



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति



Eastern Regional Power Committee

14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता-700033

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NO. ERPC/Op/SCADA/2022/ 193

DATE: 09.05.2022

To,

As per list enclosed.

Sub: Minutes of Special Meeting on issues related to M/S Chemtrols held on 26.04.2022(Tuesday) at 10:30 AM at ERPC Conference Hall, Kolkata

Sir,

Please find the minutes of the **Special meeting on issues related to M/S Chemtrols held on 26.04.2022(Tuesday) at 10:30 AM at ERPC Conference Hall, Kolkata** available at ERPC website (<http://www.erpc.gov.in/>).

Observations, if any, may please be forwarded to this office at the earliest.

Regards,

Yours faithfully,

(A.De)
09.5.22

(A.De)

Executive Engineer(Operation)

LIST OF ADDRESSES:

1. CHIEF ENGINEER (ULDC), BSPTCL, PATNA, (FAX NO. 0612-2504557/2504937)
2. DY. GENERAL MANAGER, (ULDC), JUSNL, RANCHI (FAX NO. -0651 -2490486/2490863)
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4. CHIEF ENGINEER, CLD, WBSETCL, HOWRAH, (FAX NO. 033-26886232)
5. CHIEF ENGINEER, COMMUNICATION, WBSETCL, SALT LAKE (FAX NO.: 033-23591955)
6. CHIEF ENGINEER, SLDC, DVC, HOWRAH (FAX NO. 033-2688-5094)
7. ADDL.CHIEF ENGINEER, SLDC, POWER DEPT. , GOVT. OF SIKKIM, GANGTOK, (FAX NO. 03592-228186/201148/202284)
8. CHIEF ENGINEER, SLDC, DVC, MAITHON
9. EXECUTIVE DIRECTOR, ERLDC, POSOCO, KOLKATA, (FAX NO. 033-2423-5809)
10. EXECUTIVE DIRECTOR, POWERGRID, ER-II, KOLKATA, (Fax no: 033-23572827)
11. EXECUTIVE DIRECTOR, POWERGRID, ER-I, PATNA, (FAX NO.0612-2531192)
12. EXECUTIVE DIRECTOR, POWERGRID, ODISHA PROJECTS, SAHID NAGAR, BHUBANESWAR - 751 007
13. CHIEF ENGINEER (COMMUNICATION), DVC TOWER, CIT SCHEME VII M, ULTADANGA, KOLKATA, WEST BENGAL 700067.
14. SHRI THYAGARAJ RAMACHANDRAN, DIRECTOR (INTERNATIONAL OPERATIONS), M/S OPEN SYSTEMS INTERNATIONAL, INC. 4101 ARROWHEAD DR. MEDINA, MINNESOTA, USA 55340-9457
15. SHRI ANISH RAJGOPAL, DIRECTOR, M/S CHEMTROLS INDUSTRIES PRIVATE LIMITED, AMAR HILL, SAKI VIHAR ROAD, POWAI, MUMBAI – 400 072

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Minutes of Special Meeting held on 26.04.2022(Tuesday) at 10:30 AM on Issues related to M/S Chemtrols

Member Secretary, ERPC chaired the meeting. List of participants is enclosed at **Annexure-A**.

ITEM NO. B.1: Renewal of expired license in internal and external firewalls in SCADA/ EMS at ERLDC MCC and BCC.

Firewalls, which are installed in SCADA/EMS system, are the key device to protect system from intrusion from cyber space.

Life of the external firewall i.e Check point 4200 is going to end by June 2022. So, the ERLDC SCADA system is going to be highly vulnerable to cyber security threat thereafter. ERLDC is in receipt of high cyber security alert form MHA, as well as recommendation for implementation of various policies from CERT-IN / NCIIPC to safeguard the system from cyber-attack.

On repeated persuasion from our end M/S Chemtrols had proposed PA 440 Firewall which is not meeting the approved DRS.

As per the guidelines of CEA (Cyber Security in Power Sector) Guidelines 2021, an Intrusion Detection System, and Intrusion Prevention System should be capable of identifying behavioral anomaly in both IT as well as OT Systems.

