Unbalanced load. Distribute load more evenly. A Phase 39A; B Phase 54A; C Phase 92A See Page 72	DC_0644	IR_0643	3
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-13	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	UPS-PP2-13 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 14
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/01/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	UPS-PP2-20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-20 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-21	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Concrete debris found in the bottom of the panel. Removed. See Page 73	DC_0642	NONE	
COMPUTER ROOM	UPS-PP2-21 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-03	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-03 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-04	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PP2-04 CB DISC	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	SPHP-CCF-ATS	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

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THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 15
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	SPP-CCF-2-1-1-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	PP-CCF-2A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	LP-CCF-2A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PPM-02	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	UPS-PPM-02 MAIN BREAKER	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	PP-FCC-3-1-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	DHP-FCC-3-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	DHP-FCC-3-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	PDU-FCC-3-2-A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 16
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM PDU-FCC-3-2-A	PP-PDU-3-A1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-A	PP-PDU-3-A2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-A	PP-PDU-3-A3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-A	PP-PDU-3-A4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM	PDU-FCC-3-2-B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-B	PP-PDU-3-B1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-B	PP-PDU-3-B2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-B	PP-PDU-3-B3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-B	PP-PDU-3-B4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 17
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	PDU-FCC-3-2-C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 74	DC_0648	IR_0647	
COMPUTER ROOM PDU-FCC-3-2-C	PP-PDU-3-C1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-C	PP-PDU-3-C2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-C	PP-PDU-3-C3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-C	PP-PDU-3-C4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 18
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	PDU-FCC-3-2-D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-D	PP-PDU-3-D1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-D	PP-PDU-3-D2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-D	PP-PDU-3-D3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-D	PP-PDU-3-D4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 19
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	PDU-FCC-3-2-E	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM PDU-FCC-3-2-E	PP-PDU-3-E1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM PDU-FCC-3-2-E	PP-PDU-3-E2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM PDU-FCC-3-2-E	PP-PDU-3-E3	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM PDU-FCC-3-2-E	PP-PDU-3-E4	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 20
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/03/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 2

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
COMPUTER ROOM	PDU-FCC-3-2-F	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-F	PP-PDU-3-F1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-F	PP-PDU-3-F2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-F	PP-PDU-3-F3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
COMPUTER ROOM PDU-FCC-3-2-F	PP-PDU-3-F4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 21
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/23/2010
 DATE 04/02/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
CLOSET 347	PP-CCF-3A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
CLOSET 347	LP-CCF-3A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 335	PP-CCF-3E	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 335	PP-CCF-3C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
FAN ROOM	PP-CCF-3G	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
FAN ROOM	PP-CCF-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Did not scan. Unable to safely remove cover while energized. Incident energy is 311.7 See Page 75	DC_0629	NONE	
ROOM 329	PP-CCF-3F/2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 374	PP-CCF-3G-A	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	NEC Violation: Inadequate work clearance. Must maintain 3' of clearance in front of panel. Did not scan. See Page 76	DC_0630	NONE	1
ROOM 374	PP-CCF-3G-C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 22
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/23/2010
 DATE 04/02/2012 TEMPERATURE 26 °C HUMIDITY 27 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
RM 382	PP-CCF-3G-B	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
HALLWAY	PP-CCF-3B-1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
HALLWAY	PP-CCF-3B	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
HALLWAY	LP-CCF-3B	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
FAN ROOM	PHP-CCF-3	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
ROOM 331	QPP-FCC-3A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
FAN ROOM	QPP-CCF-3-1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
CLOSET 347	LP-CCF-3B	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
COMPUTER ROOM	PP-CCF-3-D-2	<input type="checkbox"/>	Infrared Inspection	Unable to locate panel.			
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS: _____

DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR/IL-FLUKE TESTED BY: KR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 23
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/23/2010
 DATE 04/02/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM 386	UNIDENTIFIED 120/208V	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Panel is not identified.			
ROOM 390	UNIDENTIFIED 120/208V	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Panel is not identified.			
3RD FLOOR COMPUTER ROOM	PHP-FCC-2-1-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM	PP-FCC-2-1-1-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM	DHP-FCC-2-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM	DHP-FCC-2-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM	QPP-FCC-2-1-2	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Unable to scan. Can not safely open the cover while energized. Incident energy is 237.1			
3RD FLOOR COMPUTER ROOM	QPP-FCC-2-1-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM	PDU-FCC-2-2-A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

Room 386 & Room 390 have unidentified panels. We recommend investigation to determine the panel identification and updating the One-Line Diagram.

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 24
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 04/02/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
3RD FLOOR COMPUTER ROOM	DPU-FCC-2-2-B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-C	PP-PDU-2-C1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-C	PP-PDU-2-C2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-C	PP-PDU-2-C3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-C	PP-PDU-2-C4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-D	PP-PDU-2-D1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 77	DC_0632	IR_0631	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-D	PP-PDU-2-D2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-D	PP-PDU-2-D3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-D	PP-PDU-2-D4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 25
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 04/02/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
3RD FLOOR COMPUTER ROOM	DPU-FCC-2-2-D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 78	DC_0633	IR_0634	
3RD FLOOR COMPUTER ROOM	DPU-FCC-2-2-C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-B	PP-PDU-2-B1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-B	PP-PDU-2-B2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-B	PP-PDU-2-B3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-B	PP-PDU-2-B4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-A	PP-PDU-2-A1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-A	PP-PDU-2-A2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-A	PP-PDU-2-A3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 26
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 04/02/2012 TEMPERATURE 23 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. FLOOR 3

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
3RD FLOOR COMPUTER ROOM PDU-FCC-2-2-A	PP-PDU-2-A4	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
ROOM 331	PP-CCF-3F	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR,BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 27
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/22/2010
 DATE 04/04/2012 TEMPERATURE 22 °C HUMIDITY 36 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING FCC EQUIPMENT I.D. MEZZANINE

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
MEZZANINE	UPS-PPM-02	<input checked="" type="checkbox"/>	Infrared Inspection	No longer in service.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PPM-02 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No longer in service. Cables removed.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PPM-01	<input checked="" type="checkbox"/>	Infrared Inspection	No longer in service.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PPM-01 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No longer in service. Cables removed.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PP2-14 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	Breaker is off. No load side cables.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PP2-15 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	Breaker is off. No load side cables.			
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PP2-16 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
MEZZANINE	UPS-PP2-17 CB DISC	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS:

The following are no longer in use: UPS-PPM-02 and CB DISC; UPS-PPM-01 and CB DISC; UPS-PP2-14 CB DISC; UPS-PP2-15 CB DISC

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 28
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 28 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	SWBD-GCC-14	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-14	CB-A2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-14	CB-B1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-14A	CB-B2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	CRAC-12	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	CRAC-1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	CRAC-2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	CRAC-3	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	CRAC-4	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 29
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-14A	CRAC-5	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-6	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-8	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	CRAC-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 79	IR_0612	DC_0613	
DHP-GCC-14A	AC-12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-14A	AC-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 30
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-14A	AC-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-5	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-6	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
DHP-GCC-14A	AC-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 31
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMOGRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-14A	RTU-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-13AA	CB-H	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
DHP-GCC-13AA	PP-GCC-13AA-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-5	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-6	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 32
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMOGRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-13AA	PP-GCC-13AA-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-8	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No thermographic deficiency. Two cables under each lug on the breaker. See Page 80	IR_0614	DC_0615	1
DHP-GCC-13AA	PP-GCC-13AA-12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 33
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 34 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	SWBD-GCC-13	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-13A	CB-C1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-13A	CB-D1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-13A	CB-D2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted. Images for reference only. See Page 81	IR_0616	DC_0617	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-13A	CB-E	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-13A	CB-D	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
UPS-MB-SWGR	CB-G3	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
BYSW-GCC-13	CB-G2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
UPS-MB-SWGR	CB-G1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 0221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 34
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 35 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	PHP-GCC-13A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
ELECTRICAL ROOM A	DHP-GCC-14AA	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
ELECTRICAL ROOM A	TRSWBD-GCC-13	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 35
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 30 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	SWBD-GCC-21A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-21A	MAIN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
ELECTRICAL ROOM A	DHP-GCC-21A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-4	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-5	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-7	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-8	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-21A	PP-GCC-21A-9	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 36
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 30 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-21A	PP-GCC-21A-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-15	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-16	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-17	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-23	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-24	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-25	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-21A	PP-GCC-21A-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 37
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 28 °C HUMIDITY 37 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	PHP-GCC-20-9	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	MAIN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-13	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-14	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-15	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-16	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-17	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-18	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-19	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 38
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
PHP-GCC-20-9	AC-20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	AC-22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 17	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 19	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 8	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				
PHP-GCC-20-9	SPARE 12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
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Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 39
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
PHP-GCC-20-9	SPARE 14	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PHP-GCC-20-9	SPARE 16	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PHP-GCC-20-9	SPARE 18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PHP-GCC-20-9	SPARE 20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PHP-GCC-20-9	SPARE 22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 0211-9 CAMERA/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
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CUSTOMER LIEBERT SERVICES PAGE 40
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	SWBD-GCC-20	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-20	MAIN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-20	GENERATOR MAIN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
ELECTRICAL ROOM A	DHP-GCC-20	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-20	RTU-2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-20	CRAC-14	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-20	CRAC-15	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-20	CRAC-16	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-20	CRAC-17	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 41
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-20	CRAC-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	CRAC-19	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	CRAC-20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	CRAC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	CRAC-13	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	PHP-GCC-20-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	PHP-GCC-20-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	SPARE 17	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	SPARE 14	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 42
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-20	SPARE 16	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	SPARE 18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-20	SPARE 20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	SWBD-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-21	MAIN	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-21	GENERATOR MAIN	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-21	UPS MAIN	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 82	IR_0618	DC-0619	
SWBD-GCC-21	UPS BYPASS	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 43
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	BYSW-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
BYSW-GCC-21	BYPASS ISOLATION BREAKER	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
BYSW-GCC-21	MAINTENANCE ISOLATION BREAKER	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
BYSW-GCC-21	MAINTENANCE BYPASS BREAKER	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	TRSWBD-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	PP-GCC-14AA-1-12B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	PP-GCC-14AA-1-12A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	TRPP-GCC-14AA-1-12	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ELECTRICAL ROOM A	LP-GCC-14AA-1-13	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 44
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 30 °C HUMIDITY 31 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO-GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM A	PHP-GCC-14AA-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Infrared Inspection <input checked="" type="checkbox"/> Safe Work Clearances <input checked="" type="checkbox"/> Equipment Labels <input checked="" type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9 CAMERA/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 45
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 29 °C HUMIDITY 15 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM B	SWBD-GCC-23	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23	GEN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23	M1 MAIN	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23	RECTIFIER INPUT	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23	BYSW-GCC-23	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
BYSW-GCC-23	BYSW-GCC-23-BIB	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
BYSW-GCC-23	BYSW-GCC-23-TIE	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
BYSW-GCC-23	BYSW-GCC-23-MIB	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 46
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 27 °C HUMIDITY 16 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM B	SWBD-GCC-23A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23A	DHP-23A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
SWBD-GCC-23A	DHP-GCC-23A	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-23A	TRPP-GCC-23A1	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-23A	TRPP-GCC-23A2	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-23A	TRPP-GCC-23A3	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
DHP-GCC-23A	TRPP-GCC-23A4	<input checked="" type="checkbox"/>	Infrared Inspection	No deficiencies noted.	None	None	
		<input checked="" type="checkbox"/>	Safe Work Clearances				
		<input checked="" type="checkbox"/>	Equipment Labels				
		<input checked="" type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				
		<input type="checkbox"/>	Infrared Inspection				
		<input type="checkbox"/>	Safe Work Clearances				
		<input type="checkbox"/>	Equipment Labels				
		<input type="checkbox"/>	One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 47
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/26/2012 TEMPERATURE 27 °C HUMIDITY 16 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMOGRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM B	PHP-GCC-22-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Infrared Inspection <input checked="" type="checkbox"/> Safe Work Clearances <input checked="" type="checkbox"/> Equipment Labels <input checked="" type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. 221-9 IL IR TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 48
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 27 °C HUMIDITY 16 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ELECTRICAL ROOM B	SWBD-GCC-22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-22	GEN	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-22	MAIN	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-GCC-22	DHP-GCC-22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-23	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-24	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-25	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 83	IR_06023	DC_0624	
DHP-GCC-22	CRAC-26	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-27	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. FLUKE/ 221-9 IL IR

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 49
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 27 °C HUMIDITY 16 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ELECTRICAL ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
DHP-GCC-22	CRAC-28	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-29	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-30	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-31	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	CRAC-32	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	PHP-GCC-22-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DHP-GCC-22	RTU-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. FLUKE/ 221-9 IL IRC

