

Schneider Site Service Report

Schneider Project Number: 900086044

Customer: BPL Ltd

Site Name: Bio Labs Dagger Lane, Watford



Report Produced by: MO KADA

Schneider Project Manager: NEIL TUXFORD

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Introduction / Scope of work:

Maintenance of various Lv Breakers and Transformer.

Site Work – Date & time	Start: 03-01-2017	End: 10-01-2017
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Equipment Type:

Mitsubishi switches, Ellison Breakers, Trimline panels,

Serial Number(s) of Equipment:

Various (Please see test sheets)

Substation Construction, Environment & General Condition of equipment (Include Photo):

Substations are all within the main building, with easy access.

Summary of Work Completed:

Please see, test sheets for photos:

Works carried out on various substation that include:

Substation C panel NS0361

Substation A panel NS0363

Substation B panel NS0360

Lv panel EL1384 MCC No D1

Summary of work performed additional to original scope:

Customer Request/Defect	Description of work performed:	Complete Y/N
None	None	N/A

Additional Parts used to be billed:

Part Description :	Part Number
None	N/A

Outstanding Actions / Recommendations:

Replacement of Faulty Switches x2

Replacement of faulty Voltage meter

Carry out Maintenance of Various LV panels

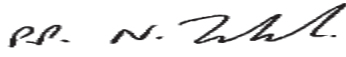
Replacement contactors as described in the test sheets

Replacement of cable where insulation break down is present


Replacement of cable boot in Rear of panel as described in test sheets

Replacement of faulty Thermal Over Load Relays

Report Created by:

Print: MO KADA	Sign 	3-02-17
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Report Reviewed by Project Manager:

Print: Neil Tuxford	Sign: 	Date: 4.2.17
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Low Voltage Switchboard Maintenance Report

Customer	Bio Products Laboratory	Site	BPL Dagger Lane
Board Ref	Substation A NSO363		
Manufacturer		Type	Trimline
		Ser No	

Ref	Panel Name	10A Ductor Results $\mu\Omega$						Chassis Info / Change	Faults / Remarks
		R	Y	B	0.2	0.4	0.3		
	LV EMERGENCY LINK TO SUB STN 'B'	R	1.9	Y	0.2	B	0.4	NFE 1200S SET @1200A 3 POLE, PUSH TO TRIP, ST DELAY PICK UP MED	
	DB PP8 (G1 NORTH WALL)	R	0.2	Y	0.1	B	0.3	NS630H 250/630A 3 POLE, Io-8 Ir-9 Isd-4 PLEASE SEE BELOW FOR TEST RESULTS	
	TEMP CHILLER 1	R	0.3	Y	0.2	B	0.5	NFE 1200S 700A-1200A SET @700A 3 POLE, S/D MAX	
	SPARE	R	0.4	Y	1.1	B	0.4	NFE 1200S 700A-1200A SET @700A 3 POLE, S/D MAX	
	MCC No2 YARD SERVICE GR PLANT RM.G1	R	0.3	Y	0.3	B	0.3	NFE 1200S 700A-1200A SET @1000A 3 POLE, S/D MED	
	(U) NO LABLE	R	1.5	Y	1.2	B	1.2	NF100 HA 70/100A SET @90A 3 POLE, PUSH TO TRIP	
	(U2) NO LABLE	R	1.3	Y	1.2	B	1.3	NF100 HA 70/100A SET @90A 3 POLE, PUSH TO TRIP	
	PP5 G23	R	2.4	Y	1.4	B	1.4	NF100 HA 100/125A SET @100A 3 POLE, PUSH TO TRIP	
	DIST BD No PP1	R	1.4	Y	1.4	B	1.3	NF100 HA 70/100A SET @70A 3 POLE, PUSH TO TRIP	
	DIST BD No PP2	R	0.8	Y	1.0	B	0.9	NF100 HA 70/100A SET @70A 3 POLE, PUSH TO TRIP	
	DIST BD No PP4	R	2.7	Y	2.8	B	3.3	NF400 HA 400/300A SET @300A SET @ HIGH 3 POLE, PUSH TO TRIP	
	(M) SPARE	R	2.5	Y	2.5	B	2.8	NFE800 500/800A SET @700A 3 POLE, SET @ S/D MED	FAULTY SWITCH THIS COULD NOT BE RE-SET, THIS SWITCH WILL REQUIRE REPLACEMENT
	MAIN INCOMER	R	21	Y	22	B	23.5	EILLISON WITHDRAWABLE ACB CASTELL 'X' FUSES 5 AMPS TIME LIMIT FUSES SERIAL C8283-1 TYPE:30 2800A ACB 240V CONTROLS SHUNT 50VDC MEGGER RESULTS: ALL >1000M OHMS	FAULTY VOLT METER

DB PP8 TEST RESULTS:

TEST I (A)	mA	Trip	meas	No Trip
910	144	67.085	59.73	43.605
3500	555	0.06	0.05	0.02
10000	1587	0.04	0.02	0.0

ALL RESULTS ARE PASS

Engineer:	<i>M.Kada K Daneshyar</i>	Defect Report Sheet attached:	<i>As Above</i>	(Y/N)
Fitter:	<i>J Copper, S Gunn, P Mann</i>	Date:	<i>05-1-17</i>	

REMARKS: *Maintenance included Switch operation, Stabs greased and set, Fuse check, wiring tightens, tightens check, Full clean, General observation and visual inspection check and Protection Relay test on separate report.*

Low Voltage Switchboard Maintenance Report

Customer	Bio Products Laboratory	Site	BPL Dagger Lane
Board Ref	Substation B NSO360		
Manufacturer		Type	Ser No

Ref	Panel Name	10A Ductor Results $\mu\Omega$						Chassis Info / Change	Faults / Remarks
		R	Y	B	0.6	1.7	0.1		
	EXT' NL LIGHTING BD No EL1 (LV SWITCHROOM G4)	R	Y	B	0.6	1.7	0.1	NF100/HA 70/100A SET @70A 3 POLE, PUSH TO TRIP	
	110V TRANS G4 DB MLV / G / 1	R	Y	B	0.5	0.7	0.6	NF100/HA 70/100A SET @70A 3 POLE, PUSH TO TRIP	
	D/B PP6 G51	R	Y	B	4.2	1.9	2.8	NF100/HA 70/100A SET @90A 3 POLE, PUSH TO TRIP	
	DIST. BD No PP3 (LV SWITCHROOM G4)	R	Y	B	2.2	5.9	1.4	NF100/HA 70/100A SET @70A 3 POLE, PUSH TO TRIP	
	LIFT No3 (ROOM G111)	R	Y	B	6.7	7.3	4.3	NF100/HA 40/60A SET @60A 3 POLE, PUSH TO TRIP	
	SPARE 1	R	Y	B	4.2	4.7	6.2	NF100/HA 40/60A SET @60A 3 POLE, PUSH TO TRIP	
	SPARE 2	R	Y	B	3.5	4.0	5.5	NF100/HA 100/125A SET @125A 3 POLE, PUSH TO TRIP	
	G17 DISTRUBUTION BOARD PP7	R	Y	B	4.4	4.0	3.5	NF225/S 125/175A SET @175A 3 POLE,	FOUND IN THE TRIPPED POSITION, THIS SWITCH DOES NOT OPERATE AND REQUIRES REPLACMENT
	NEW MCCB BOARD AT REAR	R	Y	B	1.1	1.6	1.7	NF225/S 125/175A SET @175A 3 POLE, PUSH TO TRIP	
	G23	R	Y	B	0.9	1.5	0.6	NF225/S 175/225A SET @175A 3 POLE, PUSH TO TRIP	
	HVAC CHILLER L2 8000C (GR'D FLOOR PLANT RM. G1)	R	Y	B	0.3	0.3	0.3	NFE 600S 600A SET @300A 3 POLE, MED DELAY SET	
	HVAC MCC No5	R	Y	B	0.8	0.6	0.9	NFE 1200S SET @700A 3 POLE, SHORT DELAY SET	
	HVAC CHILLER L2 8000B (GR'D FLOOR PLANT RM G1)	R	Y	B	0.2	0.4	0.5	NFE 1200S SET @1200A 3 POLE, SHORT DELAY SET	
	MCC No111 PLANT ROOM SERVICES (GR'D FLOOR PLANT RM G1)	R	Y	B	0.1	0.3	0.3	NFE 1200S SET 700A 3 POLE, SHORT DELAY SET	
	LV EMERGENCY LINK TO SUB STN A	R	Y	B	0.2	0.1	0.1	NFE 1200S SET @1200A 3 POLE, 1200AMPER RATING MAX SHORT DELAY PICK UP	

		R		Y		B		<p><i>EILLISON WITHDRAWABLE ACB CASTELL 'X' FUSES 5 AMPS TIME LIMIT FUSES SERIAL C8 283/2 TYPE: GEA 30 TX RATIO 3000/5A SHUNT RELEASE 50VDC SOLERID 240VAC MEGGER RESULTS: ALL >1000M OHMS</i></p>	
	<i>MAIN INCOMER</i>		23		24.5		22		



