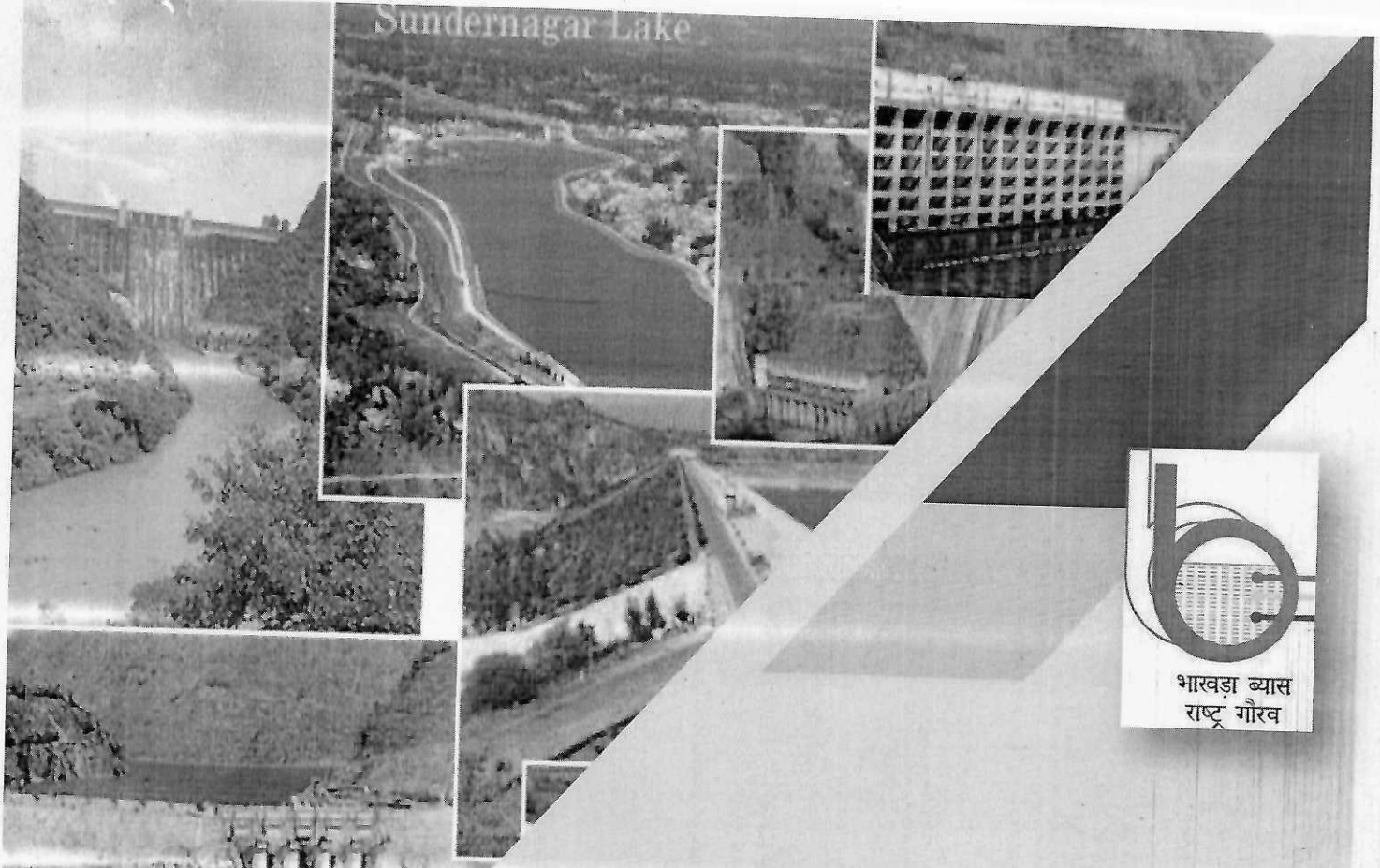


भाखड़ा ब्यास
राष्ट्र गौरव

BHAKRA BEAS MANAGEMENT BOARD
INFORMATION SECURITY MANAGEMENT SYSTEM MANUAL

IS/ISO/IEC 27001:2022

Plot No.6-B/C, Sector-19 B,
Madhya Marg, Chandigarh-160019
Phone: +91-172-5011773
Website:

भाखड़ा ब्यास
राष्ट्र गौरव

BHAKRA BEAS MANAGEMENT BOARD
An ISO 9001, 14001, 45001 Certified Board

INFORMATION SECURITY MANAGEMENT SYSTEMS MANUAL

IS/ISO/IEC 27001:2022

INFORMATION TECHNOLOGY — SECURITY TECHNIQUES — INFORMATION SECURITY MANAGEMENT SYSTEMS — REQUIREMENTS

COPY NO: -	**01**
ISSUE NO: -	**01**
DATE OF ISSUE: -	**08.08.2025**
REVISION NO: -	**01**
ISSUED TO: -	

Plot No. 6-B/C, Sector-19 B,
Madhya Marg, Chandigarh- 160019
Phone : +91- 172-5011773
Website: www.bbmb.gov.in

Section1-Documented Information

Document Title	Information Security Management Systems Manual- BBMB
Document Number	ISMS/M/01
Document Revision no.	01
Document Issue no.	0
Released Date	08- 08.2025
Document Owner	Central Management Representative (CMR) Chief Engineer /Transmission Systems
Controlled Copy No.	Controlled copy not for library
Document Status	Active
Document Revision Details	Refer to Change History Record

SIGN OFF MATRIX / DOCUMENT APPROVAL

	Name/Designation	SIGNATURE
Prepared By	Er. Shilpi Jain Assistant Director /TS	
Checked By	Er Harkiranjit Kaur Deputy Director	
Reviewed By	Er Satwant kaur Kahlon Director /P&D (TS)	
Approved By	Er. Manoj Tripathi Chairman, BBMB	
Issued By	Er. Surjeet Singh Chief Engineer/ Transmission System	

CONTENT LIST

REVISION STATUS SHEET

Sr. no.	Issue No.	Revision No.	Release Date	Section/Page # Changed	Details of Changes	Remarks
1.	00		23.06.2023		Initial ISMS/Manual	
2.	01	01	08.08.2025	Entire Document	This ISMS Manual is upgraded to ISO 27001: 2022	

MANUAL DISTRIBUTION LIST

SR.NO.	HOLDERS OF CONTROLLED COPY	COPY NO.
01	CE/TS/CMR	01
02	System Software Manager BBMB Chandigarh MR	02
03	Director Power Regulation BBMB Chandigarh MR	03
04	Director/ P&D(TS), Chandigarh MR	04
05	SE/ Bhakra Powerhouse Circle Nangal MR	05
06	Director/NHP, Chandigarh MR	06
07	Bureau of Indian Standards	07

Note:

CMR to issue 7 nos. copies as per above table, Further respective MR, whenever required, may issue controlled hard copies of this Manual and maintains a distribution log.

AUTHORISATION & STATEMENT OF INTENT

On behalf of the Management, the Chairman of, BHAKRA BEAS MANAGEMENT BOARD, has assigned the following personnel for the Information Security Management Systems (ISMS) as per requirements of IS/ISO/IEC 27001:2022 standards.

The Chairman is the Head of the BHAKRA BEAS MANAGEMENT BOARD. He is responsible for ensuring continuing suitability and effectiveness of Integrated Management System as documented in this manual.

The CMR has assigned the responsibility & authority for implementation, maintenance, and improvement of the Information security Management System.

August, 2025

CMR

GUIDE OF ISMS MANUAL

1.0 FOREWORD

This Information security Management Systems (ISMS) Manual describes the Information technology - Security techniques Information security management systems Requirements – adopted by BBMB. This Manual guides the user of the manual through various sections and detailed procedures / documents as relevant.