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 50
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/11/2010
 DATE 03/21/2012 TEMPERATURE 25 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. UPS ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
UPS ROOM A	DCDS-GCC-13	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 84	IR_0610	DC_0611	
UPS-GCC-13 UPS ROOM A	MAIN DCDS-GCC-13	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
UPS ROOM A	DCDS-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
DCDS-GCC-21 UPS ROOM A	MAIN DCDS-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
UPS ROOM A	UPS-GCC-13	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
UPS ROOM A	UPS-GCC-21	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 51
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 03/26/2012 TEMPERATURE 27 °C HUMIDITY 16 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. UPS ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
UPS ROOM B	DCDS-GCC-23	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
UPS-GCC-23 UPS ROOM B	MAIN DCDS-GCC-13	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
UPS ROOM B	UPS-GCC-23	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 52
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 23 °C HUMIDITY 45 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. NETWORK ROOM A

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
NETWORK ROOM A	PP-GCC-14AA-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 85	IR_0606	DC_0607	
NETWORK ROOM A	PP-GCC-13AA-11	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM A	PP-GCC-13AA-11A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM A	PP-GCC-14AA-2A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 53
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 03/26/2012 TEMPERATURE 28 °C HUMIDITY 19 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. NETWORK ROOM B

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
NETWORK ROOM B	PP-GCC-21A-25A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM B	PP-GCC-21A-25B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM B	PP-GCC-20-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM B	PP-GCC-22-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM B	UPS MCCB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
NETWORK ROOM B	STREET MCCB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 54
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 23 °C HUMIDITY 46 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROBOTIC STORAGE

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROBOTIC STORAGE	PP-UPS-GCC-13A-1	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
ROBOTIC STORAGE	PP-GCC-13AA-12	<input checked="" type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				
		<input type="checkbox"/>	<input type="checkbox"/> Infrared Inspection <input type="checkbox"/> Safe Work Clearances <input type="checkbox"/> Equipment Labels <input type="checkbox"/> One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 55
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 24 °C HUMIDITY 48 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRA

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRA	PP-GCC-13AA-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 86	IR_0608	DC_0609	
ROOM CRA	PP-GCC-13AA-8	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 56
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/08/2010
 DATE 03/21/2012 TEMPERATURE 24 °C HUMIDITY 48 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRA

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRA	PP-GCC-13AA-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-5	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRA	PP-GCC-13AA-6	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: _____
 DEFICIENCIES & RECOMMENDATIONS : _____

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR/JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 57
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION NA
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 30 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRB

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRB	PP-GCC-21A-24	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-23	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-17	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-16	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	A Phase is exhibiting elevated temperature consistent with a loose connection. We recommend cleaning and torquing the connection. A Phase 156A; B Phase 132A; C Phase 144A See Page 87	IR_0620	DC_0621	3
ROOM CRB	PP-GCC-21A-4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-15	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-9	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, JR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 58
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/21/2012 TEMPERATURE 29 °C HUMIDITY 20 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRB

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRB	PP-GCC-21A-8	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-5	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRB	PP-GCC-21A-1	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	NEC Violation - Unused Openings. No thermal deficiencies noted. See Page 88		DC_0622	1
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9 /IL-FLUKE

TESTED BY: KJR, JR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 59
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 30 °C HUMIDITY 23 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRC

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRC	TRPP-GCC-23A-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-1A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-1B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-1C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-1D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	TRPP-GCC-23A-2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-2A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-2B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-2C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL IR 221-9 TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 60
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 30 °C HUMIDITY 22 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRC

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRC	PP-GCC-23A-2D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	TRPP-GCC-23A-3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 89	IR_0628	DC_0627	
ROOM CRC	PP-GCC-23A-3A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-3B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-3C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-3D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 90	IR_0625	DC-0626	
ROOM CRC	TRPP-GCC-23A-4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-4A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-4B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 61
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/12/2010
 DATE 03/26/2012 TEMPERATURE 30 °C HUMIDITY 22 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING GCC EQUIPMENT I.D. ROOM CRC

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM CRC	PP-GCC-23A-4C	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PP-GCC-23A-4D	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM CRC	PHP-GCC--20	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Panel circuit were off at time of inspection. No deficiencies noted.			
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram				

COMMENTS: PHP-GCC--20 - Panel circuits were off at time of inspection.

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE TESTED BY: KJR, BR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
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CUSTOMER LIEBERT SERVICES PAGE 62
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/08/2010
 DATE 03/20/2012 TEMPERATURE 23 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING LCC EQUIPMENT I.D. ROOM 107/108

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
ROOM 107	PP-NL30-1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	CIRCUIT 11 has 2 wires on one 15 Amp Breaker Panel has dirt & debris on bottom. See Pages 91 & 92		597/598	1
ROOM 107	PHP-NL15B-3A1	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 107	LP-NL15B-3A1-10	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Circuit breakers have exposed copper on the conductors. CIRCUIT 7, 9, 11 See Page 93		DC_0599	1
ROOM 107	PHP-NL15B-7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 107	PP-NL15B-7-22	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	PP-NL15B-6-27	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	PP-NL15B-6-33	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	PP-NL15B-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	TRPP-NL15B-18	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 63
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/08/2010
 DATE 03/20/2012 TEMPERATURE 23 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING LCC EQUIPMENT I.D. ROOM 107/108

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
SWBD-NL-15B	1BR 2000A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-NL-15B	2BR 2000A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-NL-15B	3BR 2000A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-NL-15B	PHP-NL15B-3A1 400A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	AC-4 50A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	NONE	NONE	
SWBD-DHP-NL-15B	XDC-1 100A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 94	IR_0600	DC_0601	
SWBD-NL-15B	AC-5 50A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	PHP-NL15B-7 400A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	PP-NL15B-6 600A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 64
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/08/2010
 DATE 03/20/2012 TEMPERATURE 23 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING LCC EQUIPMENT I.D. ROOM 107/108

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
SWBD-DHP-NL-15B	CRAC-1 90A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	CRAC-2 90A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	CRAC-3 90A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	XDC-2 100A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	CRAC-4A 110A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	CRAC-5A 110A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	PP-NL15B-18 125A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	TRPP-NL15B-19 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	TRPP-NL15B-20 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 65
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/08/2010
 DATE 03/20/2012 TEMPERATURE 23 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING LCC EQUIPMENT I.D. ROOM 107/108

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
SWBD-DHP-NL-15B	TRPP-NL15B-21 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	TRPP-NL15B-22 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	SPARE 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
SWBD-DHP-NL-15B	SPARE 225A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	PP-NL15B-6-39	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
ROOM 108	PP-NL15B-6-45	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted. Images for reference only. See Page 95	IR_0602	DC_0603	
PDU-19	MAIN INPUT CB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-19	PP-NL15B-19A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-19	PP-NL15B-19B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	101-1433	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR



THERMOGRAPHIC INSPECTION AND EQUIPMENT INSPECTION LOG

High Voltage Maintenance
Milwaukee Area Service Center
3000 South Calhoun Road
New Berlin, WI 53151
Phone 262-784-3660

CUSTOMER LIEBERT SERVICES PAGE 66
 ADDRESS 610 EXECUTIVE CAMPUS DRIVE; WESTERVILLE OH USA 53082 JOB # 3149091
 OWNER FERMI LAB; PO BOX 500; BATAVIA IL 60510-5011
 LOCATION/PLANT INTERSECTION OF KIRK RD & PINE ST DATE LAST INSPECTION 11/09/2010
 DATE 03/20/2012 TEMPERATURE 23 °C HUMIDITY 42 % EQPT. LOCATION INTERSECTION OF KIRK RD & PINE ST
 SUBSTATION BUILDING LCC EQUIPMENT I.D. ROOM 107/108

LOCATION	EQUIPMENT ID	Acceptable Deficiency N/A	KEY INSPECTIONS	NOTES	THERMO- GRAPHIC IMAGE FILE ID	PHOTO IMAGE ID	ACTION PRIORITY
PDU-20	MAIN INPUT CB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-20	PP-NL15B-20A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-20	PP-NL15B-20B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-21	MAIN INPUT CB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-21	PP-NL15B-21A	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-21	PP-NL15B-21B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-22	MAIN INPUT CB	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	
PDU-22	PP-NL15B-22A	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	Unbalanced load. A Phase 91A; B Phase 42A; C Phase 65A Investigate and distribute load more evenly. See Page 96	IR_0604	IR_0605	2
PDU-22	PP-NL15B-22B	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Infrared Inspection Safe Work Clearances Equipment Labels One-Line Diagram	No deficiencies noted.	None	None	

COMMENTS:

DEFICIENCIES & RECOMMENDATIONS :

EQPT. INVENTORY NO. IL-IR 221-9/IL-FLUKE

TESTED BY: KJR, BR, JR

TECHNICAL REPORT

2012 Thermographic Survey and Equipment Inspection
April 19, 2012

Project 3149091

SECTION 3

THERMOGRAPHIC DEFICIENCY DATA

Thermographic Inspection Summary at Fermi Labs

EQUIPMENT IDENTIFICATION	EQUIPMENT LOCATION	REPAIR PRIORITY	SHEET NO
UPS-PHP-1-01; MCCB UPS PP2-5&6 (PDU4B)	Building FCC; Lower Level	3	67
UPS-PHP-1-01; MCCB UPS PP2-7&8 (PDU4A)	Building FCC; Lower Level	3	68
MCC-BLDG-FCCF; RW-1 Contactor	Building FCC; Lower Level	1	69
Computer Room; UPS-PP-11; Breakers 27 & 29	FCC Building; Floor 2	2	70
Computer Room; UPS-PP2-02	Building FCC; Floor 2	0	71
Computer Room; UPS-PP2-06 CB Disc	Building FCC; Floor 2	3	72
Computer Room; UPS-PP2-21	Building FCC; Floor 2	0	73
Computer Room; PDU-FCC-3-2-C	Building FCC; Floor 2	0	74
Fan Room; PP-CCF-3	Building FCC; Floor 3	0	75
Room 374; PP-CCF-3G-A	Building FCC; Floor 3	1	76
3rd Fl Computer Rm; PDU-FCC-2-2-D; PP-PDU-2-D1	Building FCC; Floor 3	0	77
3rd Floor Computer Room; DPU-FCC-2-2-D	Building FCC; Floor 3	0	78
DHP-GCC-14A; CRAC-11	Building GCC; Electrical Room A	0	79
DHP-GCC-13AA; PP-GCC-13AA-1 To 13AA-11	Building GCC; Electrical Room A	1	80
SWBD-GCC-13A; CB-D2	Building GCC; Electrical Room A	0	81
SWBD-GCC-21; UPS Main	Building GCC; Electrical Room A	0	82
DHP-GCC-22; CRAC-25	Building GCC; Electrical Room B	0	83
DCDS-GCC-13	Building GCC; UPS Room A	0	84
PP-GCC-14AA-2	Building GCC; Network Room A	0	85
PP-GCC-13AA-7	Building GCC; Room CRA	0	86
PP-GCC-21A-16	Building GCC; Room CRB	3	87
PP-GCC-21A-1	Building GCC; Room CRB	1	88
TRPP-GCC-23A-3	Building GCC; Room CRC	0	89
PP-GCC-23A-3D	Building GCC; Room CRC	0	90
Panel PP-NL30-1; Circuit 11	Building LCC; Room 107	1	91
Panel PP-NL30-1	Building LCC; Room 107	1	92
LP-NL-15B-3A1-10; Circuits 7, 9 & 11	Building LCC; Room 107	1	93
SWBD-DHP-NL-15B; AC-4	Building LCC; Room 107/108	0	94
PP-NL-15B-6-45	Building LCC; Room 108	0	95
PDU-22; PP-NL15B-22A	Building LCC; Room 107/108	3	96



HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/03/12	SHEET NUMBER	67
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building FCC; Lower Level	AIR TEMPERATURE (°C)		25	
EQUIPMENT IDENTIFICATION	UPS-PHP-1-01; MCCB UPS PP2-5&6 (PDU4B)	RELATIVE HUMIDITY (%)		29	

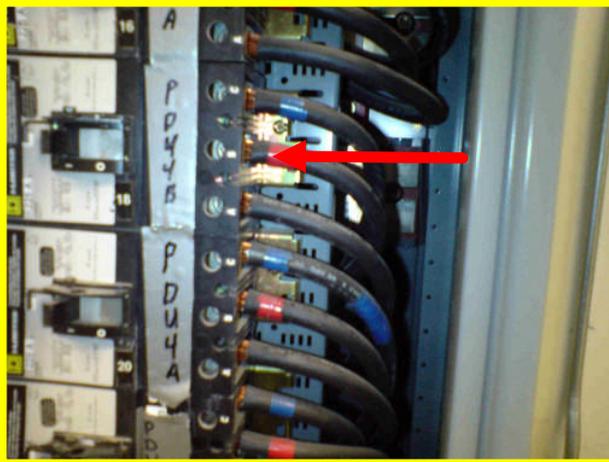


PHOTO # 0652

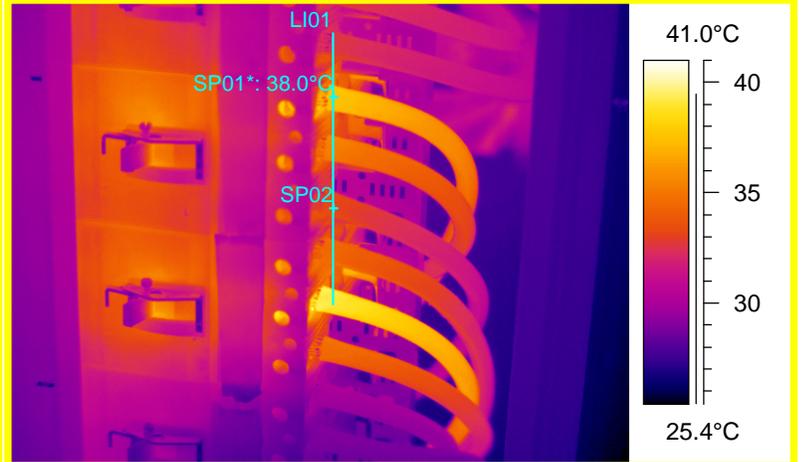


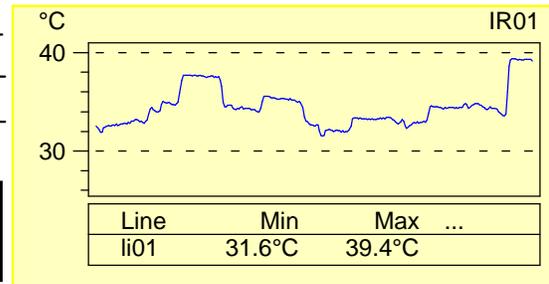
IMAGE # 0651

Problem Description:

Unbalance load. We recommend investigation to determine the cause of the unbalance and distributing the load more evenly.