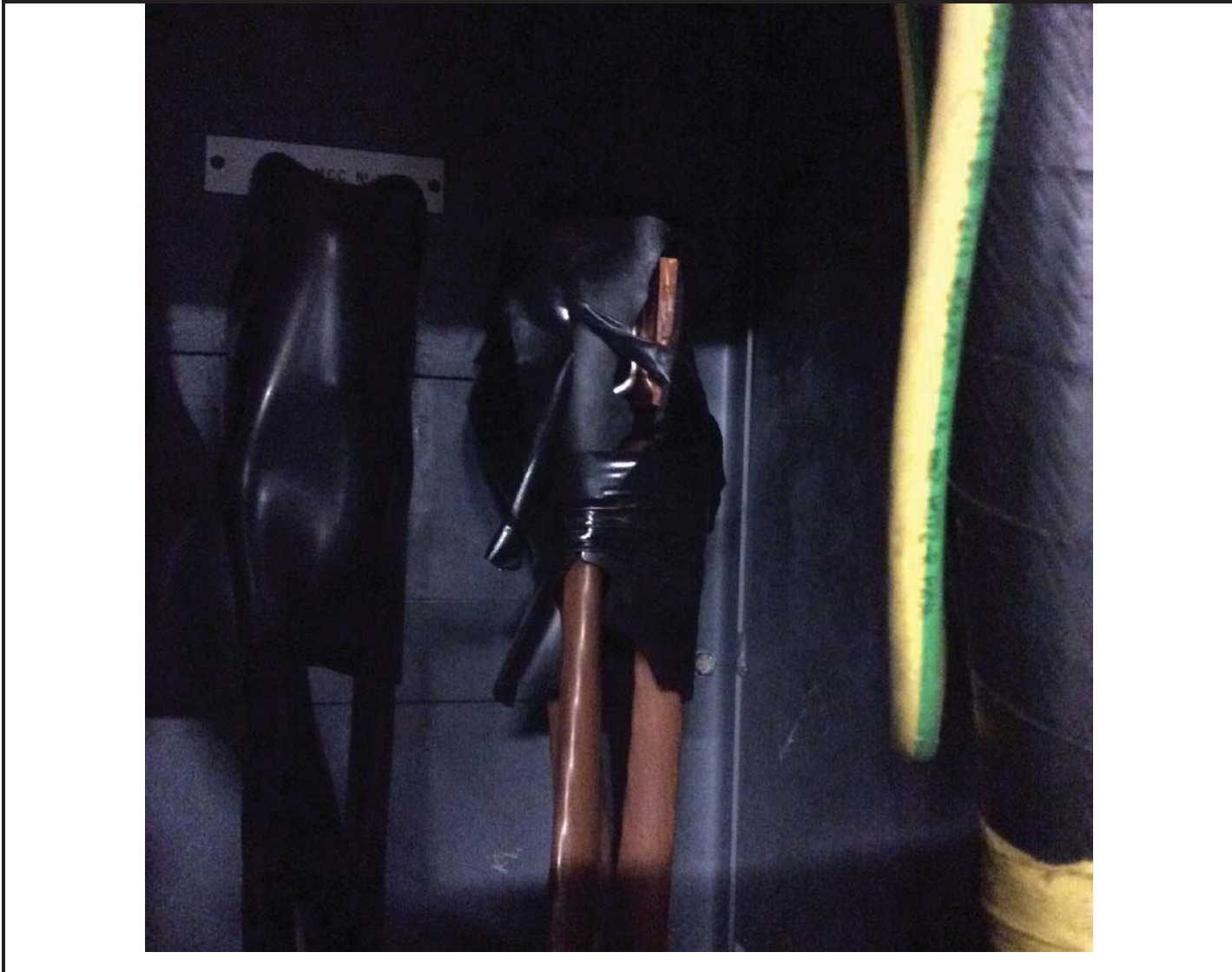
Engineer:	<i>M.Kada K Daneshyar</i>	Defect Report Sheet attached:	<i>As Above</i>	(Y/N)
Fitter:	<i>J Copper, S Gunn, P Mann</i>	Date:	<i>04-1-17</i>	

REMARKS: *Maintenance* included Switch operation, Stabs greased and set, Fuse check, wiring tightens, tightens check, Full clean, General observation and visual inspection check and Protection Relay test on separate report.4

Low Voltage Switchboard Maintenance Report

Customer	Bio Products Laboratory	Site	BPL Dagger Lane
Board Ref	Substation C NSO361		
Manufacturer		Type	Ser No