The ISMS manual has been formulated on the basis of ISO/IEC 27001:2022. This Section titled explains the Structure, Issue and Up-dation procedure of the ISMS Manual. This Manual and the information incorporated herein are the property of BHAKRA BEAS MANAGEMENT BOARD. It must not be reproduced in whole or in part or otherwise disclosed without prior consent in writing from BHAKRA BEAS MANAGEMENT BOARD.

2.0 STRUCTURE OF THE MANUAL

This ISMS Manual is structured as shown in the content pages of the Manual. Different sections have been arranged sequentially as per clause number of ISO/IEC 27001:2022. The Manual pages are numbered serially with page number indication. The current revision number and issue number on each page is also indicated. Revision no."00" has been given to first issue of the Section under the issue. This manual is available in English Language only.

3.0 MANUAL ISSUE PROCEDURE

The MR is authorized to carry out the activities of preparing, issuing, maintaining and up-dation of this ISMS Manual.

The distribution of the Manual and the amendment(s) are controlled and MR carries out this activity.

The Master Copy bears the signature of the approving and issuing authority in original. The Master Copy does not bear stamp of "Controlled Copy". The controlled copy of the ISMS Manual is released to all concerned as per the distribution list with red color rubber stamp as "CONTROLLED COPY". Copies of this manual, which are meant for others, are legibly photocopied from Master Copy, and bear no rubber stamp of "CONTROLLED COPY".

Additional copies of the Manual, required by external agencies if any, are issued by MR and such copies of the Manual are stamped with red color rubber stamp as "UNCONTROLLED COPY". These uncontrolled copies do not come under the purview of document amendment procedure and are not used within the BHAKRA BEAS MANAGEMENT BOARD, CHANDIGARH.

4.0 MANUAL REVISION AND UPDATION PROCEDURE

The ISMS Manual is reviewed periodically by the MR and concerned departments. No revision is implemented unless it has been approved and formally issued.

Each revision is introduced formally, by the MR by updating the manual for use of the personnel identified in the distribution list.

When revisions take place, the revisions are indicated by the revision number in each of the revised sections and are recorded in the Revision Status Sheet.

5.0 DOCUMENT NUMBERING SYSTEM:

The documents are coded uniquely for identification purpose.

6.0 ORIGINAL

Original Document is the one which is duly endorsed (signed) and authorized for use. The original Document will be used for generating "CONTROLLED COPY" and "UNCONTROLLED COPY", as required.

7.0 CONTROLLED COPY

Copy of the original is replaced with the updated version of the same after any revision / change is made to "ORIGINAL".

8.0 UNCONTROLLED COPY

The copy of the original which is not updated.

COMPANY PROFILE

PROFILE OF THE ORGANIZATION (BBMB)

1. Bhakra Beas Management Board (BBMB)

Bhakra-Nangal Project was taken up as a joint venture of states of erstwhile Punjab and Rajasthan. On re-organization of erstwhile Punjab State in 1966, 'Bhakra Management Board' was constituted on 1st October 1967 under Section 79 of Punjab Re-organization Act, 1966 for administration, maintenance, and operation of Bhakra-Nangal Project. Beas Construction Board was constituted under the Punjab Re-organization Act, 1966 for construction of Beas Project. 'Bhakra Management Board' was renamed as 'Bhakra Beas Management Board' (BBMB) w.e.f. 15th May 1976 after transfer of Beas Project on its completion by Beas Construction Board.

BBMB LAN/WAN system has been established for enabling IT related services i.e. Application Software Packages, Internet, Email, e-Office, Intranet etc. in various offices of BBMB. The total number of LAN/WAN users is various BBMB offices is approx. 900

2. Substation Automation System (SAS) and Remote-control Centre for BBMB Barnala & Sangrur substation

SAS and RCC for 220kVsubstation Barnala and Sangrur has been set up as first state of the art project for automation system for control, monitoring, measurement protection metering and communication function of 220kV BBMB Barnala S/stn. Its remote-control Centre has been set up at 220KV Sub Station Sangrur. This SAS system has also been provided at 220 kV S/stn Samaypur, Ballabhgarh, Hisar and Charkhi Dadri with RCC at Bhiwani and Chandigarh, which may have interconnection with SCADA at Chandigarh. It has been achieved by retro fitting of the existing equipment with new latest IEC 61850 compliant equipment like new IED's wherever required. It essentially consists of Bay Control Intelligent Electronics Devices for control and monitoring Station Human Machine Interface and DR workstation is provided to enable local station control via PC by means of HMI and control software package (Micro SCADA) by ABB which contain an extensive range of supervisory control and data acquisition (SCADA) functions. The server has been provided in hot and standby mode. DR workstation provided at the local station also perform the function of engineering workstation to achieve the change of Numerical relay setting, formation of PSL, extraction of DRs etc. of the Numerical relay installed on the panels in control room at Barnala substation. The uploading of DRs from numerical IED's to the DR cum Engineering workstation at local remote station is affected automatically.

One No. DR cum Engineering workstation is also provided at Remote Control Centre (RCC) at Sangrur Substaton to view event, records, DRs on demand from Barnala over Ethernet using existing FO network and for effecting relay parameterization, PSL etc. Redundant HMI i.e., Operator workstation at RCC Redundant managed switched Ethernet LAN communication infrastructure with hot standby has been provided. Gateways for remote control via industrial grade hardware to RCC at Sangrur on IEC 60870-5-104 have been provided. Gateway for communication with Load Dispatch Centre at Chandigarh via industrial grade hardware on IEC 60870-5-104 protocol matching with existing SCADA of M/s Siemens make have been provided. SAS has got redundant Gateways (Hardware as well as software) for communication to RCC & LDC.

BBMB has been promoting the cause of Renovation, Modernization and Up-rating of old Hydro Power Houses in the country. This task has already been undertaken for all the BBMB Power Houses.

3. Substation Automation System (SAS)

This system has been set up for automated control, monitoring, metering and protection, operation of different bays of 220kV substation Barnala SAS system on the IEC 61850 protocol and has outside communication through IEC60870-5-104 protocol to Remote Control Centre (RCC) at Sangrur. RCC at Sangrur is functional and RCC at Chandigarh will be made functional in near future.

Justification: As the SAS system has been designed for process control and monitoring at bay level of the substation and is interconnected with SCADA as well as has its own network at station level. Any disruption/ wrong function of bay level process function scan lead to catastrophic damage to the power system.

Remote Control Centre: This consists of all the duplicated major communication/IT infra structure for same function from RCC at Sangrur.

Justification: Any disruption/wrong function of bay level process function from RCC can also lead to major damage to the power system.

Infrastructure

The basic SAS architecture (copy enclosed) which has been implemented at BBMB Substations Barnala and Sangrur mainly consists of the following modules: Local OWS-1 and OWS-2: HMI for local control, monitoring, protection, metering and measurement at Barnala substation. One is in operation and other kept as hot stand by.

Engineering Workstation (Local):

HMI for analysis of disturbance recorder/event records of different IEDs of the Barnala Substation. This is also used for Engineering applications and located at Barnala Substation control room.