Exhibits a temperature rise of 4.80°C above normal.

Label	Value	Diff	Formula
SP01*	38.0°C		
SP02	33.2°C	DI01: 4.80°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:												
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation												
Oxidation of Connection(s)	Clean and tighten connections	X Probable deficiency; repair at next outage												
Overloaded Circuit(s)	X Determine cause of unbalance	Major deficiency; immediate action required.												
X Unbalanced Circuit(s)	X Distribute the load more evenly	None - Corrected at the time of scan												
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan												
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 3												
Code Violation	Replace Conductor(s)													
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)													
	Replace Circuit Breaker(s)													
	Replace Bus													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Ø</th> <th>Ø AMPS</th> <th>% FLA</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>68</td> <td></td> </tr> <tr> <td>B</td> <td>128</td> <td></td> </tr> <tr> <td>C</td> <td>83</td> <td></td> </tr> </tbody> </table>	Ø	Ø AMPS	% FLA	A	68		B	128		C	83	
Ø	Ø AMPS	% FLA												
A	68													
B	128													
C	83													

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/03/12	SHEET NUMBER	68
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Lower Level	AIR TEMPERATURE (°C)	25		
EQUIPMENT IDENTIFICATION	UPS-PHP-1-01; MCCB UPS PP2-7&8 (PDU4A)	RELATIVE HUMIDITY (%)	29		

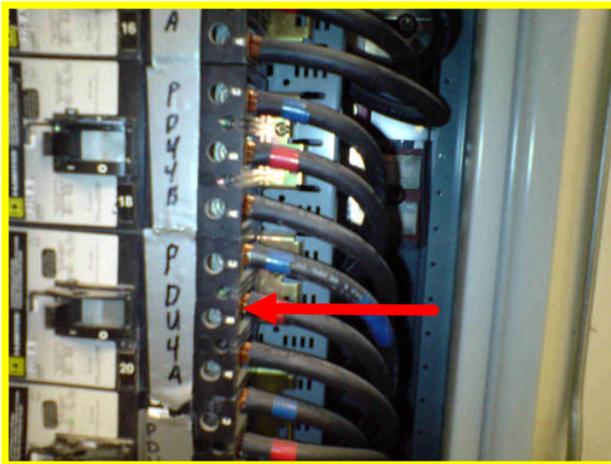


PHOTO # 0652

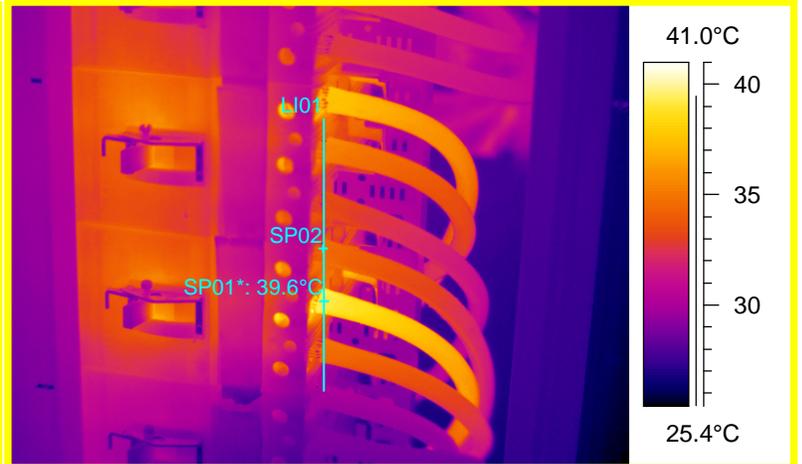


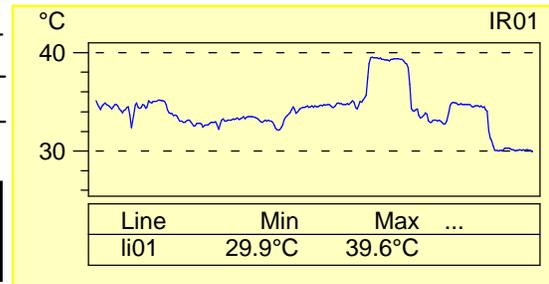
IMAGE # 0651

Problem Description:

Unbalance load. We recommend investigation to determine the cause of the unbalance and distributing the load more evenly.

Exhibits a temperature rise of 5.49°C above normal.

Label	Value	Diff	Formula
SP01*	39.6°C		
SP02	34.1°C	DI01: 5.49°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:												
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation												
Oxidation of Connection(s)	Clean and tighten connections	X Probable deficiency; repair at next outage												
Overloaded Circuit(s)	X Determine cause of unbalance	Major deficiency; immediate action required.												
X Unbalanced Circuit(s)	X Distribute the load more evenly	None - Corrected at the time of scan												
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan												
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 3												
Code Violation	Replace Conductor(s)													
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)													
	Replace Circuit Breaker(s)													
	Replace Bus													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ø</th> <th>ø AMPS</th> <th>% FLA</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>111</td> <td></td> </tr> <tr> <td>B</td> <td>82</td> <td></td> </tr> <tr> <td>C</td> <td>60</td> <td></td> </tr> </tbody> </table>	ø	ø AMPS	% FLA	A	111		B	82		C	60	
ø	ø AMPS	% FLA												
A	111													
B	82													
C	60													

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/04/12	SHEET NUMBER	69
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Lower Level	AIR TEMPERATURE (°C)	22		
EQUIPMENT IDENTIFICATION	MCC-BLDG-FCCF; RW-1 Contactor	RELATIVE HUMIDITY (%)	37		

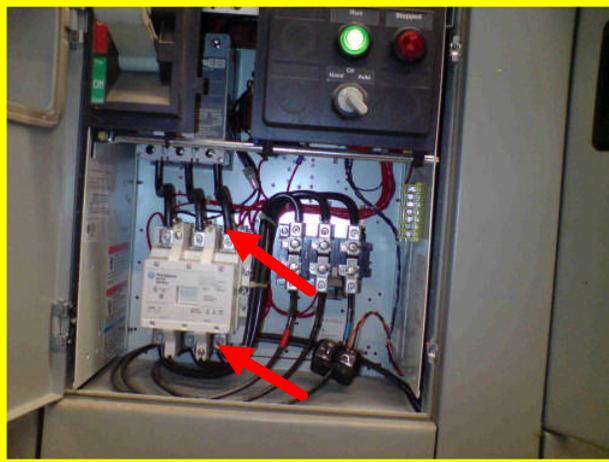


PHOTO # 0650

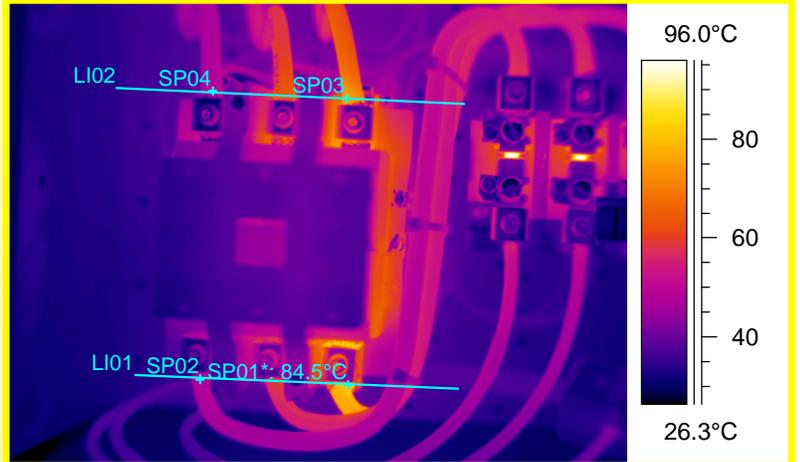


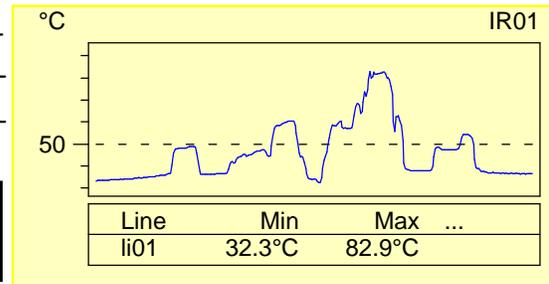
IMAGE # 0649

Problem Description:

C Phase line and load side is exhibiting elevated temperature. We recommend re-torquing the connections and measuring contact resistance.

Exhibits a temperature rise of 36.38°C above normal.

Label	Value	Diff	Formula
SP01*	84.5°C		
SP02	48.1°C	DI01: 36.38°C	SP01 - SP02
SP03	76.3°C		
SP04	49.6°C		



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:		RECOMMENDED ACTION:	ACTION REQUIRED:		
<input checked="" type="checkbox"/>	Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
	Oxidation of Connection(s)	<input checked="" type="checkbox"/> Clean and tighten connections	Probable deficiency; repair at next outage		
	Overloaded Circuit(s)	Determine cause of unbalance	<input checked="" type="checkbox"/> Major deficiency; immediate action required.		
	Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
	Bad or Failing Fuse(s)	Determine the cause of overload	<input checked="" type="checkbox"/> Repair and Verify with Infrared Scan		
	Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
	Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
	(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	35.5	
		Replace Circuit Breaker(s)	B	34.5	
		<input checked="" type="checkbox"/> Measure Contact Resistance	C	32.5	
		<input checked="" type="checkbox"/> Investigate			

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/04/12	SHEET NUMBER	70
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	FCC Building; Floor 2	AIR TEMPERATURE (°C)	21		
EQUIPMENT IDENTIFICATION	Computer Room; UPS-PP-11; Breakers 27 & 29	RELATIVE HUMIDITY (%)	36		

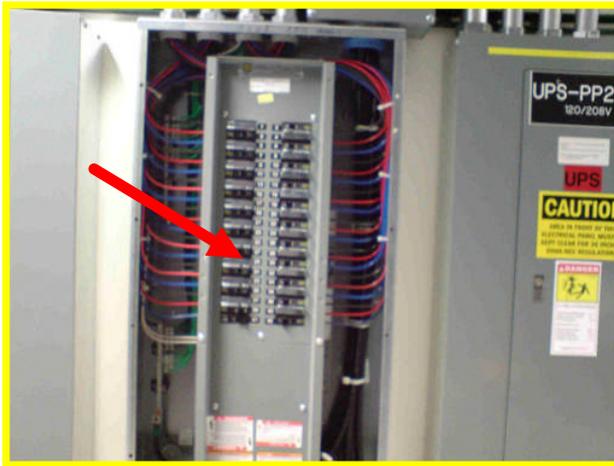


PHOTO # 0636

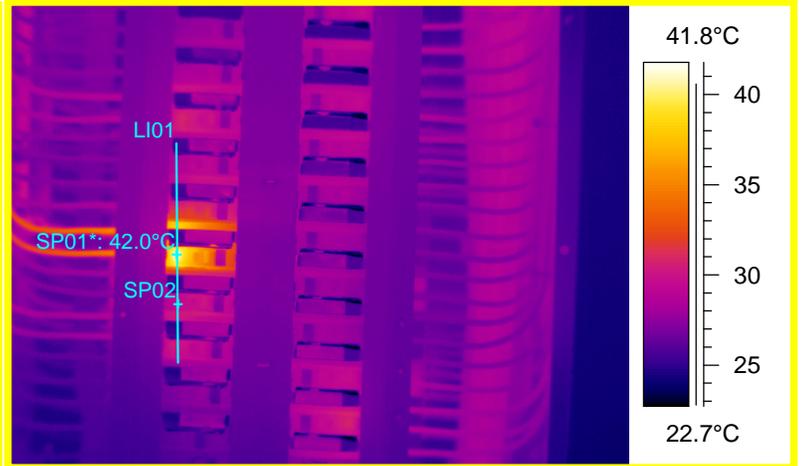


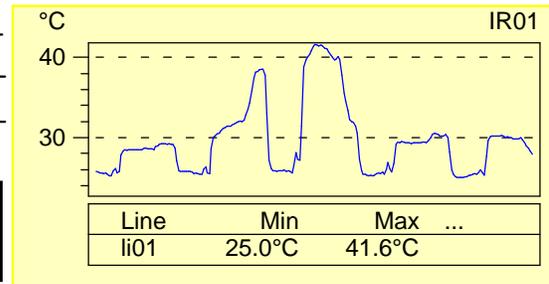
IMAGE # 0635

Problem Description:

These breakers are exhibiting elevated temperature over ambient temperature. We recommend investigation and repair.