Ref	Panel Name	10A Ductor Results $\mu\Omega$						Chassis Info / Change	Faults / Remarks
		R	Y	B	0.3	0.5	0.8		
	<i>DIST. BD FC1 (EL. CUP B'D P214)</i>	R	Y	B	0.3	0.3	0.3	NF 100HA 3 POLE, PUSH TO TRIP TEST SET @125A	
	<i>DIST. BD FC2 (EL. CUP B'D P2303)</i>	R	Y	B	0.5	0.5	0.5	100/125A SET @125A 3 POLE, PUSH TO TRIP	
	<i>SERVICE FLOOR. SUB MAIN DIST. BD SC1</i>	R	Y	B	0.3	0.3	0.3	100/125A SET @125A 3 POLE, PUSH TO TRIP	
	<i>SPARE</i>	R	Y	B	0.4	0.4	0.5	70/100A SET @100A 3 POLE, PUSH TO TRIP	
	<i>DIST. BD GC2 (EL. CUP B'D G13)</i>	R	Y	B	0.4	0.4	0.5	100/125A SET @125A 3 POLE, PUSH TO TRIP	
	<i>SUB MAIN DIST BD GC1 LV SWITCH RM.G4</i>	R	Y	B	0.9	0.9	0.8	100/125A SET @125A 3 POLE, PUSH TO TRIP	
	<i>PROCESS MCC/DIS CENTRE C3</i>	R	Y	B	0.8	0.8	0.8	NF225S 175/225A SET @225A 3 POLE, PUSH TO TRIP	
	<i>HVAC MCC No1</i>	R	Y	B	0.5	0.4	0.3	NS076249 SERIAL NUMBER, NS800N 3 POLE, DOM: 16-07-2012, MICROLOGIS 2.0, IR-.8 TR-2 ISD-1.5 LT TRIP 853A - 64.572S PASS ST TRIP 1200A - 0.062S PASS	<i>BOOT SPLIT ON REAR CABLES</i>
	<i>LOAD CENTRE C1 (FREEZE DRIERS)</i>	R	Y	B	0.1	0.1	0.4	NFE 800S SET @500A 3 POLE, PUSH TO TRIP, ST MAX INST 1500A FIXED	
	<i>PROCESS MCC/DIST CENTRE C4</i>	R	Y	B	0.2	0.4	0.4	NFE 600S SET @600A 3 POLE, PUSH TO TRIP, ST MAX INST 10000 FIXED	
	<i>LOAD CENTRE C2 (FREEZE DRIERS)</i>	R	Y	B	0.8	1.2	0.7	NFE 600S SET @600A 3 POLE, PUSH TO TRIP, ST MAX INST 10000 FIXED	
	<i>MAIN INCOMER</i>	R	Y	B	21	22	23.5	EILLISON WITHDRAWABLE ACB CASTELL 'Y' FUSES 5 AMPS TIME LIMIT FUSES SERIAL C828-1 TYPE:200/5A CT 2800AM ACB 240V CONTROLS MEGGER RESULTS: ALL >1000M OHMS	



Engineer:	<i>M.Kada K Daneshyar</i>	Defect Report Sheet attached:	<i>As Above</i>	(Y/N)
Fitter:	<i>J Copper, S Gunn, P Mann</i>	Date:	<i>03-1-17</i>	

REMARKS: Maintenance included Switch operation, Stabs greased and set, Fuse check, wiring tightens, tightens check, Full clean, General observation and visual inspection check and Protection Relay test on separate report.

Low Voltage Switchboard Maintenance Report

Customer	Bio Products Laboratory	Site	BPL Dagger Lane
Board Ref	MCC No: MCC No D1		
Manufacturer	GEC Industrial Controls	Type	Trimline
		Ser No	EL13684

Ref	Panel Name	Check fuse ratings and continuity						Chassis Info / Change	Faults / Remarks
		R	Y	B					
	Main Incomer	R		Y		B		-	Unable to Switch off
B1	FP2853A Bowl Coolant Return Pump	R	16A	Y	16A	B	16A	TDR0827/12XC/B1	
B2	FP2853B Bowl Coolant Return Pump	R	16A	Y	16A	B	16A	TDR0827/12XC/B2	
B3	Spare	R	-	Y	-	B	-	TDR0827/12XC/B3	No fuses, Relay not present / wires not in terminals.
B4	Space	R	-	Y	-	B	-	-	Not present / Removed
B5	Spare	R	20A	Y	20A	B	-	TDR0827/12XC/B5	No L3 fuses, Relay not present / wires not in terminals.
B6	Spare	R	-	Y	-	B	-	TDR0827/12XC/B6	No fuses present
B7	FF2141A Centrifuge 1685077	R	63A	Y	63A	B	63A	TDR0827/14XC/B8	
B8	FF2141B Centrifuge 1686076	R	63A	Y	63A	B	63A	TDR0827/12XC/B11	
C1	Mcc D1 P113 13A Sockets	R	25A	Y	-	B	-	TDR0827/12XC/C1	L2, L3 Fuses left out
C2	FO23438 Freezer	R		Y		B		TDR0827/12XC/C2	25A Fuses left out
C3	Space	R	-	Y	-	B	-	-	Not present / Removed
C4	Space	R	-	Y	-	B	-	-	Not present / Removed
C5	Spare	R	-	Y	-	B	-	TDR0827/12XC/C5	No Fuses present
C6	FF2141C Centrifuge 1685076	R	63A	Y	63A	B	63A	TDR0827/12XC/C6	
C7	FF2141A Centrifuge 1685075	R	63A	Y	63A	B	63A	TDR0827/12XC/C7	
D1	FM2179 Agitator	R	-	Y	-	B	-	TDR0827/12XC/D2	No Fuses present
D2	Distribution Board D1/P1	R	100A	Y	100A	B	100A	TDR0827/12XC/D3	
D3	Distribution Board D1/P2	R	100A	Y	100A	B	100A	TDR0827/12XC/D5	
D4	Distribution Board D1/P3	R	100A	Y	100A	B	100A	TDR0827/12XC/D7	
D5	Distribution Board D1/P1	R	100A	Y	100A	B	100A	TDR0827/12XC/D9	
D6	Space	R	-	Y	-	B	-	-	Not present / Removed No fuses present
E1	No Label	R	32A	Y	32A	B	32A	TDR0827/12XC/N5	
E2	FF2164A SN1684456	R	20A	Y	20A	B	20A	TDR0827/12XC/E2	
E3	FF2164B SN1684457	R	20A	Y	20A	B	20A	TDR0827/12XC/E3	
E4	FF2164C SN1684393	R	20A	Y	20A	B	20A	TDR0827/12XC/E4	
E5	FF2164D Spec I.G Centrifuge	R	-	Y	-	B	-	TDR0827/12XC/E5	No fuses present