Visual Monitoring Scheme:

PTZ cameras installed at different location at 220KV substation Barnala for visual monitoring of substation infrastructures like Isolators, Circuit Breaker etc. Remote OWS-1and OWS-2 : HMI for remote control, monitoring, protection, metering and measurement functions at Sangrur substation. DR workstation

(Remote) :

HMI for analysis of disturbance record/event records of different IED's installed at Barnala substation. This workstation is also used for Engineering applications by Engineer at remote end i.e. at Sangrur Substation. Micro SCADA Gateway-I : This Gateway is being used for SCADA application for communication at remote end Sangrur Substation / Chandigarh SLDC/RCC. Micro SCADA Server- I : This is the main server for substation automation system at Barnala Substation. Micro SCADA Gateway-II : This "Gateway will be used for SCADA application for communication at remote end at Sangrur/Chandigarh SLDC/RCC. Micro SCADA Server- II: This is the standby server for substation automation system at Barnala Substation

4. Bhakra Beas Management Board (BBMB) SLDC COMPLEX

Supervisory Control and Data Acquisition System (SCADA)

The System Load Despatch Centre (SLDC) of Bhakra Beas Management Board (BBMB) is assigned with responsibility of Monitoring of Generating and Substation parameters of BBMB. BBMB SLDC is equipped with State of the Art Supervisory Control and Data Acquisition System (SCADA) and a dedicated Optical Fiber based Communication System which helps SLDC Engineers in discharging their responsibilities efficiently by taking informed decisions duly assisted and guided by the latest technologies.

The present SCADA System of BBMB SLDC has been installed under ULDC Phase-2 scheme and is under upgradation through ULDC Phase-3 scheme. BBMB has also established its backup SLDC by sharing infrastructure with PSTCL, thereby providing a unique and cost effective solution to ensure continuity of services in case of any disaster. This methodology will also be followed in ULDC Phase-3 scheme which will save cost to the tune of Rs 30-35 Crore. BBMB has also equipped RTUs at all Generating Stations and Substations of BBMB.

SCADA System installed at SLDC Complex comprises of various Servers, Data Storage Devices, Firewalls, Video Projection System, Operation Consoles, Remote Consoles etc. Further, all BBMB Power Houses and Substations have been provided with dedicated SCADA remote consoles for viewing real time SCADA data.

Unified Real Time Dynamic State Measurement (URTDSM)

BBMB SLDC is also equipped with State of the Art Unified Real Time Dynamic State Measurement (URTDSM) system. This system has Phasor Measurement Units (PMUs) installed for fetching field data of important parameters. PMUs fetch filed data and after integration with servers 25 values per second are provided as output to Operation Officers. This system is extremely critical for trend analysis of Power Flow.

Protected Systems

SCADA and URTDSM Systems installed at SLDC Complex have been notified as Protected Systems by Ministry of Power (MoP), Govt. of India (GOI) in December, 2022. The necessary regulations/mandates for Protected Systems are being complied in SLDC BBMB.

5 Bhakra Power Houses

Bhakra Left & Right Bank Power Houses Bhakra Project is a marvel in engineering. The 225.55 m high Dam is of concrete straight gravity type having a gross storage capacity of 9621 million cum. Installed capacity of Bhakra Right Bank Power House is 785 MW (5x157 MW) and that of Bhakra Left Bank Power House is 630 MW (5 x 126 MW). .

6.NHP Project

National Hydrology project is a Central Sector Scheme of Ministry of Water Resources, River Development and Ganga Rejuvenation, GOI The total duration of project is eight years starting from 2016-17 and ending in 2023-24. Bhakra Beas Management Board (BBMB), Chandigarh is one of the implementing agencies of the project (NHP).

Bhakra Beas Management Board (BBMB) is one of the eight central agencies, participated in HP-II under the vertical extension component. BBMB has developed a Real Time Decision Support System for Operational Management of BBMB Reservoirs. Bhakra Beas Management Board (BBMB) has set up Earth Receiving Station (ERS) at Chandigarh for inflow forecasting (i.e., short term 3 days and medium term 7 to 15 days) / flood forecasting for optimum utilization of Bhakra and Pong Reservoirs and Canal Network. BBMB has been the 'first mover' in the country. Under this project, 87 no. Real Time Data Acquisition stations comprising Automatic Rain Gauge Stations, Automatic Full Climate Stations, Snow Water Equivalent, Water Level Recorders etc. had been installed in the catchment of River Sutlej and Beas by using state of the art technology. The installations are currently being upgraded

through an ongoing contract and an upcoming proposal through which, new stations are also being added. The schematic arrangement of Real Time Decision Support System involves real time transmission of Hydro meteorological data through INSAT-3D at 1 hour interval to Earth Receiving Station at Chandigarh. Real Time Data is processed using Rainfall Runoff Model, Hydro Dynamic Model, Flood Model and Water Allocation of MIKE software. The outcome/ scenario generation is further shared on NHP Dashboard accessible to all.

Vision & Mission

"To lead and Be a Trend Setter in Power sector in establishing high standards in Operation, Maintenance, Renovation & Modernization of Hydel Projects, Transmission, Canal Systems & to exploit New Hydro Power Potential to optimally utilize the existing infrastructure & resources"

SCOPE

1. Scope

This International Standard specifies the requirements for establishing, implementing, maintaining and continually improving an Information Security Management System within the context of the organization. This International Standard also includes requirements for the assessment and treatment of information security risks tailored to the needs of the organization. The requirements set out in this International Standard are generic and are intended to be applicable to BBMB.

The Scopes of certification for IS/ISO/IEC 27001:2022, which are as follows: -

"Information Technology COMMUNICATIONS SUPPORT SYSTEM In Bhakra Beas Management Board BBMB, Chandigarh, Transmission System, System Operations, 06 Nos. Power Houses, 22 Nos Sub Stations & National Hydrology Project, Chandigarh".

Boundary of Scope

BBMB IT-OT systems within the scope consist of:

a) LAN/ WAN System deployed throughout BBMB
b) SCADA/EMS & URTDSM system at SLDC Complex Chandigarh
c) Smart Substations (SAS) at Barnala and Sangrur.
d) SCADA system at Bhakra Left Power house, Including remote control at SLDC, Chandigarh
e) Real Time Decision Support system (RTDSS) under NHP Project, Chandigarh

The scope aligns with IS/ISO/IEC 27001:2022 standards, focusing on securing information and operation technology within these defined parameters.

2. NORMATIVE REFERENCES:

IS/ISO/IEC 27000 Information technology — Security techniques — Information security management systems — Overview and vocabulary

Statutory & Regulatory Requirements:

All applicable statutory and legal requirements related to BBMB activities are identified and described in the Legal Register for evaluation

TEMRS & DEFINITIONS

3. TERMS & DEFINITIONS

For the purpose of this document, the terms and definitions given in IS/ISO/IEC 27000 apply

3.1 Abbreviations:

Sr. NO.	ABBREVIATION	EXPLANATION
1	BBMB	BHAKRA BEAS MANAGEMENT BOARD
2	CMR	Chief management representative
3	CE	Chief Engineer
4	TS	Transmission system
5	SAS	Substation Automation system
6	NAS	Network Attached storage
7	PH	Powerhouse
8	MR	Management Representative
9	SCADA	Supervisory control and data acquisition
10	DD	Deputy Director
11	AD	Assistant Director
12	CISO	Chief Information Security Officer
13	AM	Assistant Manager
14	ENGR/PROGRAMMER	ENGINEER/PROGRAMMER
15	AE	Assistant Engineer
16	JE	Junior Engineer
17	EMS	Environment Management System
18	FIN	Finance
19	WI	Work Instructions
20	HOD	Head of the department
21	HR	Human Resource
22	IA	Internal Audit
23	VO	Vigilance Officer
24	IT	Information Technology
25	M&SC	Mechanical and Store Complex
26	Mech.	Mechanical
27	MRM	Management Review Meeting
28	NCR	Non-Conformance Report
29	PS	Power Station
30	SR.	Senior
31	OIC	Officer In-Charge
32	PRO	Public Relation Officer
33	QA	Quality Assurance
34	ISMS	Information security Management System

CONTEXT OF THE ORGANISTION

4 Context of the organization

4.1 Understanding the organization and its context

BBMB, concerned MR determined external and internal issues that are relevant to its purpose and that affects its ability to achieve the intended outcome(s) of its information security management system.