M/S Chemtrols may update.

Deliberation in the meeting

ERLDC representative submitted that the proposed PA 440 Firewall by M/s Chemtrols does not meet the approved DRS. They further informed that there are few deviations in PA 440 firewall from standards which are as follows –

- *Concurrent user number as per existing Firewall is 1.2 million however Concurrent user number as per PA 440 firewall is 0.2 million*
- *It is clearly mentioned in specification that PA 440 Firewall can be used only for small offices and not for medium or large offices.*
- *VPN Throughput is 250 mbps in PA 440 firewall instead of 400 mbps as per existing firewall.*
- *Firewall Throughput is 2.4 gbps in PA 440 firewall instead of 3 gbps as per existing firewall.*

On query from ERPC regarding make and model of firewall to be supplied and installed, ERLDC representative submitted that as per contract with M/S Chemtrols, firewalls of any make and model, meeting specifications as per DRS need to be supplied. ERLDC further added that firewalls like PA 3220 or Check point 5400 may be supplied by M/s Chemtrols as these firewalls meet the required specifications.

M/S Chemtrols representative submitted that they had supplied checkpoint 4200 firewall in past which can work in active – active mode but due to limitation in system architecture, only active- passive mode was utilized by ERLDC. For this very reason, they are planning to supply PA 440 firewall to ERLDC as it can work only for active passive mode and system security requirement will be satisfied in less cost. He further added that SCADA system at ERLDC can not work in active-active mode; therefore, supply of such type of firewall would not provide any benefit to the system.

ERLDC representative submitted that in order to improve redundancy of system in web- client and

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similar issues, active-active mode of operation of firewall is beneficial and it can be implemented at ERLDC SCADA system also.

Powergrid representative submitted that as per the contract, M/S Chemtrols needs to provide updated version of firewall to concerned utilities or in case of supplying firewall of active- passive mode, balance cost needs to be reimbursed.

MS ERPC opined that as per the contract, M/S Chemtrols need to provide updated version of firewall to concerned utilities.

M/S Chemtrols representative submitted that specifications of firewall as per approved DRS would be shared to ERLDC by 10th May 2022.

ITEM NO. B.2: Failure of 40KVA UPS/Battery Back up at ERLDC

It is observed that the 40 KVA UPS & battery Banks installed at ERLDC (by M/s Chemtrols Industries Ltd.) had failed to provide Backup supply during raw power failure (CESE supply) at 11.56 hrs on 17.11.21 at ERLDC which had resulted in power supply failure in the VPS and other associated equipment installed in control room of ERLDC MCC.

An emergency meeting was held on 18.11.2021 between ERLDC & M/s Chemtrols. Representative of M/s Chemtrols informed that replacement of battery bank is required.

A review meeting with Director of M/s. Chemtrols was held on 25.11.2021 wherein M/s Chemtrols informed that purchased order will be placed for supply of 01 Set of Battery bank for ERLDC MCC and subsequently supply and installation commissioning of the replaced battery bank would be completed progressively by 31st January 2022 however, battery bank is yet to be supplied.

M/S Chemtrols may update.

Deliberation in the meeting

M/S Chemtrols representative informed that dispatch of battery bank is scheduled on 30.04.2022 and it would take 7-10 days to reach at ERLDC Office and it would take another 2-3 days for installation on receipt of the same. So, commissioning of battery bank would be completed by 15th May 2022.

ITEM NO. B.3: Improper Support from M/S OSI , OEM OF SCADA Application

ERLDC SCADA/EMS system was installed in Eastern Region and OSI Monarch application is being used as core SCADA/EMS applications.

In ERLDC SCADA/EMS system, several functionalities of SCADA/EMS system are not functioning in SCADA/EMS system, for which support is required from OEM i.e. OSI.

Followings are the few lists of such critical functions:

1. BMR (bare metal recovery) on Spare server: license is required from OSI.
2. Denial of support from OSI support team when it is required to resolve OSI application related issues.
3. Restoration of Data archival in HRS application for the period w.e.f 00:00 Hrs dated 01-04-2021 to 03:00 Hrs dated 02-04-2021.