Exhibits a temperature rise of 12.65°C above normal.

Label	Value	Diff	Formula
SP01*	42.0°C		
SP02	29.3°C	DI01: 12.65°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 2
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action is Required	Breaker 27
		21
		70%
		Breaker 29
		21
		70%

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	4/3/12	SHEET NUMBER	71
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building FCC; Floor 2	AIR TEMPERATURE (°C)		22	
EQUIPMENT IDENTIFICATION	Computer Room; UPS-PP2-02	RELATIVE HUMIDITY (%)		36	

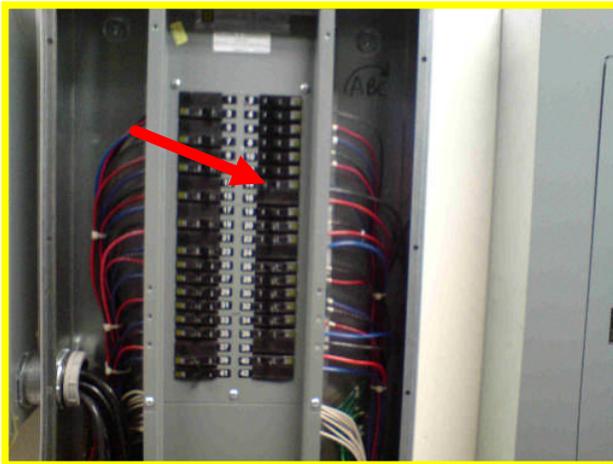


PHOTO # 0641

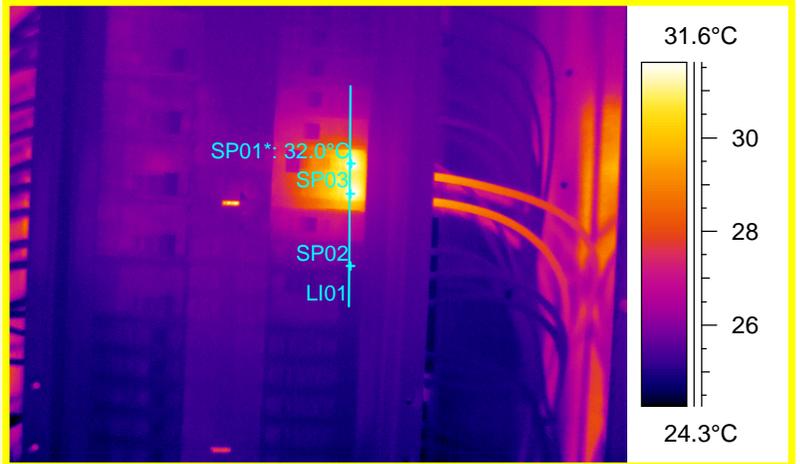


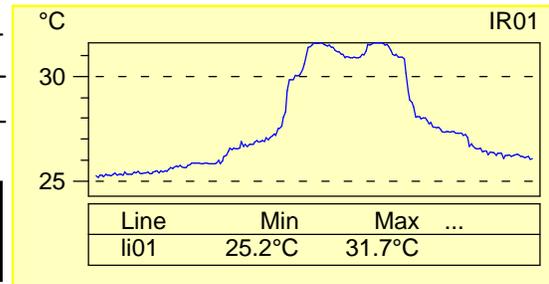
IMAGE # 0640

Problem Description:

No problems detected. Images for reference only.
 only. Temperature difference between breakers
 can be contributed to variation in load.

Exhibits a temperature rise of 6.42°C above normal.

Label	Value	Diff	Formula
SP01*	32.0°C		
SP02	25.6°C	DI01: 6.42°C	SP01 - SP02
SP03	31.6°C		



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	X	None - Reference Only	
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0		
Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code	Replace Fuse(s)	A	N/A	
Violation Description and Details)	Replace Circuit Breaker(s)	B	N/A	
X Reference Only	Replace Bus	C	N/A	
	X No Action is Required			

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/03/12	SHEET NUMBER	72
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building FCC; Floor 2	AIR TEMPERATURE (°C)		23	
EQUIPMENT IDENTIFICATION	Computer Room; UPS-PP2-06 CB Disc	RELATIVE HUMIDITY (%)		34	



PHOTO # 0644



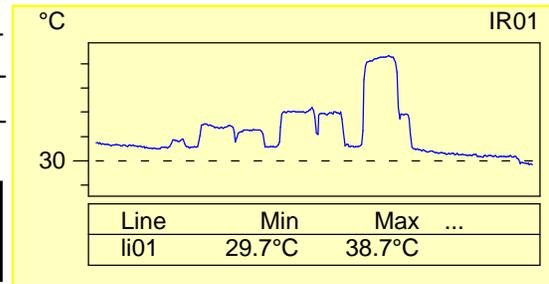
IMAGE # 0643

Problem Description:

Unbalanced load. We recommend investigation to determine the cause of the unbalance and distributing the load more evenly.

Exhibits a temperature rise of 5.96°C above normal.

Label	Value	Diff	Formula
SP01*	39.0°C		
SP02	33.0°C	DI01: 5.96°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:																
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation																
Oxidation of Connection(s)	Clean and tighten connections	X Probable deficiency; repair at next outage																
Overloaded Circuit(s)	X Determine cause of unbalance	Major deficiency; immediate action required.																
X Unbalanced Circuit(s)	X Distribute the load more evenly	None - Corrected at the time of scan																
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan																
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 3																
Code Violation	Replace Conductor(s)																	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)																	
	Replace Circuit Breaker(s)																	
	Replace Bus																	
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>∅</th> <th>∅ AMPS</th> <th>% FLA</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td>39</td> <td></td> </tr> <tr> <td>B</td> <td></td> <td>54</td> <td></td> </tr> <tr> <td>C</td> <td></td> <td>92</td> <td></td> </tr> </tbody> </table>		∅	∅ AMPS	% FLA	A		39		B		54		C		92	
	∅	∅ AMPS	% FLA															
A		39																
B		54																
C		92																

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/03/12	SHEET NUMBER	73
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Floor 2	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	Computer Room; UPS-PP2-21	RELATIVE HUMIDITY (%)	36		



PHOTO # 0642

Problem Description:

Concrete debris was found in the bottom
of the panel and was removed.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	X	None - Corrected at the time of scan	
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0		
Code Violation	Replace Conductor(s)	∅	∅ AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
X Concrete debris found	Replace Bus	C	N/A	
	X Removed			

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	4/3/12	SHEET NUMBER	74
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building FCC; Floor 2	AIR TEMPERATURE (°C)		23	
EQUIPMENT IDENTIFICATION	Computer Room; PDU-FCC-3-2-C	RELATIVE HUMIDITY (%)		36	

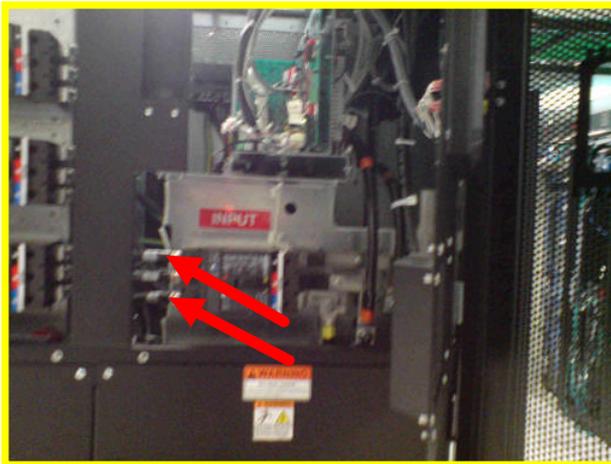


PHOTO # 0647

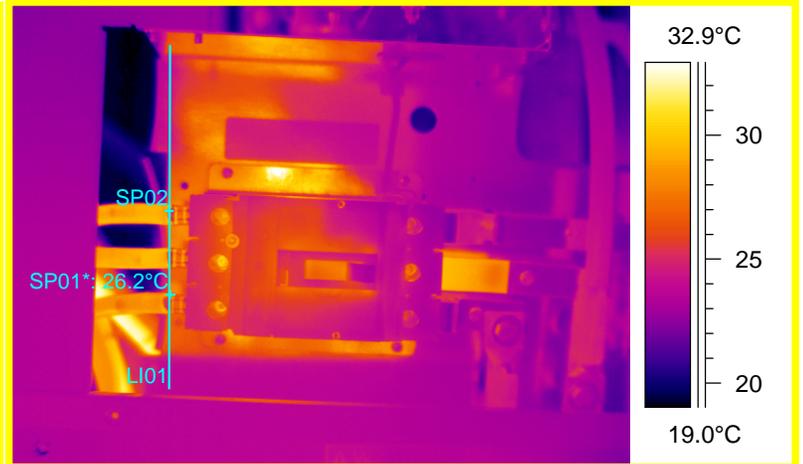


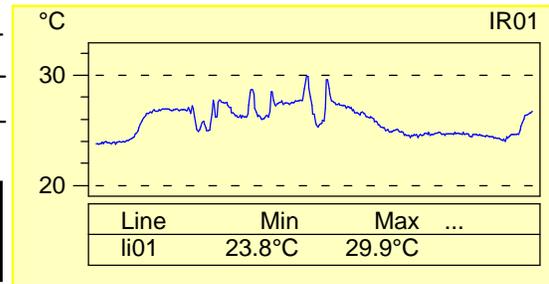
IMAGE # 0648

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.14°C above normal.

Label	Value	Diff	Formula
SP01*	26.2°C		
SP02	26.1°C	DI01: 0.14°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
		A
		B
	X No Action Required	C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/02/12	SHEET NUMBER	75
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Floor 3	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	Fan Room; PP-CCF-3	RELATIVE HUMIDITY (%)	36		



PHOTO # 0629

Problem Description:

Did not scan. Unable to safely remove cover while energized.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	X	None	
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0		
Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
	Replace Bus	C	N/A	
	X	Examine next outage		

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	04/02/12	SHEET NUMBER	76
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building FCC; Floor 3	AIR TEMPERATURE (°C)			23
EQUIPMENT IDENTIFICATION	Room 374; PP-CCF-3G-A	RELATIVE HUMIDITY (%)			36



PHOTO # 0630

Problem Description:

NEC Violation: Inadequate Work Clearance
 Must maintain 3' of clearance in front of
 panel.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at time of scan
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1
X Code Violation	Replace Conductor(s)	Ø Ø AMPS % FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A N/A
	Replace Circuit Breaker(s)	B N/A
X Inadequate Work Clearance	Replace Bus	C N/A

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	4/2/12	SHEET NUMBER	77
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Floor 3	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	3rd FI Computer Rm; PDU-FCC-2-2-D; PP-PDU-2-D1	RELATIVE HUMIDITY (%)	36		



PHOTO # 0631

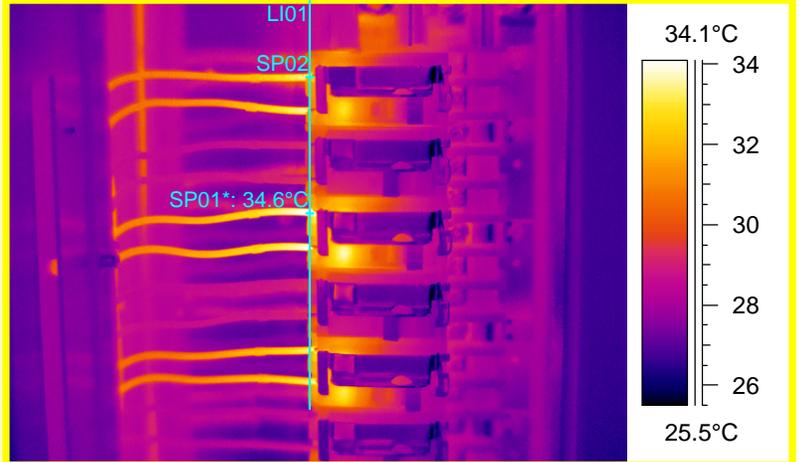


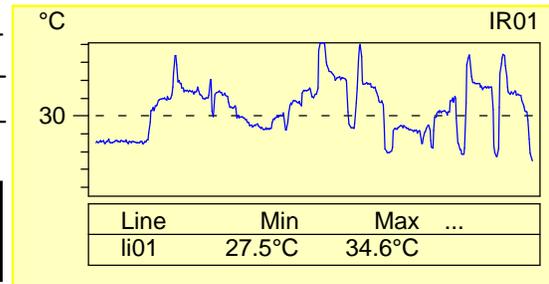
IMAGE # 0632

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 1.66°C above normal.