E6	Spare	R	-	Y	-	B	-	TDR0827/12XC/E6	No fuses present
E7	Spare	R	-	Y	-	B	-	TDR0827/12XC/E7	No fuses, Relay not present / wires not in terminals.
E8	Spare	R	-	Y	-	B	-	TDR0827/12XC/E8	No fuses, Relay not present / wires not in terminals.
E9	Spare	R	-	Y	-	B	-	TDR0827/12XC/E9	No fuses, Relay not present / wires not in terminals.
E10	Feeder to Inverters	R	80A	Y	80A	B	80A	TDR0827/12XC/E10	
E11	FP2178 Coolant Circulation Pump	R		Y		B		TDR0827/12XC/E11	
E12	Spare	R	10A	Y	10A	B	10A	TDR0827/12XC/E12	
F1	Spare	R	-	Y	-	B	-	TDR0827/12XC/F1	No fuses. Relay removed, wires not in terminals.
F2	FM2111 ETH Feed Agitator	R		Y		B			No Test / No Access Padlocked
F3	FM2131 ETH Feed Agitator	R		Y		B			No Test / No Access Padlocked
F4	FM2151 ETH Feed Agitator	R		Y		B			No Test / No Access Padlocked
F5	FP12082 C.I.P Recirc Pump	R	20A	Y	20A	B	20A	TDR0827/12XC/B4	
F6	FP12082 C.I.P Recirc Pump 1	R	20A	Y	20A	B	20A	TDR0827/12XC/F6	
F7	FP2 2082 C.I.P Scavenge Pump 1	R	32A	Y	32A	B	32A	TDR0827/12XC/F7	
F8	Space	R	-	Y	-	B	-	-	
F9	Spare	R	10A	Y	10A	B	10A	TDR0827/12XC/F9	No fuses. Relay removed, wires not in terminals.
F10	Space	R	-	Y	-	B	-	-	Not present
F11	Space	R	-	Y	-	B	-	-	Not present
F12	Spare	R	25A	Y	25A	B	25A	TDR0827/12XC/A9	No Relay fitted from manufacture
F13	Spare	R	-	Y	-	B	-	TDR0827/12XC/F13	No fuses, Relay not present / wires not in terminals.
G1	FP3 2082 C.I.P Scavenge Pump 2	R	40A	Y	40A	B	40A	TDR0827/08XC/AR4	
G2	FP4 2082 C.I.P Scavenge Pump 3	R	32A	Y	32A	B	32A	TDR0827/12XC/G2	
G3	FP7 2082 C.I.P Chlorine Inj Pump	R	2A	Y	2A	B	2A	TDR0827/12XC/G3	Faulty Reset Button Fault MC5 GEC Contactor
G4	FP7 2092 C.I.P Chlorine Inj Pump	R	2A	Y	2A	B	2A	TDR0827/12XC/G4	Fault MC5 GEC Contactor
G5	FP2 2092 C.I.P Chlorine Inj Pump 1	R	32A	Y	32A	B	32A	TDR0827/12XC/G5	
G6	FP3 2092 C.I.P Chlorine Inj Pump 2	R	32A	Y	32A	B	32A	TDR0827/12XC/G7	
G7	FP4 2092 C.I.P Scavenge Pump 3	R	32A	Y	32A	B	32A	TDR0827/12XC/G6	
G8	Spare	R	16A	Y	16A	B	16A	TDR0827/12XC/N7	
G9	Space	R	-	Y	-	B	-	-	Not present