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M/S OSI may update.

Deliberation in the meeting

M/S OSI representative was not available in the meeting.

ERLDC representative informed that they are facing several issues with M/S OSI that are already listed; however, they are not getting any support from them.

M/S Chemtrols representative informed that as per their communication with M/S OSI, service level agreement (SLA) duly signed by POSOCO is required by M/S OSI.

ERLDC representative submitted that they do not have any issue in signing the SLA and for that M/s OSI has to visit ERLDC office at Kolkata. ERLDC further added that M/S OSI representatives have not been attending the meetings too.

Member Secretary, ERPC mentioned that a letter would be given to M/S OSI from ERPC regarding their absence in TeST Meetings and the special meeting. He further informed that strict action would be taken against M/S OSI if proper support is not provided to ERLDC by them.

ITEM NO. B.4: Malfunctioning of RGU: ERLDC

The Report Generation Utility plays a crucial when it comes to historical data extraction and preparation of important reports pertaining to ERLDC System Operation.

The RGU excel add-in provided in the SCADA Consoles of ERLDC Control Room is malfunctioning since last few months which is affecting the post-dispatch report preparation.

The matter has been intimated to the concerned Chemtrols but the issue yet to be resolved.

M/S Chemtrols may update.

Deliberation in the meeting

M/S Chemtrols representative informed that issue with RGU functionality would be solved by 15th May 2022.

ITEM NO. B.5: Nonfunctioning of Deep Security: ERLDC

Trend micro deep security solution is very critical for SCADA system for security in Cyber Space as this is designed to protect External DMZ and Internal DMZ zone. However, Trend Micro Deep security application is not working in ER SCADA/EMS and the matter was taken up with M/S Chemtrols on several occasions bur the matter is yet to be resolved.

M/S Chemtrols may update.

Deliberation in the meeting

M/S Chemtrols representative informed that Non-functioning of Trend micro deep security non functioning would be sorted out by 10th May 2022.

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ITEM NO. B.6: Nonfunctioning of Kiwi Syslog Server Application (for centralized log monitoring)

In ERLDC SCADA project, Kiwi Syslog Sever was installed in the system for centralized monitoring of system logs. However, this application is not currently working, and the matter was taken up with M/S Chemtrols on several occasions however this matter is yet to be resolved.

M/S Chemtrols may update.

Deliberation in the meeting

M/S Chemtrols representative informed that Non-functioning of Kiwi Syslog Sever would be sorted out by 30th April 2022.

ITEM NO. B.7: Issues related to M/S Chemtrols - DVC

- As per Cyber security guide lines, biannual cyber audit should be conducted at each SLDC, one by respective SCADA AMC vendor i.e Chemtrols and another by own arrangement of DVC. However due to delayed processing of audit procedures and thereafter delayed compliance of report, the schedule to conduct the second audit could not be finalized. It is hereby informed that last audit was completed on 11/03/22 but till today the audit report had not been submitted by M/S Chemtrols.
- No spares are available for day-to-day maintenance work with M/s Chemtrols. One SMPS for VPS and one SMPS for RVDU at Howrah SLDC are urgently required for which several communications had been made but no fruitful action had been taken by M/S Chemtrols.

M/S Chemtrols may update.

Deliberation in the meeting

Regarding compliance of cyber security audit, M/S Chemtrols representative informed that report would be provided by 30th May 2022.

Regarding SMPS, M/S Chemtrols representative informed that SMPS would be delivered by 1st week of May'2022 to given locations.

Regarding UPS, M/S Chemtrols representative informed that UPS would be delivered by May'2022.

ITEM NO. B.8: Rectification of faulty UPS: JUSNL

Due to fault in UPS at SLDC, SCADA/ EMS system got severely interrupted on several occasions. At present only one UPS (UPS-1) is in working condition and the other UPS (UPS-2) had become faulty and is not in working condition. Several requests have been made to M/s Chemtrols for its rectification however, neither the issues have been rectified nor any response is being received from M/s Chemtrols.