External Issues	Internal Issues
MOU Targets	Availability of Generation Unit
Complaints from interested parties	Short fall in IT&C Facilities
Managing contract work force	Availability of Inputs
Legal obligation	Knowledge and skill up gradation
Communication Link Failure	

Monitoring & review of External & Internal Issues:

External Issues	Monitoring, Review& Frequency	Internal Issues	Monitoring, Review& Frequency
MOU	Daily/Monthly	Availability of equipment	Daily
Complaints from interested parties	Mgt. Review Meeting (Once in a year)	Short fall in IT&C Facilities	Daily
Managing contract work force	Terms & condition of contract (Daily)	Availability of water	Daily
Legal obligation	Mgt. Review Meeting	Knowledge and skill upkeep	Training/ communication
Communication Link Failure	As and when required		

4.2 Understanding the needs and expectations of interested parties

BBMB, concerned MR determined:

a) interested parties that are relevant to the Information Security Management System;

b) the relevant requirements of these interested parties;

c) Which of these requirements will be addressed through the Information Security Management System.

NEEDS & EXPECTATIONS OF THE INTERESTED PARTIES

Interested Party	Needs/ Expectations	Monitoring/ Review
Govt. & beneficiaries	Generation as per MOU	Monthly compliance of MOU (Ref: DGR)
Employees	Amenities in workplace	Monthly meeting
	Availability of IT Facilities	concerned MR Division
	Knowledge/skill enhancement	Training, involvement in improvement activities. Mgt Review meeting
Contractors	Safe working environment	Management/EIC (Ref: as per Contract Agreement)
	Timely Payment	Engineer in Charge to Monitor pending liability
	Availability of Site	Engineer in Charge to Monitor
	Amenities in place	Engineer in Charge to Monitor
Society: Pollution risk /Flood Risk	Compliance to legal norms	Monitor & review as per legal norms

4.3 Determining the scope of the Information Security Management System

BBMB, concerned MR determined the boundaries and applicability of the information security management system to establish its scope.

When determining this scope, BBMB, concerned MR consider:

a) the external and internal issues referred to in 4.1;

b) the requirements referred to in 4.2; and

c) interfaces and dependencies between activities performed by the organization, and those that are performed by other organizations.

The scope is available as documented information at **Ref: SECTION NO. ISMS:1**

4.4 Information Security Management System

BBMB, concerned MR established, implemented, maintained and continually improved an information security management system including the processes needed and their interaction, in accordance with the requirements of this International Standard.

Ref: SECTION NO: ISMS ANNEX "D"

LEADERSHP

5. Leadership

5.1 Leadership and commitment

Top management demonstrated leadership and commitment with respect to the information security management system by:

a) ensuring the information security policy and the information security objectives are established and are compatible with the strategic direction of the organization;

b) ensuring the integration of the information security management system requirements into the organization's processes;

c) ensuring that the resources needed for the information security management system are available;

d) communicating the importance of effective information security management and of conforming to the information security management system requirements;

e) ensuring that the information security management system achieves its intended outcome(s);

f) directing and supporting persons to contribute to the effectiveness of the information security management system;

g) promoting continual improvement; and

h) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

Ref: ISMS Policy Annexure B

5.2 Policy

Top management established an information security policy that:

a) is appropriate to the purpose of the organization;

b) includes information security objectives (see 6.2) or provides the framework for setting information security objectives;

c) includes a commitment to satisfy applicable requirements related to information

security; and

d) includes a commitment to continual improvement of the information security management system.

The information security policy :

e) be available as documented information;

f) be communicated within the organization; and

g) be available to interested parties, as appropriate.

Ref: SECTION NO: ISMS ANNEX "B", Common ISMS Policies & Procedures (BBMB Chandigarh)

5.3 Organizational roles, responsibilities and authorities

Top management ensured that the responsibilities and authorities for roles relevant to information security are assigned and communicated within the organization.

Top management assigned the responsibility and authority for:

a) ensuring that the information security management system conforms to the requirements of this International Standard; and

b) reporting on the performance of the information security management system to top management.

Ref: SECTION NO: ISMS ANNEX "E" and "F"

PLANNING

6. Planning

6.1 Actions to address risks and opportunities

6.1.1 General

When planning for the Information Security Management System, BBMB, concerned MR considered the issues referred to in 4.1 and the requirements referred to in 4.2 and determined the risks and opportunities that need to be addressed to:

a) Ensured the Information Security Management System can achieve its intended outcome(s);

b) prevented, or reduced, undesired effects; and

c) achieved continual improvement.

BBMB, concerned MR planned:

d) actions to address these risks and opportunities; and

e) how to

1) integrate and implement the actions into its information security management system processes; and

2) evaluate the effectiveness of these actions.

Ref: Risk Identification Register (DOC NO: ISMS/RISK/01)

6.1.2 Information security risk assessment

BBMB, concerned MR defined and applied an information security risk assessment process that:

a) establishes and maintains information security risk criteria that include:

1) the risk acceptance criteria; and

2) criteria for performing information security risk assessments;

b) ensures that repeated information security risk assessments produce consistent, valid and comparable results

c) identifies the information security risks:

1) apply the information security risk assessment process to identify risks associated with the loss of confidentiality, integrity and availability for information within the scope of the information security management system; and

2) identify the risk owners;

d) analyses the information security risks:

1) assess the potential consequences that would result if the risks identified in 6.1.2 (c) 1) were to materialize;

2) assess the realistic likelihood of the occurrence of the risks identified in 6.1.2 (c) 1); and

3) determined the levels of risk;

e) evaluates the information security risks:

1) compare the results of risk analysis with the risk criteria established in 6.1.2 a); and

2) prioritize the analyzed risks for risk treatment.

BBMB, concerned MR retained, documented information about the information security risk assessment process.

Ref: Risk Identification Register (DOC NO: ISMS/RISK/01), Risk Assessment Formula, Common ISMS Policies & Procedures (BBMB Chandigarh)/ BBMB/COM/ISM/P/11

6.1.3 Information security risk treatment

BBMB, concerned MR defined and applied an information security risk treatment process to:

a) select appropriate information security risk treatment options, taking account of the risk assessment results;

b) determined all controls that are necessary to implement the information security risk treatment option(s) chosen;

c) compare the controls determined in 6.1.3 b) above with those in Annex A and verify that no necessary controls have been omitted

d) produced a Statement of Applicability that contains the necessary controls (see 6.1.3 b) and c) and justification for inclusions, whether they are implemented or not, and the justification for exclusions of controls

e) formulated an information security risk treatment plan; and

f) obtained risk owners' approval of the information security risk treatment plan and acceptance of the residual information security risks.

BBMB, concerned MR retained documented information about the information security risk treatment process.

Ref: Risk Identification Register (DOC NO: ISMS/RISK/01), SOA

6.2 Information security objectives and planning to achieve them

BBMB, concerned MR established information security objectives at relevant functions and levels. The information security objectives:

a) be consistent with the information security policy;

b) be measurable (if practicable);

c) take into account applicable information security requirements, and results from risk assessment and risk treatment;

d) be monitored;

e) be communicated; and

f) be updated as appropriate.

g) be available as documented information.

BBMB, concerned MR retained documented information on the information security objectives.

When planning how to achieve its information security objectives, BBMB, concerned MR determined:

f) what will be done;

g) what resources will be required;

h) who will be responsible;

i) when it will be completed; and

j) how the results will be evaluated.