Label	Value	Diff	Formula
SP01*	34.6°C		
SP02	32.9°C	DI01: 1.66°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	A
	Replace Bus	B
X Reference Only	X No Action Required	C

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	4/2/12	SHEET NUMBER	78
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building FCC; Floor 3	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	3rd Floor Computer Room; DPU-FCC-2-2-D	RELATIVE HUMIDITY (%)	36		

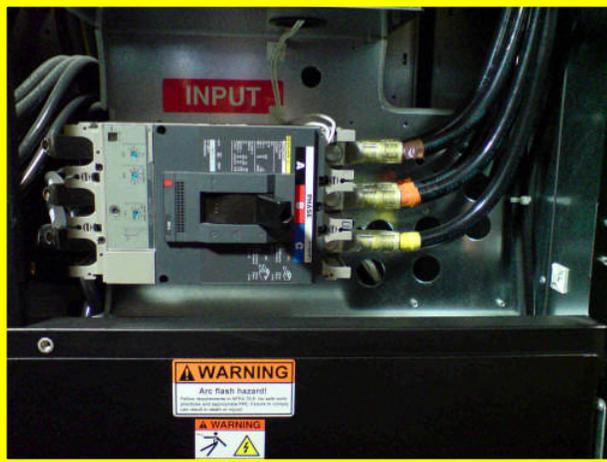


PHOTO # 0633

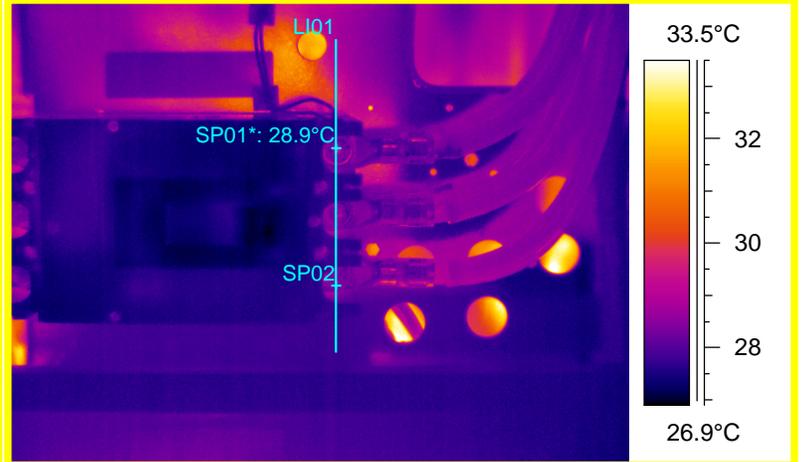


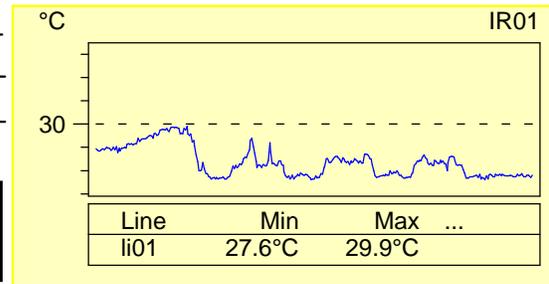
IMAGE # 0634

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.39°C above normal.

Label	Value	Diff	Formula
SP01*	28.9°C		
SP02	28.5°C	DI01: 0.39°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	∅
	Replace Circuit Breaker(s)	A
X Reference Only	Replace Bus	B
	X No Action Required	C

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	79
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building GCC; Electrical Room A	AIR TEMPERATURE (°C)		23	
EQUIPMENT IDENTIFICATION	DHP-GCC-14A; CRAC-11	RELATIVE HUMIDITY (%)		36	

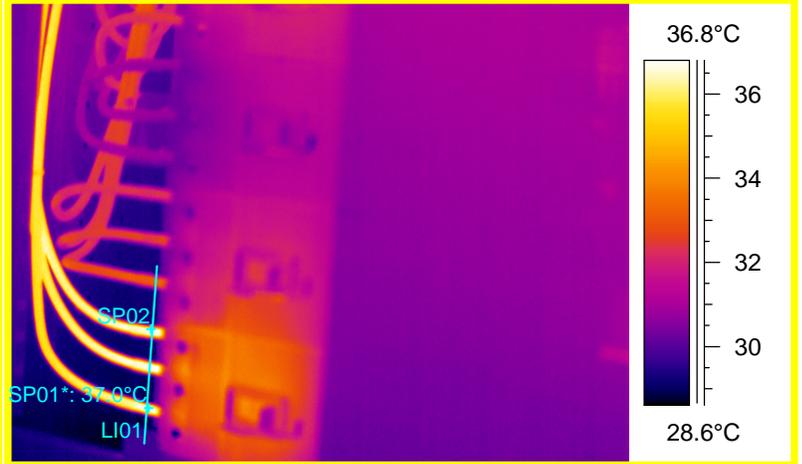
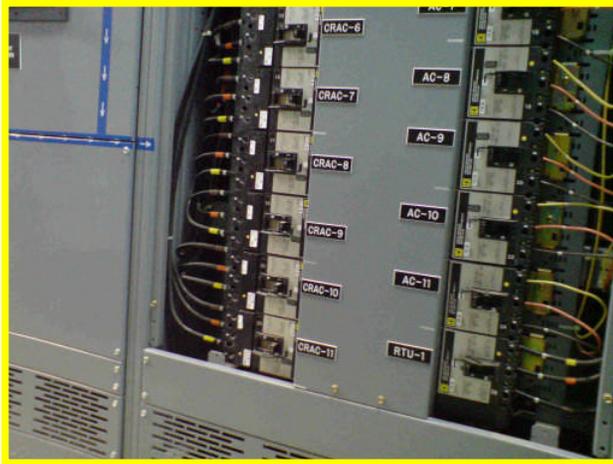


PHOTO # 0613

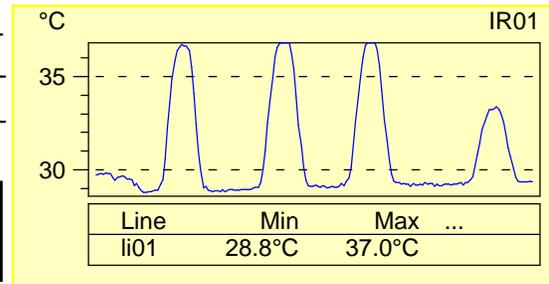
IMAGE # 0612

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.40°C above normal.

Label	Value	Diff	Formula
SP01*	37.0°C		
SP02	36.6°C	DI01: 0.40°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	3/21/12	SHEET NUMBER	80
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building GCC; Electrical Room A	AIR TEMPERATURE (°C)			29
EQUIPMENT IDENTIFICATION	DHP-GCC-13AA; PP-GCC-13AA-1 To 13AA-11	RELATIVE HUMIDITY (%)			37

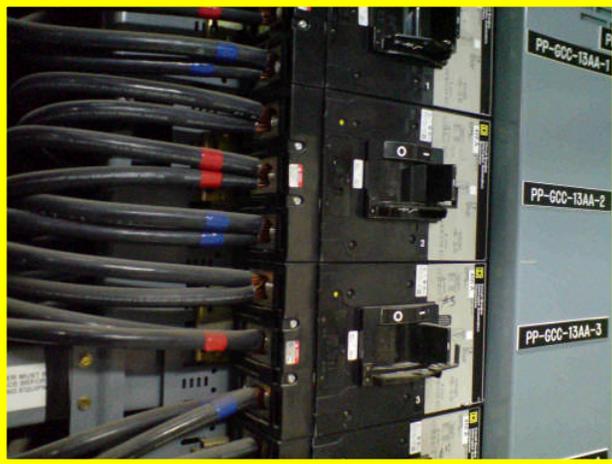


PHOTO # 0615

Problem Description:

Two cables are under each lug on breakers.

Lugs must be approved for multiple conductors.

Correct per NEC.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
X Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
X Multiple Conductors under One Lug	Replace Bus	C	N/A	
	X Investigate & Repair			

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	81
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building GCC; Electrical Room A	AIR TEMPERATURE (°C)		29	
EQUIPMENT IDENTIFICATION	SWBD-GCC-13A; CB-D2	RELATIVE HUMIDITY (%)		34	

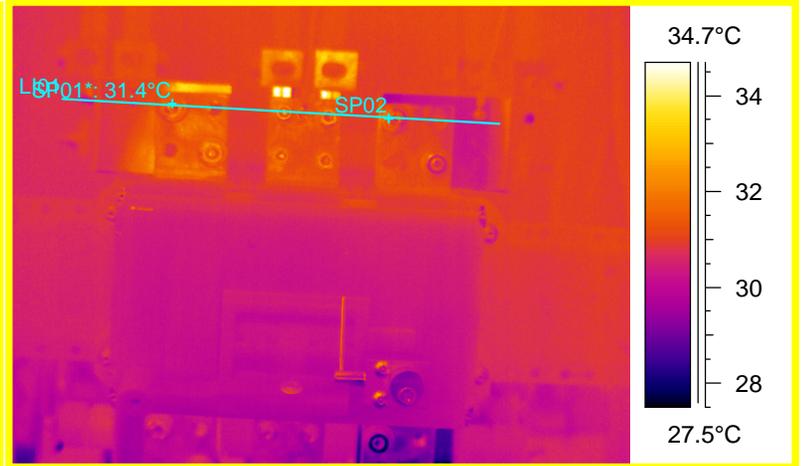
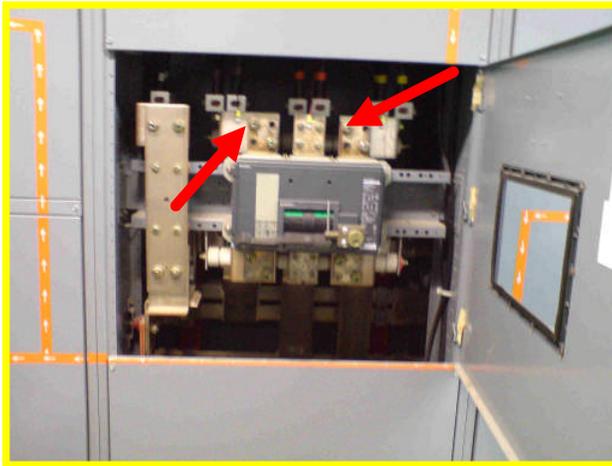


PHOTO # 0617

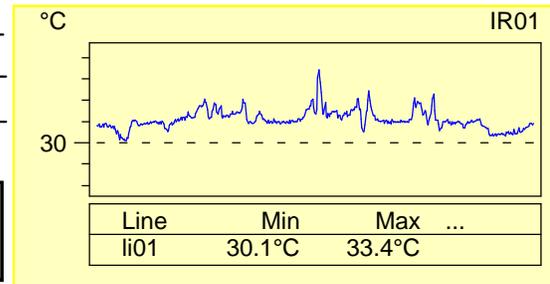
IMAGE # 0616

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.19°C above normal.