G10	FM2302 Agitator	R	25A	Y	25A	B	25A	TDR0827/12XC/G12	Isolator very stiff Reset bracket fixing missing
G11	FM2311 Agitator	R	20A	Y	20A	B	20A	TDR0827/12XC/G10	L1, L2 Insulation on Cables cracking / split
H1	FM2081A COHN V STR1 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
H2	FM2081B COHN V STR1 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
H3	FM20810 COHN V STR1 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
J1	FM2085A COHN V STR2 Agitator	R	N/A	Y	N/A	B	N/A	-	
J2	FM2085B COHN V STR1 Agitator	R	N/A	Y	N/A	B	N/A	-	Front cover fixing faulty
J3	FM2085C COHN V STR1 Agitator	R	N/A	Y	N/A	B	N/A	-	Back plate taken out, wiring left in compartment
K1	FM2091A COHN V FR3 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
K2	FM2018 COHN V FR3 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
K3	FM2091C COHN V FR3 Agitator	R	N/A	Y	N/A	B	N/A	-	Door Interlock not working
L1	Unusable	R	N/A	Y	N/A	B	N/A	-	
L2	Spare	R	N/A	Y	N/A	B	N/A	-	Back plate taken out, wiring left in compartment
L3	FM2241 Agitator	R	N/A	Y	N/A	B	N/A	-	
M1	FM2025A CRYO Agitator	R	-	Y	-	B	-		Padlocked off
M2	FM2025B CRYO Agitator	R	-	Y	-	B	-		Padlocked off
M3	FM2112 ETH. Feed Pump	R	16A	Y	16A	B	16A	TDR0827/12XC/M3	
M4	FM2132 ETH. Feed Pump	R	16A	Y	16A	B	16A	TDR0827/12XC/M4	
M5	FP2152 ETH. Feed Pump	R	16A	Y	16A	B	16A	TDR0827/12XC/M5	
M6	Space	R	-	Y	-	B	-	-	Not Present
M7	FM2241 Agitator	R	10A	Y	10A	B	10A	TDR0827/12XC/M7	Cover fixing loose
M8	FP2098 Defrost Pump	R	20A	Y	20A	B	20A	TDR0827/12XC/M8	
M9	Non-Essential Contactor	R	200A	Y	200A	B	200A	TDR0827/12XC/M9	
N1	FP1 2412 C.I.P Scavenge Pump	R	32A	Y	32A	B	32A	TDR0827/12XC/N1	L2 Insulation on Cables cracking / split
N2	FP1 2412 C.I.P Vessel Wash Pump	R	40A	Y	40A	B	40A	TDR0827/15XC/C17	
N3	FP7 2412 C.I.P Dosing Pump	R	20A	Y	20A	B	20A	TDR0827/13XC/D11	Fuses L1, L2 Found to have blown, now replaced, Connections found to be loose, Faulty GEC MC5 Contactor
N4	AZ2403 Cabinet Washer	R		Y		B			Padlock off
N5	AZ2404 Tunnel Washer	R		Y		B			Padlock off
N6	ED2401 Hot Air Oven	R	32A	Y	32A	B	32A	TDR0827/12XC/N6	

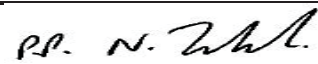
N7	FF2321 DEAE Centrifuge	R	20A	Y	20A	B	20A	TDR0827/12XC/G8	All Insulation on Cables cracking / split, Control Fuse Blown 6A
N8	Space	R	-	Y	-	B	-	-	Not Present
N9	Space	R	-	Y	-	B	-	-	Not Present
N10	Spare	R	20A	Y	20A	B	20A	TDR0827/12XC/N10	
P1	FF2324 DEAE Centrifuge	R	25A	Y	25A	B	25A		
P2	DB1 / P6	R	100A	Y	100A	B	100A		
P3	Spare	R	32A	Y	32A	B	32A	TDR0827/12XC/P4	
P4	Distribution Board DB1 / P5	R	63A	Y	63A	B	63A	TDR0827/12XC/P6	Door Interlock not working
P5	Unusable		-		-		-	-	Not Present
P6	Unusable		-		-		-	-	Not Present
P7	Unusable		-		-		-	-	Not Present



Engineer:	<i>M kada, K.Daneshyar, P.Mann</i>	Defect Report Sheet attached:	<i>As Above</i>	(Y/N)
Fitter:	<i>J. Cooper, S.Gunn,</i>	Date:	<i>06-01-2017 to 10-01-2017</i>	

REMARKS: Maintenance included Switch operation, Stabs greased and set, Fuse check, Wiring, tightness check, Full clean, Push button and lamp wire check where fitted ,General observation and visual inspection check and Protection Relay test on separate report.