In 10th TeST Meeting, M/S Chemtrols representative informed that a meeting was held between Managing Director, Chemtrols and Chief Engineer, JUSNL on 28th October 2021 and it was deliberated

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that faulty UPS would be rectified by December 2021.

JUSNL representative informed that several issues are being faced with SCADA/EMS system due to faulty UPS at SLDC. JUSNL requested M/S Chemtrols to rectify faulty UPS by 15th Nov 2021.

TeST Committee advised M/S Chemtrols to expedite the rectification work.

M/S Chemtrols may update.

Deliberation in the meeting

JUSNL representative was not available in the meeting.

M/S Chemtrols representative informed that rectification work of UPS will be completed by June'2022

ITEM NO. B.9: Replacement of Battey Bank.

JUSNL has already given approval to M/s Chemtrols for replacements of battery bank at SLDC vide letter no. 89 SLDC, Ranchi; dated 11.06.2021. In the 9thTeST meeting, M/s Chemtrols assured to replace the battery bank by the end of September 2021. However, replacement has not been done yet. Further, even after several correspondences made vide letters and e-mails for getting status of replacement work, M/s Chemtrols has not reverted back.

In 10th TeST Meeting, M/S Chemtrols representative informed that the issue got delayed due to insufficient fund, however, it is expected that fund would be received by Nov'2021 and the battery bank would be replaced by Dec 2021.

M/s Chemtrols may update.

Deliberation in the meeting

JUSNL representative was not available in the meeting.

M/S Chemtrols representative informed that backup/additional battery bank had been already supplied to JUSNL.

ITEM NO. B.10: Non-availability of Spare Materials.

Spare materials required for attending faults at GSS and at SLDC are unavailable with M/s Chemtrols personnel deputed at SLDC Ranchi. In this regard request has been made to M/s Chemtrols vide e-mail dated 28.09.2021 enlisting details pertaining to material requirements at different GSS and at SLDC Ranchi. However, arrangement for making available these materials had not been done yet.

In 10th TeST Meeting, M/S Chemtrols representative informed that the issue got delayed due to insufficient fund, however, it is expected that fund would be received by Nov'2021 and spare materials would be provided by Dec 2021.

M/s Chemtrols may update.

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Deliberation in the meeting

JUSNL representative was not available in the meeting.

M/S Chemtrols representative informed that spare materials are being supplied in phased manner.

ITEM NO. B.11: Issues of M/S Chemtrols by BSPTCL

1. Issues Related to M/s Chemtrols

➤ PENDING CRITICAL ISSUES

- a) Compliance Report of Cyber Security Audit of 2021 is pending.
- b) VCS is not working February 2020.
- c) Battery bank- 2 and display unit of UPS -2 is defective since 24th May 2021.
- d) Both Phase sequence corrector is defective since 19th May 2021 and 4th April 2022.
- e) Charger of battery (150 AH) of DG Set is defective since 15th May 2021.
- f) Both graphic card of controllers of VPS is Defective since 20th April 2021.
- g) One No. of External Firewall SMPS Defective since 15th January 2021.
- h) GPS Antenna is defective since December 2020.
- i) Fifteen no. of Server Fan is defective since August 2020.
- j) One No. of 900 GB SAS card is defective since 15th April 2022.

➤ General/Other ISSUES

- a) Integration of new bay:-
As per AMC contracts Chemtrols has to integrate 50 nos. of new bays in to RTU and the work is still pending since long.
- b) The following materials are faulty which are required to be replaced at the earliest:
 - MFT – 20 pcs
 - Node –30 Pcs
 - Decode Modem- 10 pcs
 - DI Card- 10 Pcs
 - DO Card- 03 Pcs
 - Ethernet Card- 02 Pcs
 - Mini DP to DVI Cable – 04 Pcs
 - Two No. of Dell Monitor is faulty at GSS Lakhisarai and Masaudhi and handed over to M/s Chemtrols since last one year.
- c) One no. of SCADA Workstation and one no. of DTS Workstation are defective since 05.11.2020.
- d) SCADA Data explorer showing error: "Not connected to Data Explorer Adaptor" since May 2020.
- e) MP 2355 RICOH printer is defective since November 2020.
- f) LDMS– 40 no. of LDMS is not working due to various issues which is attached at **Annexure B11**.

