



SERVICE REPORT: UPS

Ticket Number: 3830489

Date: 7/6/2020

Customer: MBARI

Customer Contact: Craige Dawe

E-mail: dacr@mbari.com

Owner: Mbari

Site Address: 7700 San Holdt Road
Moss Landing Ca 95039

Tag Number: 1993949

Equipment Model / ID: EPD70/24KVA PLUS

Equipment Serial Number: B214349

Customer Equip. ID:

Customer: MBARI

Owner: Mbari

Site Contact: Craig Dawe
Site Contact Email: dacr@mbari.com

Site ID: 117856
Visit Date: 7/6/2020 9:13:30 AM
Ticket No. 3830489
Tag No. 1993949

Attending Engineer: Suprato, Alex

Site Address: 7700 San Holdt Road
Moss Landing Ca 95039

Equipment Details / Status

Manufacturer: Chloride
Model: EPD70/24KVA PLUS
Type: EDP70 plus
Serial No. B214349

Client Equipment ID:
Client System ID: 117856
Installed Date:

Visit Summary (PMV Annual)

Pre-work Employee Health & Safety (EHS) Assessment: Yes, no hazards

Identified Hazards & Required Corrective Actions:

	
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Operational Status

On Arrival: Unit online - no alarms/faults apparent

On Departure: Unit is online & fully operational.

	Required	Complete	Status		Required	Complete	Status
Environmental	●	✓	●	UPS Bypass	●	✓	●
UPS Mechanical	●	✓	●	DC Source Mechanical	●	✓	●
UPS Power Circuits	●	✓	●	DC Source Output	●	✓	●
UPS Control	●	✓	●	Communications/Life Services	●	●	●
Measurements & Op. Testing	●	✓	●				

Limited Life: Capacitors ●

Fans ●

Unit Accessibility: Unit fully accessible

Findings and Recommendations:

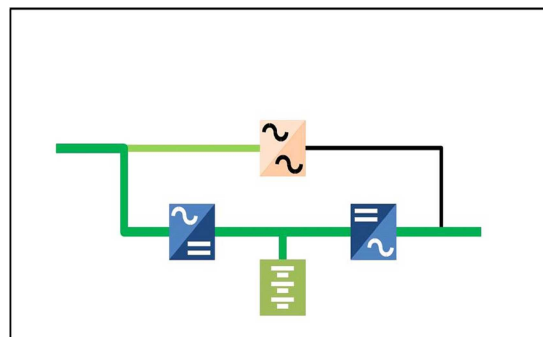
Performed annual preventive maintenance on EPD70 UPS; no discrepancy found at this time.

Required Customer Actions:

None

Unit Details / Configuration

System Name
 Model
 Serial Number
 Rating kVA kW A
 Nominal Voltage v
 Unit Configuration
 DC Source Ah @ h
 Battery Capacity
 No. Strings Jars per string



Environmental

Unit Room Temperature °C ☒ Battery Ambient Temperature: Max. ☒ Min. °C ☒
 Unit Ventilation Sufficient ☒ Battery Ventilation Sufficient: ☒
 Unit Clean/Free of Debris ☒ Battery Clean/Free Of Debris ☒
 Check posts, lugs, and interconnect bar ends for anti-corrosive application ☒

UPS Mechanical

Customer permission to perform offline checks
 Tightness of accessible nuts, bolts, and terminals ☒ Compromised wire insulation ☒
 Installed cables & wires are secure ☒ Evidence of broken, damaged or stressed components ☒
 Capacitors visual condition ☐ Fan Guards ☒
 Fan visual condition ☐ Fans operation ☒
 Earth to Neutral Voltage v ☐ Air Filters ☐

UPS Power Circuits

Clear foreign material & dust ☒ PCB heat damage ☒
 Accessible power connections are secure ☒ Plugs and sockets are secure ☒
 PCB switch, jumpers & headers positions ☒ Power/control circuit fuses (UPS, battery, MBC) ☒

Activity Progress:

☒ Not Started ☒ Completed ☒ Started and on-going ☒ N.A. - Not Applicable

Status of the Functional Assembly:

☒ Normal - fully operational - no action required ☒ Issue - not operational - action required ☒ Urgent warning - still operation but high risk - recommended to take urgent action
☒ Normal after change - fully operational but after a modification - no action required ☒ Safety Issue - operational/not operational with a safety risk - action required/mandatory ☒ Warning - still operational but potential risk - recommended to take action

UPS Control

Before Visit

Faults ☒

Alarms ☒

After Visit

☒

☒

Metering (check calibration)

Display Functionality & Accuracy ☒

Date/Time & Int. Clock ☒

Keyboard / touchscreen function ☒

Total Number Of Mains Failures:

Total Time of Mains Failures (hh:mm:ss)

Fan Life Alarm: Hours Remaining Hrs

Battery Time Remaining: mins

Measurements & Operational Testing

Input Measurements

Voltage (Ph-Ph)

A-B	B-C	C-A
207	208	208

 v

Frequency Hz

Current

A	B	C
8	6	5

 A

Voltage (Ph-N)

A-N	B-N	C-N

 v

DC Measurements

DC Voltage v

Battery Charge Current A

Output Measurements

Voltage (Ph-Ph)

A-B	B-C	C-A
209	209	208

 v

Frequency Hz

Current

A	B	C
11	8	11

 A

Power Factor

A	B	C
0.69		

Real Power

A	B	C

 kW

Load level (kW)

A	B	C

 %

Total kW

Faults

Voltage (Ph-N)

A-N	B-N	C-N
120	121	121

 v

Apparent Power

A	B	C
1.9	1.8	16

 kVA

Load level (kVA)

A	B	C
23.8	22.5	200

 %

Total kVA

Measurements & Operational Testing

AC Filter Measurements

Input Filter Current A B C A

Output Filter Current 8 8 7 A
 High Freq. Filter Current A

Operational

Customer permission to carry out operational tests Customer gave full permission for testing

Transfer Tests

	Status	Explanation	Normal Config Stat	Battery Stat	Final Stat
To Internal Bypass	●				
To Static Bypass	●				
To Inverter	●				
	Status	Explanation	Normal Config Stat	Battery Stat	Final Stat
s/source failure test	●				

Function

	Status	Explanation
External Bypass Interlock Functioning	●	
Remote Alarm(s) Work	●	
Mains Fail Alarms Operational:	●	

Operation

	Status	Explanation
With customer's load	●	
On Generator	●	
With ATS	●	
With STS	●	
With LBS	●	

Legend (One-Line Diagrams):

Bus, De-energized	Bus, Energized, Not Supporting Critical Load	Bus, Energized, Supporting Critical Load
Static Switch, De-energized	Static Switch, Energized, Not Supporting Critical Load	Static Switch, Energized, Supporting Critical Load
Rectifier, De-energized	Rectifier, Energized, Not Supporting Critical Load	Rectifier, Energized, Supporting Critical Load
Battery, Disconnected	Battery, Connected, Not Supporting Critical Load	Battery, Connected, Supporting Critical Load
Inverter, De-energized	Inverter, Energized, Not Supporting Critical Load	Inverter, Energized, Supporting Critical Load
Bypass Contactor, De-energized	Bypass Contactor, Energized, Not Supporting Critical Load	Bypass Contactor, Energized, Supporting Critical Load

UPS Bypass

Voltage (Ph-Ph) v
 Frequency Hz
 Current A B C A

Voltage (Ph-N) v
 A-N B-N C-N

DC Source Mechanical

Connection tightness ☒
 Verify no ground fault exists ☒

Battery cracks, leakage & corrosion ☒
 Battery blocs/strings condition ☒
 Battery Electrolyte Level ☐

Condition

Battery Monitoring ☐

DC Source Output

Operational

Voltage at End of Discharge v

Charge Current Limit A

Automatic battery test ☐

Recent tests completed without problems ☐

Customer permission to perform "manual" autonomy tests

Autonomy Demonstration mins

Load on UPS kVA

Room Temp during test °C

Conclusion ☐