TRIPPING AND AUXILIARY RELAYS SECONDARY INJECTION

Customer:	Bio Products Laboratory	Site Location:	BPL Dagger Lane Elstree, WD6 3BX
Schneider Project No.:	WO-01858049	Date of Visit:	06/01/2017
Switchboard Ref:	MCC 1		
Tested by:	M.Kada, K Daneshyar	Signature:	

Reference	Relay Type	Ith Setting	Ith Test Setting	Ith Test Current	Graph Time Cold Start	Actual Time Cold Start
Main Incomer	Comments: No Isolation / No Test					
FP2853A Bowl Coolant Return Pump B1	MTO 22SE	4.8A	4.8A	14.4A	30 sec	NO TRIP
FP2853B Bowl Coolant Return Pump B2	MTO 22SE	4.8A	4.8A	14.4A	30 sec	18.45
Spare B3	Comments: No Thermal O/L relay, this has been removed, No fuses					
Spare B5	Comments: Unable to test relay, L3 fuse missing					
Spare B6	Comments: No Thermal O/L relay, this has been removed, All fuses missing					
FF2141A Centrifuge 1685077 B7	MTO 22SE	4.8	4.8	14.4	30 sec	NO TRIP
FF2141B Centrifuge 1686076 B8	MTO 22SE	4.8	4.8	14.4	30 sec	14.21 sec
Mcc D1 P113 13A Sockets C1	Comments: No Thermal O/L relay					
FO23438 Freezer C2	Comments: Padlocked, No access					
Spare C5	Comments: No fuses, No Thermal O/L relay					
Space C3	Comments: No Thermal O/L relay					
Spare C4	Comments: No Thermal O/L relay					
FF2141C Centrifuge 1685076 C6					Not available	No Trip
FF2141A Centrifuge 1685075 C11					Not available	No Trip
FM2179 Agitator D1	MC0 22E					No Test
Distribution Board D1/P1 D2	Comments: No Thermal O/L Relay					
Distribution Board D1/P2 D3	Comments: No O/L Thermal Relay					
Distribution Board D1/P3 D4	MTO 22E	4.8 A	4.8A	3 x 4.8 A	18 sec	No Trip
Distribution Board D1/P1 D5	MTO 22E	4.8 A	4.8A	3 x 4.8A	18 sec	17.2 sec
Space	Comments:					

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Schneider Project No.:	WO-01858049	Date of Visit:	06/01/2017
Switchboard Ref:	MCC 1		
Tested by:	M.Kada, K Daneshyar	Signature:	<i>PP. N. W. A.</i>

No Label E1	Comments: No Relay					
FF2164A SN1684456 E2	MTO 22E	4.8A	4.8A	3 X 4.8A	18 sec	18 sec
FF2164B SN1684457 E3	Comments:					
FF2164C SN1684393 E4	MTO 22E	4.8A	4.8A	3 x 4.8A	18 sec	18 sec
FF2164D Spec I.G Centrifuge E5	Comments:					
Spare E6	MTO 22E	4.8A	4.8A	3 x 4.8A	18 sec	17.5 sec
Spare E7	Comments: No fuses, No Thermal O/L relay					
Spare E8	Comments:					
Spare E9	Comments: No fuses, No Thermal O/L relay					
Feeder to Inverters E10	Comments: No Thermal O/L relay					
FP2178 Coolant Circulation Pump E11	Comments: Unable to test Thermal O/L relay					
Spare E12	Mto 15/28A	1.9A	1.9A	3 X 1.9A	Not available	23.6 sec
Spare F1	Comments: No fuses, No Thermal O/L relay					
FM2111 ETH Feed Agitator F2	Comments: No Access / Pad locked					
FM2131 ETH Feed Agitator F3	Comments: No Access / Pad locked					
FM2151 ETH Feed Agitator F4	Comments: No Access / Pad locked					
FP12082 C.I.P Recirc Pump F5	MTO 15/28	12A	12A	3 x 12A	30 sec	No Trip
FP12082 C.I.P Recirc Pump 1 F6	Comments:					
FP2 2082 C.I.P Scavenge Pump 1 F7	MTO 15/28	15A	15A	3 x 15A	35 sec	14 sec
Space F8	Comments:					
Spare F9	Comments: Contactor Missing					Not Tested
Space F10	Comments:					
Space F11	Comments:					
Spare F12	Comments: No O/L Relay					
Spare F13	Comments: No Fuses, No O/L Relay					
FP2 2082 C.I.P	MTO 15/28	17A	17A	3 x 17A	Not available	26 sec