List of defective materials sent to M/s Chemtrols but yet not handed over to BSPTCL:

- Node –17 Pcs
- DI Card- 10 Pcs

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- DO Card- 03 Pcs
- Ethernet Card- 02 Pcs
- CPU at GSS Sheikhpura handed over to your representative.

M/S Chemtrols may update.

Deliberation in the meeting

Regarding compliance of cyber security audit, M/S Chemtrols representative informed that report would be provided by 30th May 2022.

Regarding VCS, M/S Chemtrols representative informed that cable needed for installing VCS had been found damaged and he requested BSPTCL to provide cable or provide additional cost to M/S Chemtrols in order to install VCS.

ERPC advised BSPTCL and M/S Chemtrols to resolve the issue bilaterally.

Regarding LDMS issue, M/S Chemtrols representative informed that issue had been rectified at certain substations as per the given list.

ERPC advised M/S Chemtrols to provide updated list of LDMS to ERPC.

ERPC advised M/S Chemtrols to solve all pending issues at the earliest.

ITEM NO. B.12: Implementation of Automatic Demand Management System

A. Non-working of ADMS logic.

Deliberation in the meeting

BSPTCL representative informed that logic of ADMS is not functioning and in order to operate breaker, manual operation needs to be done every time.

M/S Chemtrols representative informed that logic operation is working satisfactorily for ADMS operation; however, request for testing the logic for ADMS would be given to BSPTCL by 26th April 2022.

BSPTCL representative submitted that permission would be provided by them to conduct test once request is received from M/S Chemtrols.

ITEM NO. B.13: Agenda from WBSETCL

- A. Replacement of 2nd battery band at SLDC Howrah.
- B. Return of all Nodes taken by M/S Chemtrols of repairing.

Deliberation in the meeting

Regarding battery bank at SLDC Howrah, M/S Chemtrols representative informed that battery bank

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would be supplied by 15th June 2022.

Regarding Nodes, M/S Chemtrols representative informed that nodes taken by them would be returned by end of June 2022.

ITEM NO. B.14: Extension of SCADA/EMS contract from 2023 to 2025 as per rated terms and conditions

Existing AMC contract for SCADA/EMS System of ERLDC and Eastern Region Constituents is going to end on 31st March 2023. Upgradation package of existing SCADA/EMS System is in Pre-NIT Stage & it is expected to take another 2-3 years to complete the Upgradation process. Therefore, extension of existing AMC contract with M/s Chemtrols is required for continuation of the existing contract. It is proposed to extend the present contract till March 2025 with the same rate & terms As per the Clause No .X of the LOA so that Grid Operation doesn't get affected.

Deliberation in the meeting

ERLDC representative informed that SCADA/EMS contract with M/S Chemtrols is going to expire by March 2023. ERLDC further added that it would take another 2 to 3 years to implement phase III SCADA upgradation work by Powergrid; therefore, extension of AMC contract with M/S Chemtrols is required for continuation of the existing contract.

On query from MS ERPC regarding the status of phase III SCADA upgradation work, Powergrid representative submitted that approval from ERPC Meeting is required, in order to proceed further. MS ERPC informed that necessary amendment would be done in minutes of 45th ERPC Meeting so that Powergrid can proceed further for implementation of project. He further advised Powergrid to complete the work by March 2023.

Powergrid representative added that board meeting of Powergrid is going to be held in the 1st week of May'2022; so implementation work for this project would be started after taking approval from board meeting. Powergrid further informed that they would try to complete upgradation work of SCADA in least possible time; however, minimum one year extension of SCADA/EMS contract with M/S Chemtrols will be required as there are different works like quality inspection etc which would take time.