Ref: SECTION NO: ISMS ANNEX "C" and Risk Identification Register (DOC NO:ISMS/RISK/01)

6.3 Planning of changes

When the organization determines the need for changes to the information security management system, the changes shall be carried out in a planned manner.

SUPPORT

7.0 Support

7.1 Resources

BBMB, concerned MR determined and provided the resources needed for the establishment, implementation, maintenance and continual improvement of the information security management system.

7.2 Competence

The organization:

a) determined the necessary competence of person(s) doing work under its control that affects its information security performance;

b) ensured that these persons are competent on the basis of appropriate education, training, or experience;

c) where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken; and

d) retain appropriate documented information as evidence of competence.

Ref: Procedure PR: 01

7.3 Awareness

Persons doing work under the BBMB, concerned MR's control aware of:

a) the information security policy;

b) their contribution to the effectiveness of the information security management system, including the benefits of improved information security performance; and

c) the implications of not conforming with the information security management system requirements.

Ref: Procedure PR: 01, Common ISMS Policies & Procedures (BBMB Chandigarh)/ BBMB/COM/ISM/P/1-13/ANNEXURE-G

7.4 Communication

BBMB, concerned MR determined the need for internal and external communications relevant to the information security management system including:

a) on what to communicate;

b) when to communicate;

c) with whom to communicate;

d) how to communicate.

Ref: Procedure PR: 02

a) Communication Matrix

Sl. No	Description of Communication	Mode of Communication	Responsibility	Frequency	Communicated To				
					Within Dept	MR	contractors/ visitor	Customers	Interested Party
1.	ISMS Policy	Verbal/ Training Displays	HOD	All time	√ √	√ √	√	√	√
2.	ISMS Objectives	Verbal Displays in Department	HOD	Monthly All time	√ √	√			
3.	Management Programs	Verbal Displays in Department	HOD	Monthly All time	√ √	√			
4.	Work Instructions	Displays On-Job Training	HOD	All time At least once	√ √		√		
5	Audit results	Audit Report	MR HOD	Once in 6 Months	√	√			
6	Corrective Actions	Circulation 0f Minutes of meetings	MR HOD	Once in 6 Months	√ √	√			

Sl. No	Description of Communication	Mode of Communication	Responsibility	Frequency	Communicated To				
					Within Dept	MR	contractors / visitor	Customers	Interested Party
7	ISMS Risks	Doc Verbal On the job training	Concerned HODs	At least once / when there is any change	√ √ √	√	√		
8	Applicable Legal Requirements	Legal Register Legal Compliance Report	HOD(HR)	Quarterly As and when	√ √		√		
9	Suggestions	Verbally Management Review Meeting	HODs	As and when required As and when required	√ √	√	√ √		
10	ISMS Documentation	On the job Training	HOD(HR)	On change of key personnel	√				

7.5 Documented information

7.5.1 General

The BBMB, concerned MR 's Information Security Management System includes:

a) documented information required by this International Standard; and

b) documented information determined by the BBMB, concerned MR as being necessary for the effectiveness of the information security management system.

7.5.2 Creating and updating

When creating and updating documented information BBMB, concerned MR ensured appropriate:

a) identification and description (e.g., a title, date, author, or reference number);

b) format (e.g., language, software version, graphics) and media (e.g., paper, electronic); and

c) review and approval for suitability and adequacy.

Ref: Procedure PR: 03

7.5.3 Control of documented information

Documented information required by the information security management system and by this International Standard be controlled to ensure:

a) it is available and suitable for use, where and when it is needed; and

b) it is adequately protected (e.g., from loss of confidentiality, improper use, or loss of integrity).
For the control of documented information, BBMB, concerned MR addresses the following activities, as applicable:

c) distribution, access, retrieval and use;

d) storage and preservation, including the preservation of legibility;

e) control of changes (e.g. version control); and

f) retention and disposition.

Documented information of external origin, determined by the organization to be necessary for the planning and operation of the information security management system, be identified as appropriate, and controlled.

Ref: Procedure PR: 03

OPERATION

8. Operation

8.1 Operational planning and control BBMB

Concerned MR planned, implemented and controlled the processes needed to meet information security requirements, and to implement the actions determined in Clause 6, by:

- Establishing criteria for the processes;
- Implementing control of the processes in accordance with the criteria.

Documented information shall be available to the extent necessary to have confidence that the processes have been carried out as planned.

BBMB, concerned MR shall control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

BBMB, concerned MR shall ensure that externally provided processes, products or services that are relevant to the information security management system are controlled.

8.2 Information security risk assessment

BBMB, concerned MR shall perform information security risk assessments at planned intervals or when significant changes are proposed or occurred, taking into account of the criteria established in 6.1.2 a).

BBMB, concerned MR shall retain documented information of the results of the information security risk assessments.

Ref: Risk Identification Register (DOC NO: ISMS/RISK/01)

8.3 Information security risk treatment

BBMB, concerned MR shall implement the information security risk treatment plan.

BBMB, concerned MR shall retain documented information of the results of the information security risk treatment.

Ref: Risk Identification Register (DOC NO: ISMS/RISK/01)

PERFORMANCE EVALUTION

9. Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

BBMB, concerned MR evaluated the information security performance and the effectiveness of the information security management system.

BBMB, concerned MR determined:

a) what needs to be monitored and measured, including information security processes and controls;
b) the methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results;
c) when the monitoring and measuring be performed;
d) who monitor and measure;
e) when the results from monitoring and measurement be analyzed and evaluated; and
f) who analyze and evaluate these results.

BBMB, concerned MR retained appropriate documented information as evidence of the monitoring and measurement results.

Ref: Procedure PR: 04

9.2 Internal audit

9.2.1 General

BBMB, concerned MR shall conduct internal audits at planned intervals of six months to provide information on whether the Information Security Management System:

a) conforms to
   1) the BBMB, concerned MR's own requirements for its information security management system;
   2) the requirements of this International Standard;
b) is effectively implemented and maintained

9.2.2 Internal audit programme

The BBMB, concerned MR shall Plan, establish, implement and maintain an audit programme(s), including the frequency, methods, responsibilities, planning requirements and reporting.

When establishing the internal audit programme(s), The concerned MR shall consider the importance of the processes concerned and the results of previous audits;

BBMB, concerned MR shall:

a) define the audit criteria and scope for each audit;

b) select auditors and conduct audits that ensure objectivity and the impartiality of the audit process;

c) ensure that the results of the audits are reported to relevant management;

documented information shall be available as evidence of the implementation of the audit programme(s) and the audit results.
Ref: Procedure PR: 05

9.3 Management review

9.3.1 General

Top management reviewed the organization's information security management system at planned intervals to ensure its continuing suitability, adequacy and effectiveness.

9.3.2 Management review inputs

The management review shall included consideration of:

a) the status of actions from previous management reviews;

b) changes in external and internal issues that are relevant to the information security management system;

c) changes in needs and expectations of interested parties that are relevant to the information security management system;

d) feedback on the information security performance, including trends in:

1) nonconformities and corrective actions;

2) monitoring and measurement results;

3) audit results; and

4) fulfilment of information security objectives;

e) feedback from interested parties;

f) results of risk assessment and status of risk treatment plan; and

g) opportunities for continual improvement.

9.3.3 Management review results

The results of the management review shall include decisions related to continual improvement opportunities and any needs for changes to the Information Security Management System.

BBMB, concerned MR retain documented information shall be available as evidence of the results of management reviews.

Ref: Procedure PR: 06

IMPROVEMENT

10. Improvement

10.1 Continual improvement

BBMB, concerned MR shall continually improve the suitability, adequacy and effectiveness of the information security management system.