Label	Value	Diff	Formula
SP01*	31.4°C		
SP02	31.2°C	DI01: 0.19°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	82
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; Electrical Room A	AIR TEMPERATURE (°C)	29		
EQUIPMENT IDENTIFICATION	SWBD-GCC-21; UPS Main	RELATIVE HUMIDITY (%)	34		

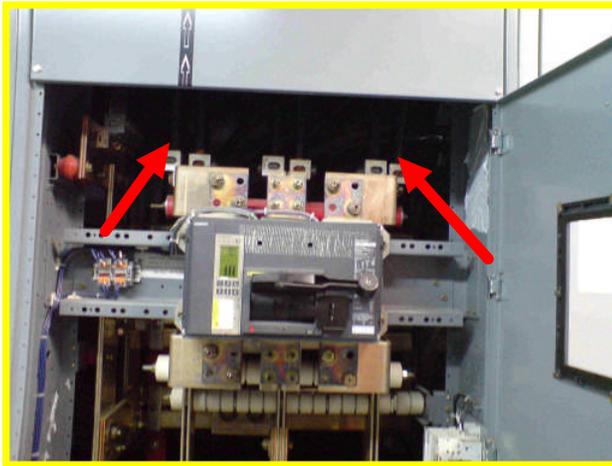


PHOTO # 0619

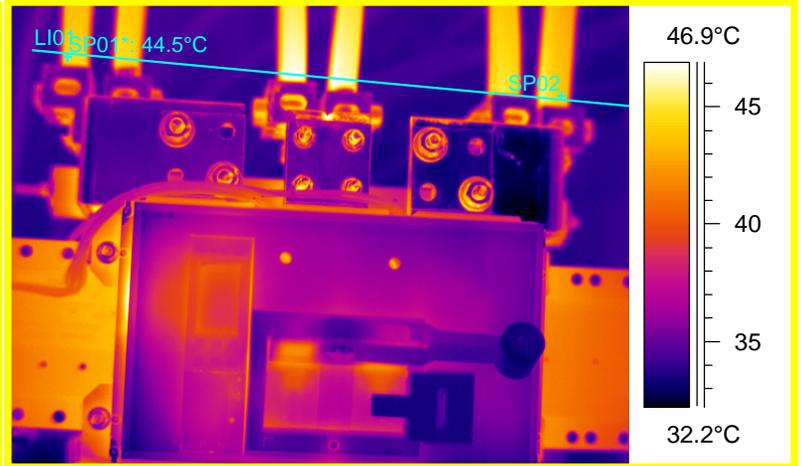


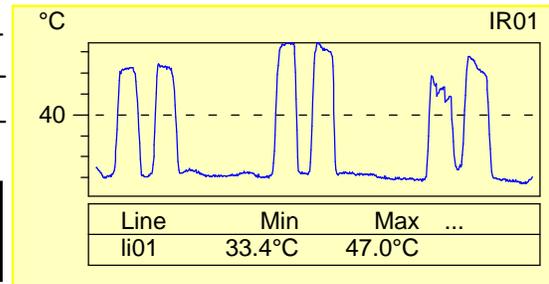
IMAGE # 0618

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.55°C above normal.

Label	Value	Diff	Formula
SP01*	44.5°C		
SP02	44.0°C	DI01: 0.55°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
		A
		B
	X No Action Required	C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/26/12	SHEET NUMBER	83
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; Electrical Room B	AIR TEMPERATURE (°C)	29		
EQUIPMENT IDENTIFICATION	DHP-GCC-22; CRAC-25	RELATIVE HUMIDITY (%)	34		



PHOTO # 0624

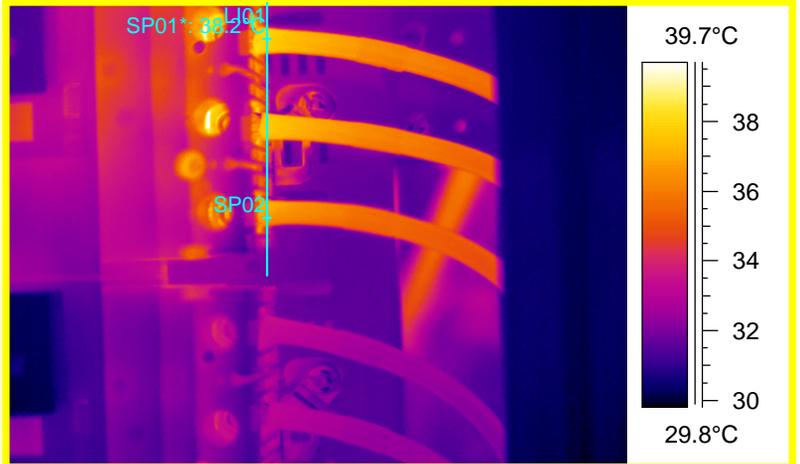


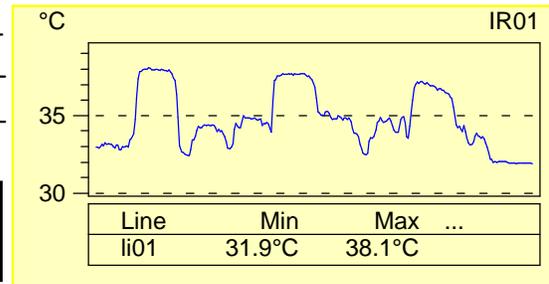
IMAGE # 0623

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 1.43°C above normal.

Label	Value	Diff	Formula
SP01*	38.2°C		
SP02	36.7°C	DI01: 1.43°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	A
	Replace Bus	B
X Reference Only	X No Action Required	C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	84
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; UPS Room A	AIR TEMPERATURE (°C)	25		
EQUIPMENT IDENTIFICATION	DCDS-GCC-13	RELATIVE HUMIDITY (%)	42		

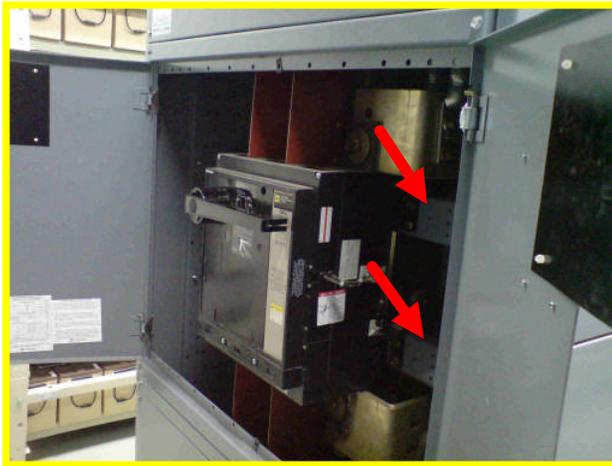


PHOTO # 0611

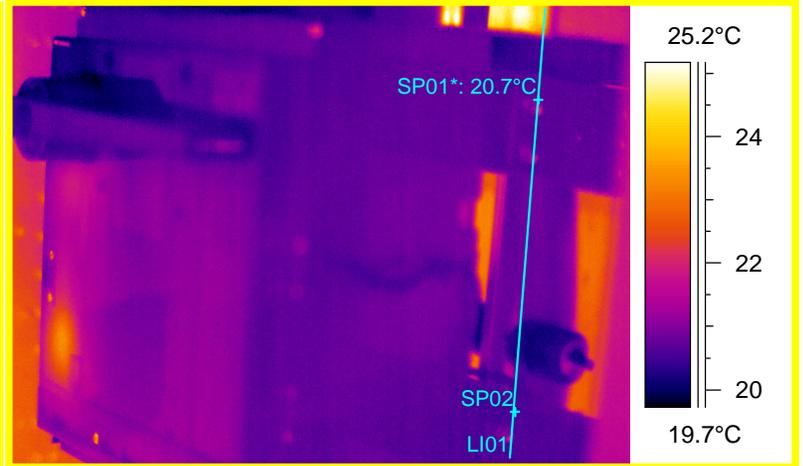


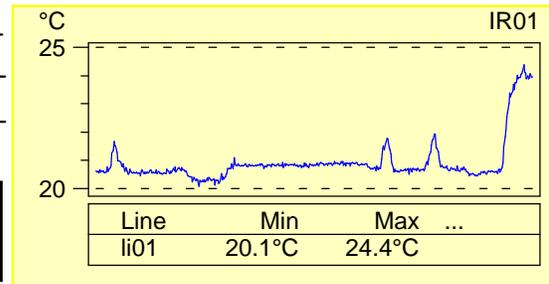
IMAGE # 0610

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 0.15°C above normal.

Label	Value	Diff	Formula
SP01*	20.7°C		
SP02	20.6°C	DI01: 0.15°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	85
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION		11/2010	
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.		3126310	
EQUIPMENT LOCATION	Building GCC; Network Room A	AIR TEMPERATURE (°C)		23	
EQUIPMENT IDENTIFICATION	PP-GCC-14AA-2	RELATIVE HUMIDITY (%)		45	

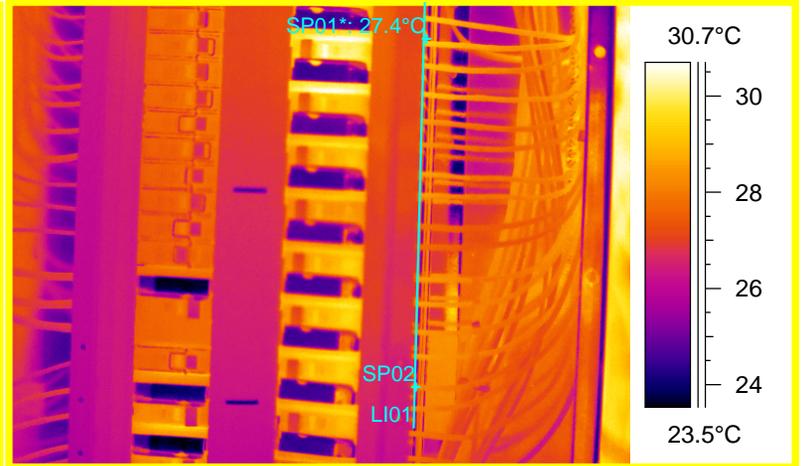
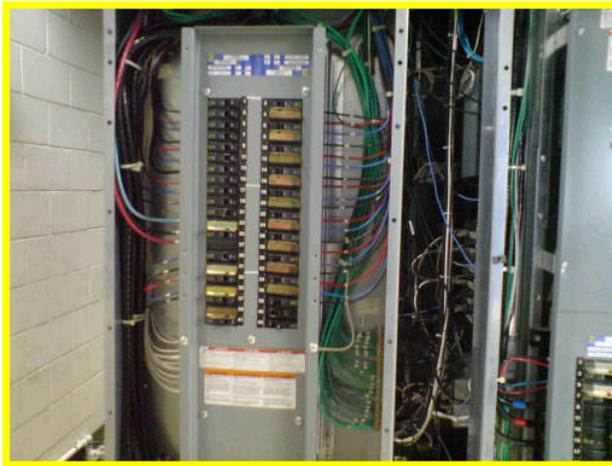


PHOTO # 0607

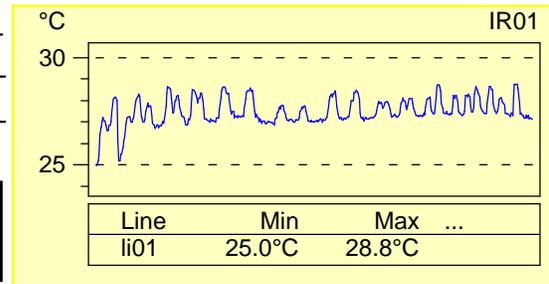
IMAGE # 0606

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of -0.85°C above normal.

Label	Value	Diff	Formula
SP01*	27.4°C		
SP02	28.3°C	DI01: -0.85°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	A
	Replace Bus	B
X Reference Only		C
	X No Action Required	N/A
		N/A

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	86
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building GCC; Room CRA	AIR TEMPERATURE (°C)			24
EQUIPMENT IDENTIFICATION	PP-GCC-13AA-7	RELATIVE HUMIDITY (%)			48

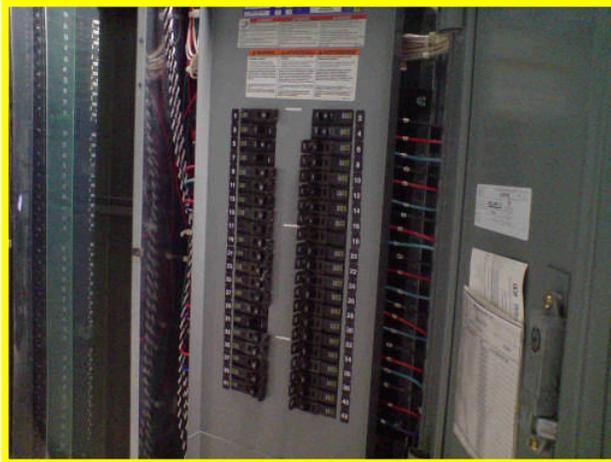


PHOTO # 0609

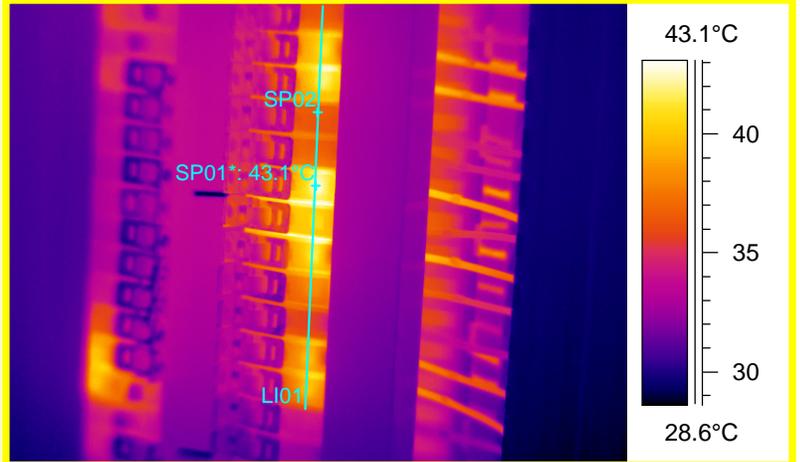


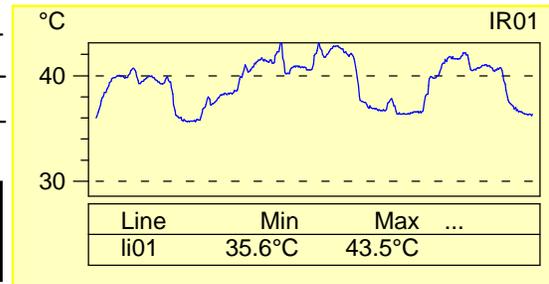
IMAGE # 0608

Problem Description:

No deficiencies noted. Images for reference only. Variances in temperatures of the breakers can be contributed to variances in load.