During the deliberation it was emerged that as per contract with M/S Chemtrols, it is clearly mentioned that employer may extend contact for 2 years as per the same rate and terms & conditions.

M/S Chemtrols representative submitted that contract can be extended only if additional maintenance cost is provided to M/S Chemtrols. He further added that additional cost needs to be paid for any hardware replacement.

Powergrid representative submitted that as per the contract, once employer wants the extension of AMC contract, M/S Chemtrols has to abide by that without any financial implications.

No Consensus could be arrived at regarding extension of the contract.

Annexure A

Participants in Special Meeting on Issues related to M/S Chemtrols

Date: 26.04.2022 (Tuesday)

Venue: ERPC Conference Hall, Kolkata

Time: 10:30 hrs

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
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19	Khitesh K. Prushti	PKCIL (SRGM)	8393882717	kkp@powergrid.in	
20					

"Coming together is a beginning, staying together is progress, and working together is success." -Henry Ford

Issue of LDMS, Inverter in BSPTCL

Annexure B11

S.No.	SITE NAME	ISSUE	REMARKS
1	Aurangabad	LDMS not getting ON	Inverter and SMPS issue
2	Banjari	Inverter of LDMS Issue	Invertor Faulty
3	Banka	LDMS displaying mismatched data.	Meerkat Software Issue
4	Begusarai	Inverter Issue	
5	Bettiah	Inverter Issue	Inverter faulty
6	Chapra	Inverter Issue	Inverter faulty
7	Dalsinghsarai	CPU Issue	inverter and SMPS issue
8	Dhaka	Meerkat software Issue	Meerkat software Issue
9	Goh	Meerkat Software Issue. Data is not displaying on SLD	Inverter faulty
10	Jagdishpur	Power Supply of Inverter not working	Inverter faulty
11	Jahanabad	Inverter Issue	Inverter faulty
12	Jainagar	CPU Issue.	
13	Jandaha	LDMS and Inverter issue.	Inverter faulty
14	Kahalgaon	LDMS and Inverter issue.	Inverter and SMPS issue
15	Karmanasa	Keyboard and Mouse of LDMS Faulty.. Modbus faulty only data of 33 KV is reporting.	Node Unhealthy and inverter issue
16	Kataiya (kosi)	LDMS Monitor Issue	inverter and SMPS issue
17	Katihar	Inverter faulty, UPS faulty	inverter and SMPS issue
18	Kishanganj Old	RTU & SMPS issue	SMPS issue
19	Kochas (Dinara)	LDMS not getting ON	
20	Kusheshwar Asthan	Inverter Issue	
21	Madhepura	LDMS Issue	
22	Madhubani	Inverter Issue	Inverter Issue
23	Masaudhi	Meerkat software Issue	Meerkat software Issue
24	Motihari	Battery Charger Issue	Battery Charger Issue
25	Pandaul	LDMS software issue	Meerkat corrupted
26	Phulparas	LDMS and Inverter issue	inverter and SMPS issue
27	Purnea	System restart with Blue Screen Error	
28	Rafiganj	LDMS monitor not getting ON	
29	Raxaul	Inverter & LDMS Issue	inverter and SMPS issue
30	Saharsa	Invertor Issue	Invertor Faulty

31	Samastipur	Meerket software Corrupted and Inverter Issue	Meerkat Software and Inverter Issue
32	Sheikhpura	HDD faulty, Front panel faulty	CPU handed over to M/s Chemtrols Representative
33	Sipara	Meerkat software Issue	Meerkat software Issue
34	Sitamarhi	LDMS CPU and Inverter Issue	Inverter and SMPS issue
35	Siwan	Inverter & LDMS Issue	Inverter and SMPS issue
36	Sonebarsa	CPU Issue	Inverter and SMPS issue
37	Sonenagar	Software not updated	Meerkat Software issue
38	Supaul	Meerkat software Issue	Meerkat software Issue
39	Valmikinagar	CPU issue	Inverter issue
40	Wazirganj	LDMS CPU Issue	LDMS not Starting (SMPS issue)