10.2 Nonconformity and corrective action

When a nonconformity occurs, the BBMB, concerned MR

a) react to the nonconformity, and as applicable:

1) take action to control and correct it;

2) deal with the consequences;

b) evaluate the need for action to eliminate the causes of nonconformity, in order that it does not recur or occur elsewhere, by:

1) reviewing the nonconformity;

2) determining the causes of the nonconformity; and

3) determining if similar nonconformities exist, or could potentially occur;

c) implement any action needed;

d) review the effectiveness of any corrective action taken; and

e) make changes to the information security management system, if necessary.

Corrective actions shall be appropriate to the effects of the nonconformities encountered.

BBMB, concerned MR shall retain documented information as evidence of:

f) the nature of the nonconformities and any subsequent actions taken,

g) the results of any corrective action.

Ref: Procedure PR: 07

LIST OF MANUAL

PROCEDURE SECTION NO.	TITLE	NO. OF PAGES
PR:01	Competence	1
PR:02	Communication	2
PR:03	Control of documented information	5
PR:04	Analysis and evaluation	1
PR:05	Internal audit	1
PR:06	Management review	2
PR:07	Nonconformity and corrective action	1

ISMS POLICY

INFORMATION SECURITY MANAGEMENT SYSTEM POLICY

OUR AIM

- To establish, maintain and continually improve the Information Security Management System (ISMS).

OUR COMMITMENTS

- To comply applicable legal, regulatory and contractual requirements related to information Security.
- To set measurable objectives and targets to drive continual improvement in ISMS.

OUR ENDEAVOUR

- To promote awareness and motivate employees and stakeholders to adhere to the ISMS framework
- To identify and effectively manage information security risks to safeguard the confidentiality, integrity and availability of information

August, 2025

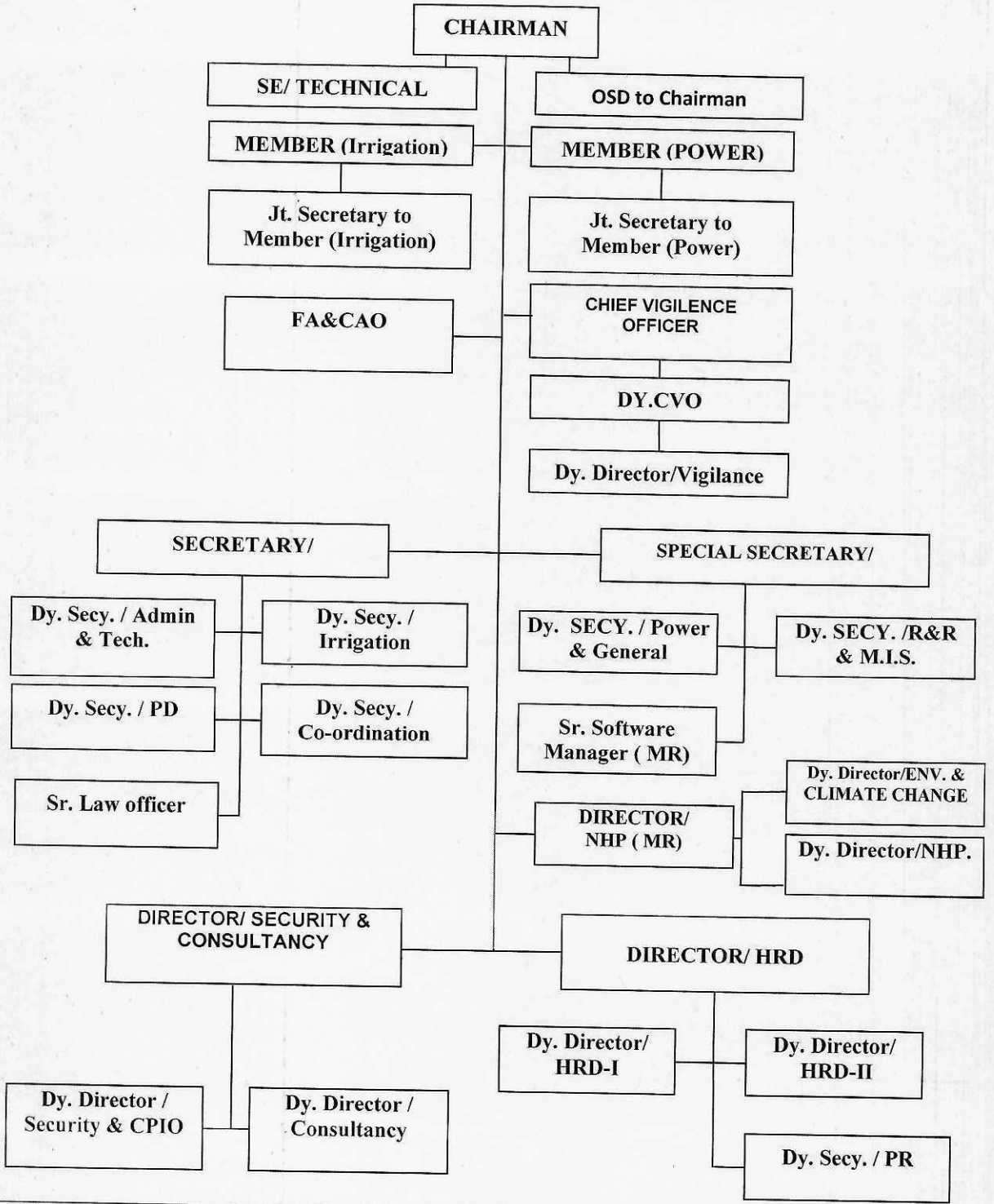
Chairman

OBJECTIVES & TARGETS FOR THE YEAR 2025-26

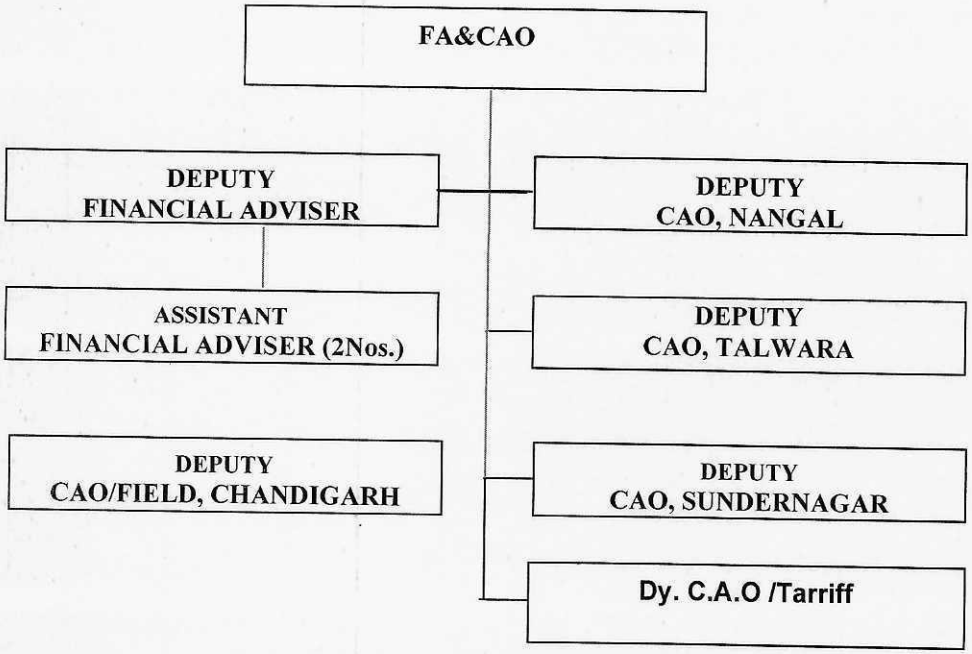
S. N	Management System	Objectives	Targets	Responsibility
1	ISMS	Complaints from interested parties	Nil	CONCERNED MR
2	ISMS	Availability of IT Services (Internet-services, mailing services, Web services etc.)	100%	CONCERNED MR
3	ISMS	Availability of IT Facilities (Hardware, equipment, LAN etc.)	100%	CONCERNED MR
4	ISMS	Availability of Internet Lease Line Link, MPLS Link	100%	CONCERNED MR
5	ISMS	Availability of physical media/OFC/ Link within BBMB From data center to various departments.	100%	CONCERNED MR
6	ISMS	Training of Employees/ Contract workers	Once in a year	CONCERNED MR