Exhibits a temperature rise of 6.61°C above normal.

Label	Value	Diff	Formula
SP01*	43.1°C		
SP02	36.5°C	DI01: 6.61°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/21/12	SHEET NUMBER	87
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; Room CRB	AIR TEMPERATURE (°C)	29		
EQUIPMENT IDENTIFICATION	PP-GCC-21A-16	RELATIVE HUMIDITY (%)	30		

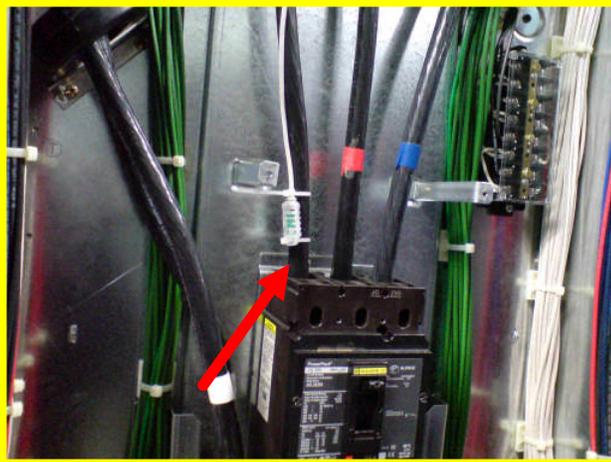


PHOTO # 0621

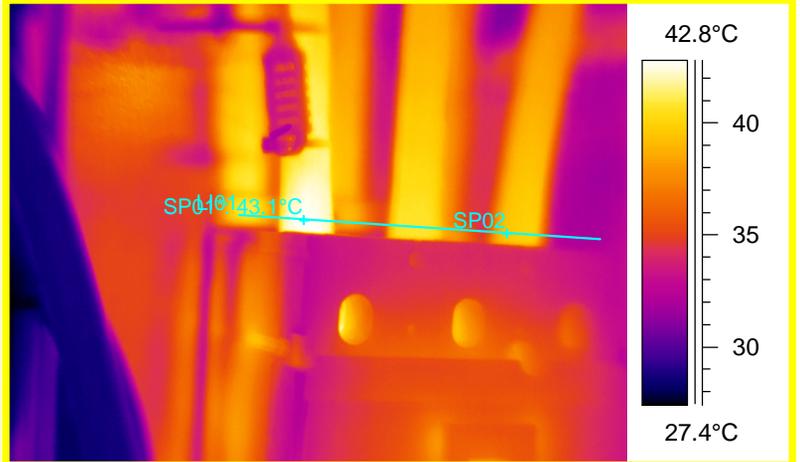


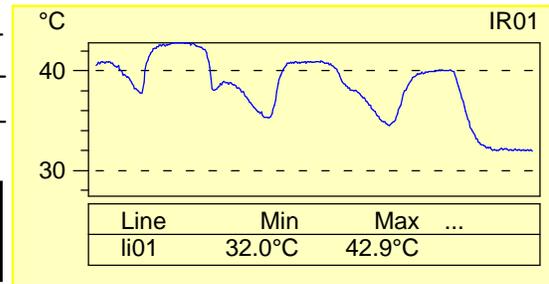
IMAGE # 0620

Problem Description:

A Phase is exhibiting elevated temperature consistent with a loose or dirty connection. We recommend cleaning & re-torquing the connection.

Exhibits a temperature rise of 3.43°C above normal.

Label	Value	Diff	Formula
SP01*	43.1°C		
SP02	39.7°C	DI01: 3.43°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:																
X Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation																
Oxidation of Connection(s)	X Clean and tighten connections	X Probable deficiency; repair at next outage																
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.																
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan																
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan																
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 3 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>∅</th> <th>∅ AMPS</th> <th>% FLA</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td>156</td> <td></td> </tr> <tr> <td>B</td> <td></td> <td>132</td> <td></td> </tr> <tr> <td>C</td> <td></td> <td>144</td> <td></td> </tr> </tbody> </table>		∅	∅ AMPS	% FLA	A		156		B		132		C		144	
	∅		∅ AMPS	% FLA														
A			156															
B			132															
C			144															
Code Violation	Replace Conductor(s)																	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)																	
	Replace Circuit Breaker(s)																	
	Replace Bus																	

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/26/12	SHEET NUMBER	88
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building GCC; Room CRB	AIR TEMPERATURE (°C)			29
EQUIPMENT IDENTIFICATION	PP-GCC-21A-1	RELATIVE HUMIDITY (%)			20

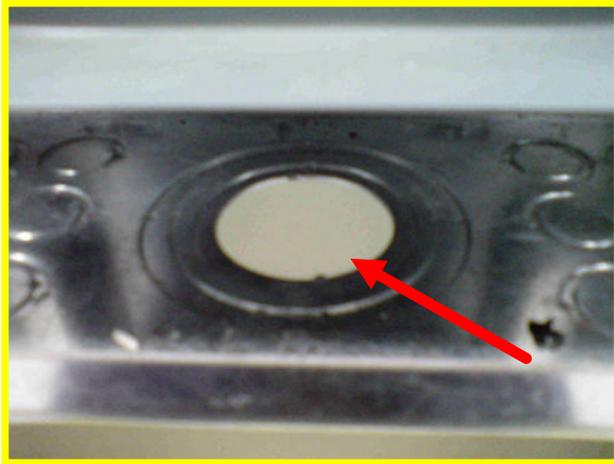


PHOTO # 0622

Problem Description:

NEC Violation: Unused Openings

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
X Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
X Unused Opening	Replace Bus	C	N/A	

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HIGH VOLTAGE MAINTENANCE

THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/26/12	SHEET NUMBER	89
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; Room CRC	AIR TEMPERATURE (°C)	30		
EQUIPMENT IDENTIFICATION	TRPP-GCC-23A-3	RELATIVE HUMIDITY (%)	22		

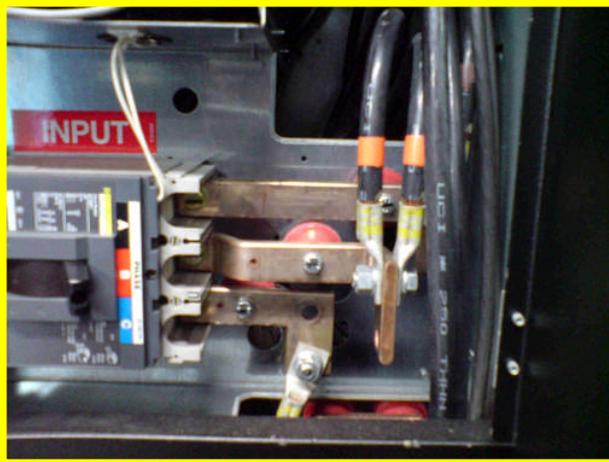


PHOTO # 0627

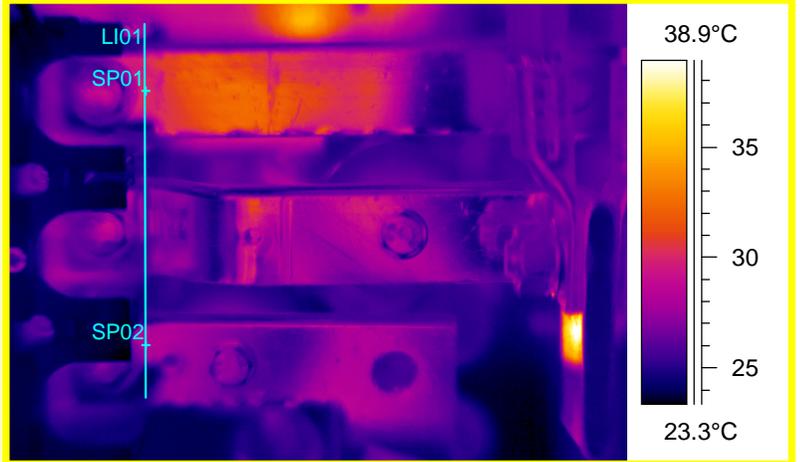


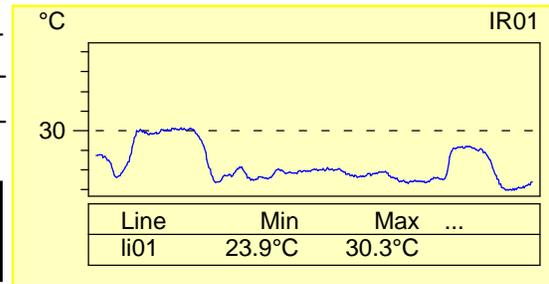
IMAGE # 0628

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 1.74°C above normal.

Label	Value	Diff	Formula
SP01	30.1°C		
SP02	28.3°C	DI01: 1.74°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	A
	Replace Bus	B
X Reference Only	X No Action Required	C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	3/26/12	SHEET NUMBER	90
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building GCC; Room CRC	AIR TEMPERATURE (°C)	30		
EQUIPMENT IDENTIFICATION	PP-GCC-23A-3D	RELATIVE HUMIDITY (%)	22		

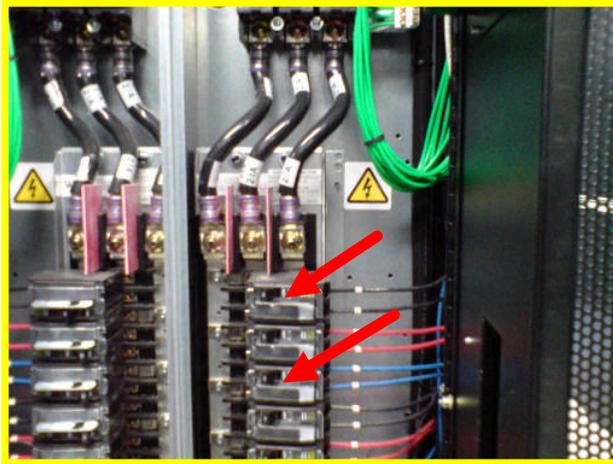


PHOTO # 0626



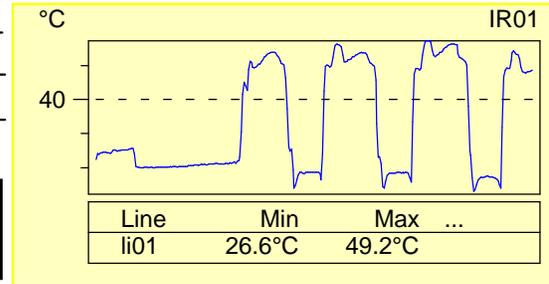
IMAGE # 0625

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 1.84°C above normal.