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Scavenge Pump 2 G1	Comments:					
FP4 2082 C.I.P Scavenge Pump 3 G2	MTO 15/28	15A	15A	3 x 15A	Not available	8 sec
FP7 2082 C.I.P Chlorine Inj Pump G3	Comments: Faulty Reset, Faulty MC5 GEC Contactor					
FP7 2092 C.I.P Chlorine Inj Pump G4	MTO 15/28	0.7A	0.7A	3 x 0.7A	Not available	No Results
FP2 2092 C.I.P Chlorine Inj Pump 1 G5	Comments: Faulty Reset, Faulty MC5 GEC Contactor					
FP3 2092 C.I.P Chlorine Inj Pump 2 G6	MTO 15/28	15A	15A	3x 15A	Not available	25 sec
FP4 2092 C.I.P Scavenge Pump 3 G7	MTO 15/28	16A	16A	3 x 16A	18 sec	19 sec
Spare G8	Comments: No Protection					
Space G9	Comments:					
FM2302 Agitator G10	MTO 15/28	7A	7A	3 x 7A	Not available	15 sec
	MTO 15/28	4A	4A	3 x 4A	Not available	16 sec
FM2311 Agitator G11	Comments:					
	MTO 15/28	15A	15A	3 x 15A	Not available	15 sec
FM2081A COHN V STR1 Agitator H1	MTO 15/28	12A	12A	3 x 12A	Not available	12 sec
	Comments:					
FM2081B COHN V STR1 Agitator H2	Comments: No Tests Required					
FM20810 COHN V STR1 Agitator H3	Comments: No Tests Required					
FM2085A COHN V STR2 Agitator K1	Comments: No Tests Required					
FM2085B COHN V STR1 Agitator K2	Comments: No Tests Required					
FM2085C COHN V STR1 Agitator K3	Comments: No Tests Required					
FM2091A COHN V FR3 Agitator J1	Comments: No Tests Required					
FM2018 COHN V FR3 Agitator J2	Comments: No Tests Required					
FM2091C COHN V FR3 Agitator J3	Comments: No Tests Required					
Unusable L1	Comments: No Tests Required					
Page 18 of 21 Spare						

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Switchboard Ref:	MCC 1		
Tested by:	M.Kada, K Daneshyar	Signature:	

L2	<i>Comments: No Tests Required.</i>					
FM2241 Agitator L3	<i>Comments: No Tests Required</i>					
FM2025A CRYO Agitator M1	<i>Comments: Padlocked, No access</i>					
FM2025B CRYO Agitator M2	<i>Comments: Padlocked, No access</i>					
FM2112 ETH. Feed Pump M3	MTO 15/28	3.2A	3.2A	3 x 3.2A	18 sec	13 sec
	<i>Comments:</i>					
FM2132 ETH. Feed Pump M4	MTO 15/28	3.2A	3.2A	3 x 3.2A	18 sec	15 sec
	<i>Comments:</i>					
FP2152 ETH. Feed Pump M5	MTO 15/28	3.2A	3.2A	3 x 3.2A	18 sec	15 sec
	<i>Comments: Sticky Relay</i>					
Space M6	<i>Comments:</i>					
FM2241 Agitator M7	MTO 15/28	3.3A	3.3A	3 x 3.3A	Not available	15 sec
	<i>Comments:</i>					
FP2098 Defrost Pump M8	MTO 15/28	6A	6A	3 x 6A	Not available	15 sec
	<i>Comments:</i>					
Non-Essential Contactor M9	<i>Comments: No Thermal O/L Relay</i>					
FP1 2412 C.I.P Scavenge Pump N1	MTO 15/28	15A	15A	3 x 15A	Not available	25 sec
	<i>Comments:</i>					
FP1 2412 C.I.P Vessel Wash Pump N2	MTO 15/28	14.5A	14.5A	3 x 14.5A	Not available	29 sec
	<i>Comments:</i>					
FP7 2412 C.I.P Dosing Pump N3	MTO 15/28	12A	12A	3 x 12A	Not available	No Test
	<i>Comments: Faulty MC5 GEC Contactor, Fuses found to have blown, Now replaced</i>					
AZ2403 Cabinet Washer N4	<i>Comments: Padlocked, No Access</i>					
AZ2404 Tunnel Washer N5	<i>Comments: Padlocked, No Access</i>					
ED2401 Hot Air Oven N6	<i>Comments: NO Thermal O/L</i>					
FF2321 DEAE Centrifuge N7	<i>Comments: Blown 6 Amp Control fuse, Faulty contactor</i>					
Space N8	<i>Comments: NO Thermal O/L</i>					
Space N9	<i>Comments: NO Thermal O/L</i>					
Spare N10	<i>Comments: NO Thermal O/L</i>					
FF2324 DEAE Centrifuge P1	<i>Comments: NO Thermal O/L</i>					
DB1 / P6 P2	<i>Comments: NO Thermal O/L</i>					
Spare P3	<i>Comments: NO Thermal O/L</i>					
Distribution Board DB1 / P3	<i>Comments: NO Thermal O/L</i>					

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Schneider Project No.:	<i>WO-01858049</i>	Date of Visit:	<i>06/01/2017</i>
Switchboard Ref:	<i>MCC 1</i>		
Tested by:	<i>M.Kada, K Daneshyar</i>	Signature:	<i>P.P. N. W.A.L.</i>

<i>P4</i>						
<i>Unusable P5</i>	<i>Comments: NO Thermal O/L</i>					
<i>Unusable P6</i>	<i>Comments: NO Thermal O/L</i>					
<i>Unusable P7</i>	<i>Comments: NO Thermal O/L</i>					

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