RISK & OPPORTUNITY IN ACHIEVING OBJECTIVES/ TARGETS

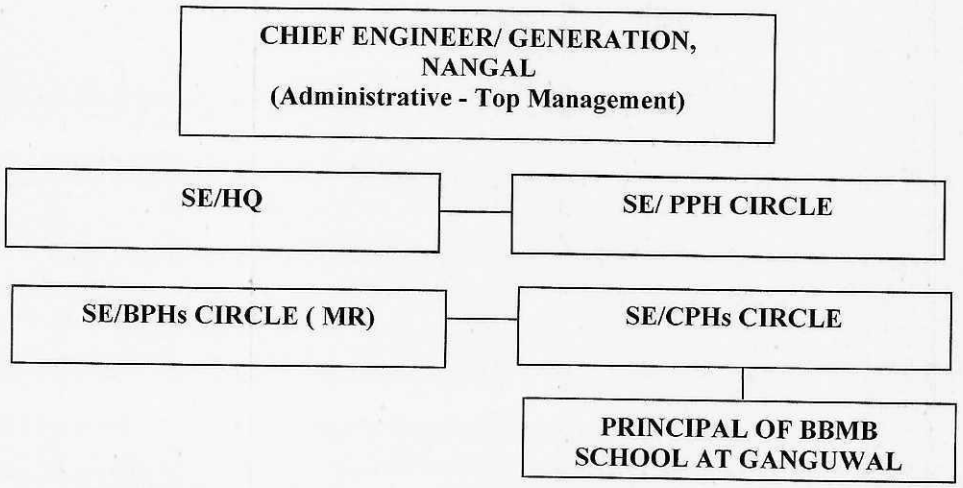
SL	RISK	OPPORTUNITY
1.	Shortage of Manpower	Recruitment / Stand by arrangement
2.	Non availability of suitable equipment/ resource needed.	Availability of suitable equipment/ resource needed.
3.	Noncompliance of statutory & regulatory directives and legal obligations.	Compliance of obligations applicable to the organization
4.	Non availability of suitable facilities	Availability of suitable facilities
5.	Issues raised by local authorities/leaders	Identify issues raised by local authorities/leaders in time
6.	Issues raised from nearby people	Identify Issues raised from nearby people in time


CHAIRMAN
SE/ TECHNICAL
OSD to Chairman
MEMBER (Irrigation)
MEMBER (POWER)
Jt. Secretary to Member (Irrigation)
Jt. Secretary to Member (Power)
FA&CAO
CHIEF VIGILENCE OFFICER
DY.CVO
Dy. Director/Vigilance
SECRETARY/
SPECIAL SECRETARY/
Dy. Secy. / Admin & Tech.
Dy. Secy. / Irrigation
Dy. SECY. / Power & General
Dy. SECY. /R&R & M.I.S.
Dy. Secy. / PD
Dy. Secy. / Co-ordination
Sr. Software Manager (MR)
Sr. Law officer
Dy. Director/ENV. & CLIMATE CHANGE
DIRECTOR/ NHP (MR)
Dy. Director/NHP.
DIRECTOR/ SECURITY & CONSULTANCY
DIRECTOR/ HRD
Dy. Director/ HRD-I
Dy. Director/ HRD-II
Dy. Director / Security & CPIO
Dy. Director / Consultancy
Dy. Secy. / PR

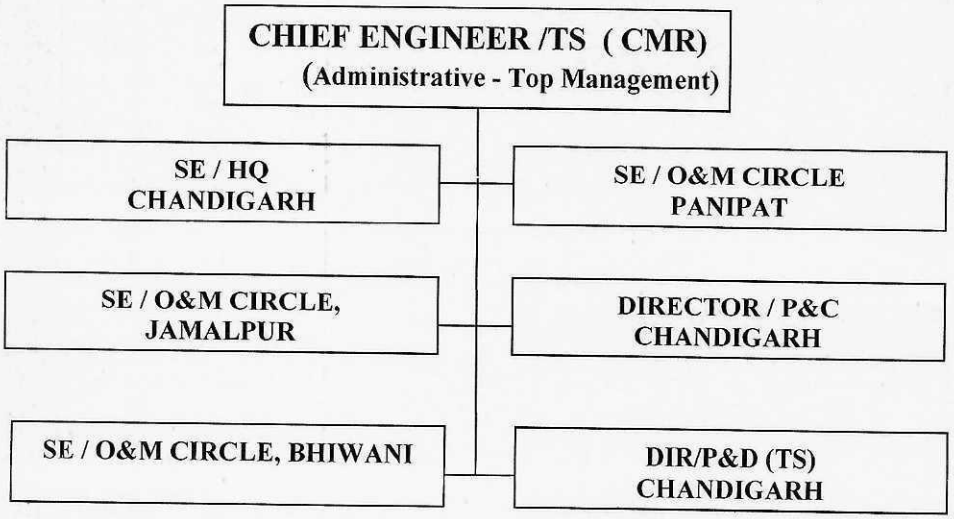
Organization set up of FA & CAO



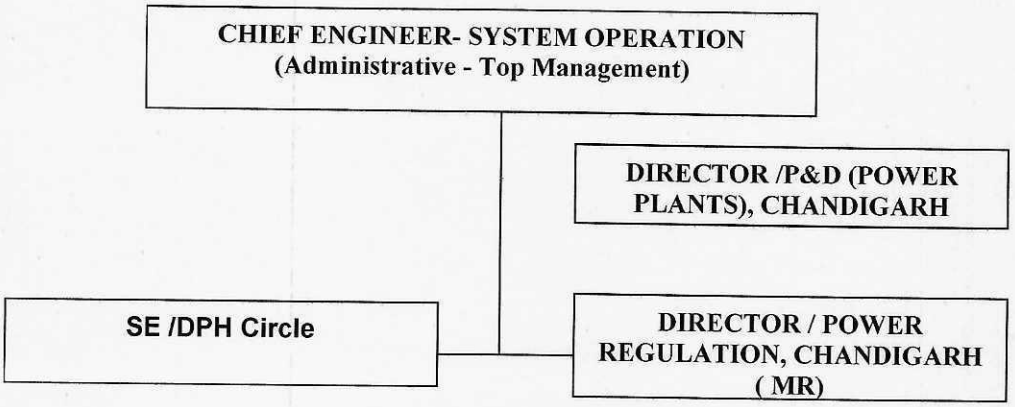
A. Organization set up of Chief Engineer/Generation, Nangal (Power Wing)



B. Organizational set up of Chief Engineer/ Transmission System, Chandigarh (Power Wing)



C. Organization set up of Chief Engineer/System Operations, Chandigarh (Power Wing)



ROLE, RESPONSIBILITY & AUTHORITY

CHIEF ENGINEER /TS /CMR:

Roles

Leading BBMB/TS

Reporting to Regional MEMBER POWER.