Label	Value	Diff	Formula
SP01*	48.6°C		
SP02	46.8°C	DI01: 1.84°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	A
	Replace Bus	B
X Reference Only		C
	X No Action Required	

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	91
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building LCC; Room 107	AIR TEMPERATURE (°C)			23
EQUIPMENT IDENTIFICATION	Panel PP-NL30-1; Circuit 11	RELATIVE HUMIDITY (%)			42

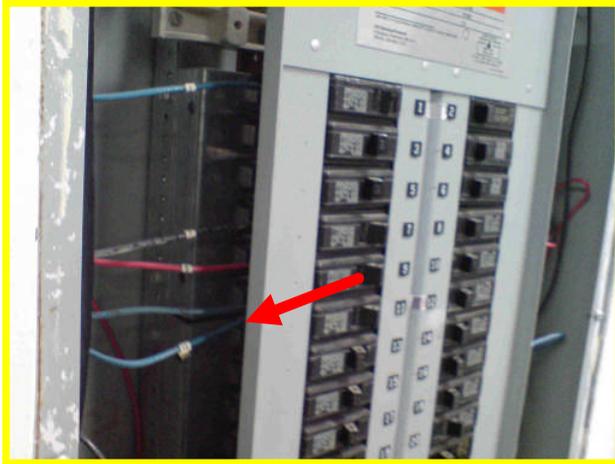


PHOTO # **0597**

Problem Description:

Circuit 11 has two wires on one 15 Amp breaker. Correct per NEC.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
X Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
X Multiple Conductors	Replace Bus	C	N/A	
	X Correct per NEC			

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	92
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building LCC; Room 107	AIR TEMPERATURE (°C)			23
EQUIPMENT IDENTIFICATION	Panel PP-NL30-1	RELATIVE HUMIDITY (%)			42



PHOTO # 0598

Problem Description:

Dirt and debris found in the bottom of the panel. Clean panel.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
X Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	A	N/A	
	Replace Circuit Breaker(s)	B	N/A	
X Multiple Conductors	Replace Bus	C	N/A	
	X Correct per NEC			

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	93
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building LCC; Room 107	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	LP-NL-15B-3A1-10; Circuits 7, 9 & 11	RELATIVE HUMIDITY (%)	42		

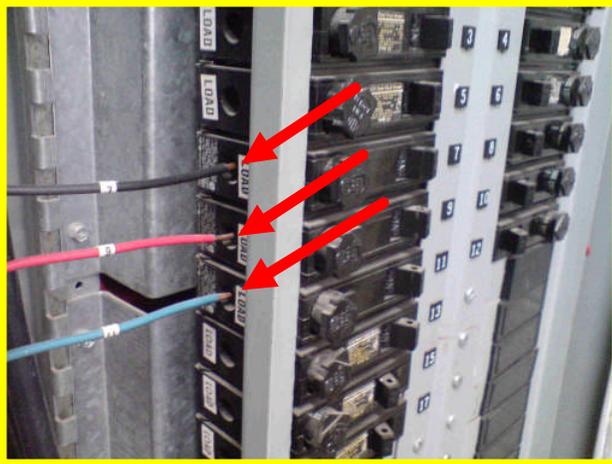


PHOTO # 0599

Problem Description:

Circuit breakers have exposed copper on
 conductors. Re-terminate conductors.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:		
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation		
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage		
Overloaded Circuit(s)	Determine cause of unbalance	X Major deficiency; immediate action required.		
Unbalanced Circuit(s)	Distribute the load more evenly	None - Corrected at the time of scan		
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan		
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 1		
Code Violation	Replace Conductor(s)	Ø	Ø AMPS	% FLA
(See Engineering Report for Code	Replace Fuse(s)	A	N/A	
Violation Description and Details)	Replace Circuit Breaker(s)	B	N/A	
X Exposed Copper	Replace Bus	C	N/A	
	X Re-terminate Conductors			

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	94
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building LCC; Room 107/108	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	SWBD-DHP-NL-15B; AC-4	RELATIVE HUMIDITY (%)	42		

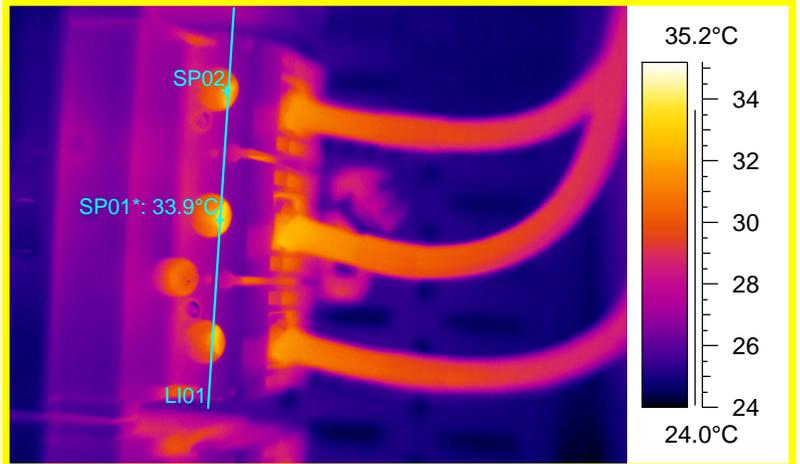
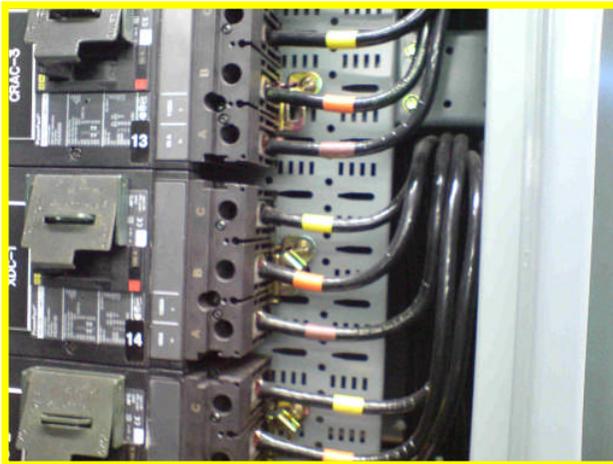


PHOTO # 0601

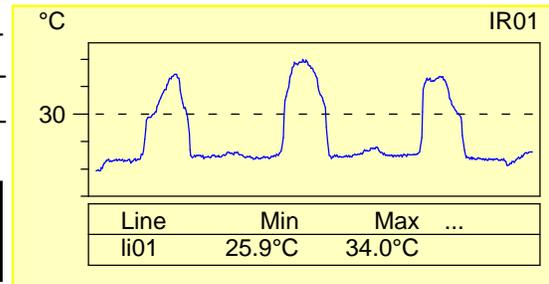
IMAGE # 0600

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 1.64°C above normal.

Label	Value	Diff	Formula
SP01*	33.9°C		
SP02	32.2°C	DI01: 1.64°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	95
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION	11/2010		
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.	3126310		
EQUIPMENT LOCATION	Building LCC; Room 108	AIR TEMPERATURE (°C)	23		
EQUIPMENT IDENTIFICATION	PP-NL-15B-6-45	RELATIVE HUMIDITY (%)	42		



PHOTO # 0603

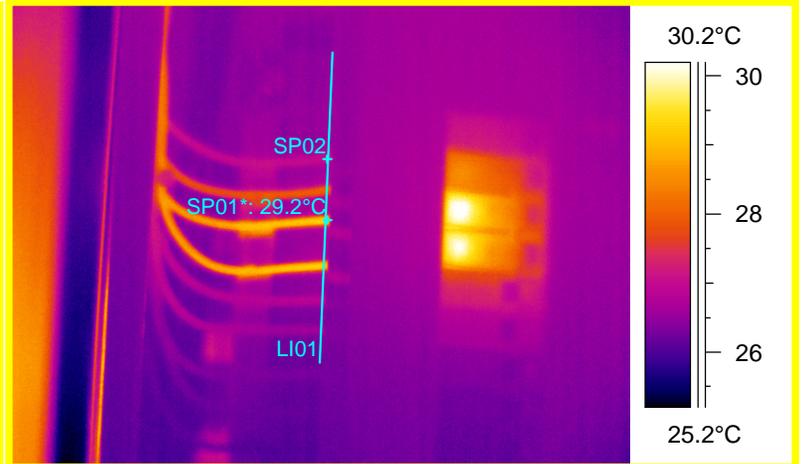


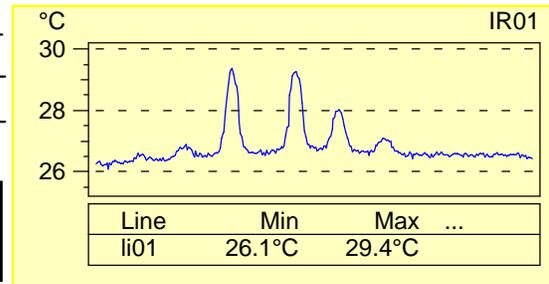
IMAGE # 0602

Problem Description:

No deficiencies noted. Images for reference only.

Exhibits a temperature rise of 2.20°C above normal.

Label	Value	Diff	Formula
SP01*	29.2°C		
SP02	27.0°C	DI01: 2.20°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation
Oxidation of Connection(s)	Clean and tighten connections	Probable deficiency; repair at next outage
Overloaded Circuit(s)	Determine cause of unbalance	Major deficiency; immediate action required.
Unbalanced Circuit(s)	Distribute the load more evenly	X None - Reference Only
Bad or Failing Fuse(s)	Determine the cause of overload	Repair and Verify with Infrared Scan
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 0
Code Violation	Replace Conductor(s)	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)	Ø
	Replace Circuit Breaker(s)	Ø AMPS
X Reference Only	Replace Bus	% FLA
	X No Action Required	A
		B
		C

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THERMOGRAPHIC INSPECTION REPORT

CUSTOMER	Liebert Services	DATE	03/20/12	SHEET NUMBER	96
CUSTOMER ADDRESS	610 Executive Campus Dr; Westerville, OH	TEST NO.	N/A	PROJECT NO.	3149091
OWNER/USER	Fermi Labs	DATE OF LAST INSPECTION			11/2010
USER ADDRESS	P.O. Box 500; Batavia, IL	LAST INSPECTION REPORT NO.			3126310
EQUIPMENT LOCATION	Building LCC; Room 107/108	AIR TEMPERATURE (°C)			23
EQUIPMENT IDENTIFICATION	PDU-22; PP-NL15B-22A	RELATIVE HUMIDITY (%)			42

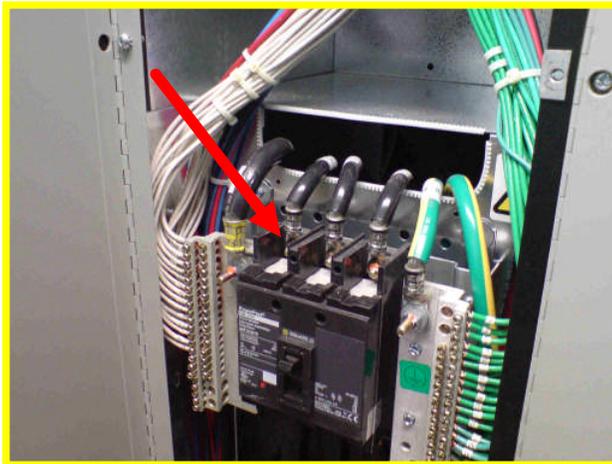


PHOTO # 0605

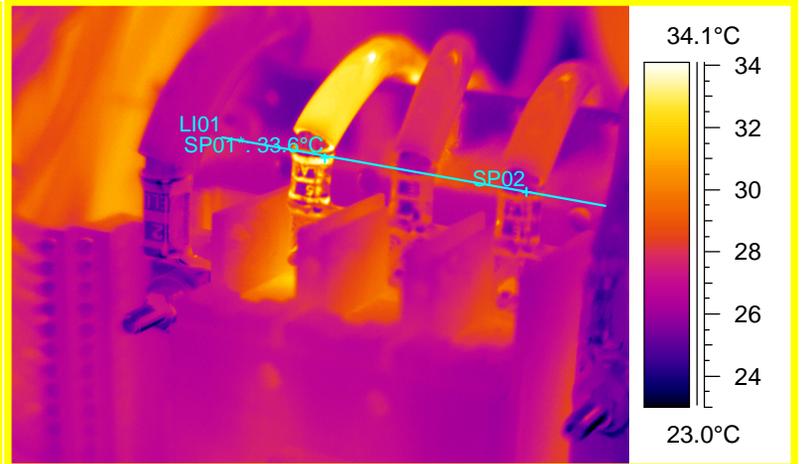


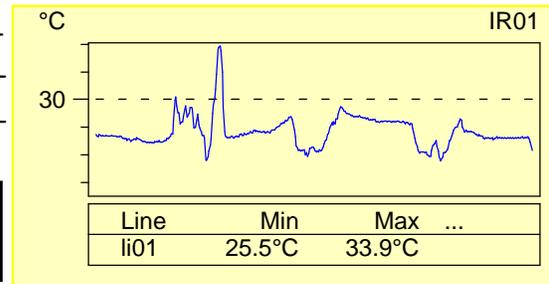
IMAGE # 0604

Problem Description:

Unbalanced load. Investigate to determine the cause of the unbalance and distribute the load more evenly.

Exhibits a temperature rise of 7.73°C above normal.

Label	Value	Diff	Formula
SP01*	33.6°C		
SP02	25.9°C	DI01: 7.73°C	SP01 - SP02



Temperature Profile Chart Based on Line 1 (LI01) above.

PROBABLE CAUSE:	RECOMMENDED ACTION:	ACTION REQUIRED:																
Loose Component/Connection	Secure Power	Possible deficiency; warrants investigation																
Oxidation of Connection(s)	Clean and tighten connections	X Probable deficiency; repair at next outage																
Overloaded Circuit(s)	X Determine cause of unbalance	Major deficiency; immediate action required.																
X Unbalanced Circuit(s)	X Distribute the load more evenly	None - Corrected at the time of scan																
Bad or Failing Fuse(s)	Determine the cause of overload	X Repair and Verify with Infrared Scan																
Bad or Failing Circuit Breaker(s)	Reduce load to below 80% of FLA	REPAIR PRIORITY RATING: 3																
Code Violation	Replace Conductor(s)																	
(See Engineering Report for Code Violation Description and Details)	Replace Fuse(s)																	
	Replace Circuit Breaker(s)																	
	Replace Bus																	
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>∅</th> <th>∅ AMPS</th> <th>% FLA</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td>91</td> <td></td> </tr> <tr> <td>B</td> <td></td> <td>42</td> <td></td> </tr> <tr> <td>C</td> <td></td> <td>65</td> <td></td> </tr> </tbody> </table>		∅	∅ AMPS	% FLA	A		91		B		42		C		65	
	∅	∅ AMPS	% FLA															
A		91																
B		42																
C		65																

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