Responsibility

Co-ordination/ liaison with State Govt. Authorities/ Local Administration, Public Leaders, Media, for resolution of various state level/local issues affecting the Power Transmission.

Monitoring of compliance of MOU and holding review meetings with departments & contractors.

To decide/ resolve technical, contractual issues including accord of approval of departmental proposals within his delegated powers and further processing such cases which are beyond his jurisdictions in accordance with provisions, extant rules and guidelines.

To ensure preparation/ finalization of annual plans, budgets etc.

To ensure implementation of social and other developmental activities at the Powerhouse /substations and its peripheries/ nearby localities.

To ensure timely submission of compliance obligations, various returns, reports, replies etc. to Regional/Corporate Office and other agencies.

To monitor Information Security Management System requirements by interacting with ISMS third party auditors/certification body etc.

To Chair the ISMS Team and approve the ISMS Policy.

Authority

Provide Guidelines and Directions.

Accountability

Failure in achieving objectives Failure in Information Security System within the boundary of BBMB, SAS, SSM, SLDC, Substations.

THE INFORMATION SECURITY STEERING COMMITTEE (ISSC)

Members of Information Security Steering Committee of BBMB are as under:

1. Chairman BBMB Chandigarh (Chairman of Committee)
2. Chief Engineer/ System Operation as Chief Information Security Officer
3. FA & CAO , BBMB, Chandigarh
4. Director (P&E) , NCIIPC , New Delhi
5. Director HRD & IT , BBMB , Chandigarh
6. Director Power Regulation , BBMB, Chandigarh (Member Convenor)

- Information Security Steering Committee (ISSC) shall approve Bhakra Beas Management Board (BBMB) Information Security Policies based on recommendations from Security Forum (ISF).

- It shall plan, determine and provide the necessary resources (man power, tools, hardware, software, computing resources and information) for effective implementation of ISMS.

ROLES AND RESPONSIBILITIES OF THE CHIEF INFORMATION SECURITY OFFICER (CISO)

Chief Engineer/ System Operation, BBMB , Chandigarh has been designated as Chief Information Security Officer (CISO) . Following are the roles and responsibilities of CISO .

- Manage the overall Information Systems Security program in the organization.

- Develop the Information System Security Policies and Standards for use throughout the organization.

- Manage Risk Assessment and Risk Treatment process.

- Co-ordinate or Initiate the Security Forum Meeting for review and updating the Security Policies.

- Co-ordinate or Initiate Security Forum Meeting for effective Risk Assessment and Risk treatment process.
- Ensure updation of the Information Asset Registers of the organization.
- Keep Security Policies and Standards up to date, reflecting changes in technology, business direction and potential threats.
- Where necessary provide inputs to various departments in the development of specific standards or guidelines that meet the information Security Policies for specific products within the organization.
- Ensure that, when exceptions to the information Security Policy are necessitated, the risk acceptance process is completed and the exceptions are reviewed and re-assessed periodically.
- Remain current /up-to-date on the threats against the information assets (Attending information Security Meetings, reading trade publications and participation in work groups are some of the ways to stay current /up-to-date with the developments in the field of information systems security).
- Understand the current information processing technologies and the most current information protection methods and controls by receiving internal education, attending information security seminars and through on-the-job training.
- Understand the business processes of the organization, so as to provide appropriate security protection.
- Encourage the participation of the managers, auditors, legal experts and the staff members from other disciplines, who can contribute to the information systems security program.
- Review audit and examination reports dealing with the information security issues and ensure that they are placed before the Steering Committee Meetings.
- Formulate the audit findings and follow-up to ensure that the security controls and procedures as required are implemented within the stipulated time frame.

- Assist in the preparation and distribution of an appropriate warning system of potentially serious and imminent threats /attacks to the organization's information assets e.g. outbreak of computer virus etc.
- Co-ordinate or assist in the investigation of security threats or other attacks on the information assets.
- Assist in the recovery of information and information assets from attacks.

ROLES AND RESPONSIBILITIES OF THE INFORMATION SECURITY OFFICER (ISO'S)

Following officers have been designated as Information Security Officers of IT-OT Systems :

Sr No.	IT/OT System	Information Security Officer
1	LAN WAN System	System Software Engineer BBMB, Chandigarh
2.	SCADA System of Bhakra Left (5 Nos. Units)	Superintendent Engineer / Bhakra Power House Circle BBMB , Nangal
3.	SAS System Installed at various Substations of BBMB	Director/ P&D(TS), BBMB, Chandigarh
4.	RTDSS installed under National Hydrology Project , BBMB, Chandigarh	Director/ NHP BBMB Chandigarh

The Chief Engineer Security Officer (CISO) shall hold quarterly review meetings with ISO's with System Software Engineer BBMB, Chandigarh as Member convenor.

- Information Security Officer's (ISO's) could be a senior official who shall provide inputs for the design, development, implementation and maintenance of the information System Security Program for protecting the information assets of the department.

The ISO of respective IT-OT systems and its associated team will have the scope of work as per following (but not limited to):-

- Manage the overall information systems security program in concerned department or project.
- Attending VC/Physical meetings of respective sectoral CERTs.
- To provide the quarterly information of respective IT/OT system to CISO in requisite formats.
- To provide the information as and when desired by respective Sectoral CERTs.
- Shall provide the information as and when desired for putting up the Board Agenda in respect of Cyber Security.
- Shall adhere to the Cyber Security Guidelines and advisories as per MoP, CEA, Sectoral CERTs, NCIIPC, MeITY etc.
- Cases in respect of AMC provisioning and maintenance of existing systems.
- Documentation related to Cyber Crisis Management Plan (CCMP), Cyber Security Policy (CSP), and Business Continuity Plan (BCP) etc.
- Need based analysis of declaration of systems as Critical and documentation and coordination with NCIIPC and other such agencies thereof.
- Implement the information Security Policies through appropriate procedures for his department.
- Monitor the security of resources and assets present in their respective departments /Systems and safeguard against security breaches.
- Monitor the judicious usage of resources.
- Manage cyber security incidents and intimate regarding the same to CISO.

- Remain current /up-to-date on the threats against the information assets (Attending information security meetings, reading trade publications and participation in work groups are some of the ways to stay current/up-to-date with the developments in the field of information systems security).

- Understand the current information processing technologies and the most current information protection methods and controls by receiving internal education, attending information security seminars and through on-the-job training.

- Encourage the participation of department members & officers, for effective implementation of the information system security program.

- Conducting cyber security audits of respective systems as per the prevalent guidelines and closure of vulnerabilities found during the audit.

- Review Cyber Security Audit and examination reports dealing with the information security issues and ensures that corrective and preventive actions are formulated.

- Any other related work.

CONCERNED MR:

Reporting to CMR if any major incident happened.
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.

SE(HQ)/DIRECTORS:

Reporting as per organizational hierarchy
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.

(HR)
Reporting as per organizational hierarchy
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.
Participation in internal audit/MRM related to ISMS implementation.

(Finance):
Reporting as per organizational hierarchy
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.
Participation in internal audit/MRM related to ISMS implementation.

DDs/ADs/Engr's/AEs (All Sections of BBMB)
Reporting as per organizational hierarchy
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.
Participation in internal audit related to ISMS implementation

Officers/Supervisors (All sections under BBMB)
Reporting as per organizational hierarchy
Leading the team reporting to him
Responsible for all activities related to his area of control
Authorized in accordance with provisions, extant rules and guidelines.
Accountable for failure in achieving objectives, failure in safety and security of all within his control.
Participation in internal audit related to ISMS implementation.

Index

BBMB's Common ISMS Policies & Procedures.