INTEGRATED MANAGEMENT SYSTEM MANUAL

(Version 06)

MAHANADI COALFIELDS LIMITED

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APPROVAL

This manual describes the companywide Integrated Management System of Mahanadi Coalfields Limited (MCL) simultaneously complying with the requirements of the international standards - ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

This manual now supersedes the Version 05 of Integrated Management System manual of MCL issued on 22/04/2021.

The scope, approach and the contents of this manual are hereby approved, authorized, and released for use of all concerned in MCL.

Any future change(s) in this manual shall be issued only through specific approval after ensuring the system integrity and compliance with the above standards.

All users shall also exercise necessary care to prevent unauthorized use, loss and damage of this manual.

Place: Sambalpur.
Date: 14/07/2023

Chairman-cum-Managing Director
Mahanadi Coalfields Limited

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

MANAGEMENT POLICY OF MCL

Mahanadi Coalfields Limited, a leading coal provider, with the intent of assuring energy security to the nation, recognizes that good performance in respect of quality, environment, energy and occupational health and safety is paramount to success and sustainable development of its business.

We are committed to:

1. **Assured quality of our coal supplies.**
2. **Optimum utilization of our available resources.**
3. **Continual improvement in the functioning and performance of our management system.**
4. **Provide all information and resources necessary to achieve our objectives and targets.**
5. **Continual improvement in the energy performance of all our processes and systems.**
6. **Ensure prevention of pollution, injury and ill health due to our work activities.**
7. **Promote elimination of hazards and reduction of OH&S risks.**
8. **Comply with all applicable legislations and other subscribed obligations.**
9. **Promote Consultation and participation of workers in all matters related to OH&S management system.**
10. **Promote importance of the concept of sustainable development.**
11. **Promote the purchase of energy efficient products, services, and designs.**
12. **Ensure that this policy is effectively implemented, maintained, and communicated.**
13. **Review this policy regularly to ensure its continual improvement and relevance.**
14. **Make this policy publicly available in an effective form and manner to all interested parties, upon request.**

1. DISTRIBUTION LIST

1.1 Controlled hard copy distribution by Nodal Officer (IMS), MCL HQ -

Copy	Copy Holder	
IMSM – 0	Nodal Officer (IMS), MCL HQ	(As master copy, for use of self, CMD, Directors and external auditors)
IMSM – 1	Central Library, MCL HQ	(For the use of all concerned in HQ)
IMSM – 2	Area GM, Basundhara Area	(For the use of all concerned in the Area & concerned units)
IMSM – 3	Area GM, IbValley Area	(For the use of all concerned in the Area & concerned units)
IMSM – 4	Area GM, Lakhanpur Area	(For the use of all concerned in the Area & concerned units)
IMSM – 5	Area GM, Orient Area	(For the use of all concerned in the Area & concerned units)
IMSM – 6	GM, CWS IbValley	(For the use of all concerned in the Area & concerned units)
IMSM – 7	CMS incharge, Central Hospital, Ib Valley	(For the use of all concerned in the Area & concerned units)
IMSM – 8	Area GM, BharatpurArea	(For the use of all concerned in the Area & concerned units)
IMSM – 9	Area GM, HingulaArea	(For the use of all concerned in the Area & concerned units)
IMSM – 10	Area GM, JagannathArea	(For the use of all concerned in the Area & concerned units)
IMSM – 11	Area GM, KanihaArea	(For the use of all concerned in the Area & concerned units)
IMSM – 12	Area GM, LingrajArea	(For the use of all concerned in the Area & concerned units)
IMSM – 13	Area GM, TalcherArea	(For the use of all concerned in the Area & concerned units)
IMSM- 14	Area GM, Mahalaxmi Area	(For the use of all concerned in the Area & concerned units
IMSM – 15	GM, CWS,Talcher	(For the use of all concerned in the Area & concerned units)
IMSM – 16	CMS in Charge Central Hospital, Talcher	(For the use of all concerned in the Area & concerned units)
IMSM- 17	GM/ In charge Mines Rescue Station,Orient area, Ib Valley	(For the use of all concerned in the Area & concerned units)

[The above copy holders may distribute copies of this manual within their functional domain for awareness/training purpose as uncontrolled copies – refer procedure at Section 7.5].

1.2 LAN distribution by System/Server Administrator –

Master copy of all pages of this IMS manual for providing on LAN and/or website with suitable protection.

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00	As on Page 1	Not applicable, since initial issue.

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3. DEFINITIONS, ABBREVIATIONS AND CONVENTIONS

3.1 DEFINITIONS & ABBREVIATIONS

For the purpose of this Integrated Management Manual, the terms and definitions given in ISO 9000:2015, ISO14001:2015 and ISO 45001:2018 apply. Important amongst them are described here. Besides these, abbreviations commonly used in this manual and related to MCL & CIL are also defined. The definitions & abbreviations given below are arranged alphabetically.

TERM/ACRONYM	DEFINITION/MEANING
Area	A portion within the mining leasehold of MCL that has been distinctly earmarked by a specific name for functional and administrative ease.
Audit	Systematic, independent and documented process for obtaining objective evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.
CMD	Chairman-cum-Managing Director, i.e., the chief executive officer for MCL.
Compliance obligations	Legal requirements that an organization has to comply with and other requirements that an organization has chosen to comply with.
Continual Improvement	Recurring activity to enhance performance.
Correction	Action to eliminate a detected nonconformity.
Corrective Action	Action to eliminate the cause of nonconformity and to prevent recurrence.
CRO	Chief Risk Officer of MCL.
Customer	Person or organization that could or does receive a product or a service that is intended for or required by this person or organization.
Documented Information	Information required to be controlled and maintained by an organization and the medium on which it is contained. All the documents and records of MCL are considered as documented information of MCL.
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships.
Environmental aspect	Element of an organization's activities or products or services that interacts or can interact with the environment.
Environmental impact	Change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.
Field Unit	A functional unit of MCL, outside its headquarters, for undertaking some specific function for and on behalf of MCL, e.g. coal mining area, workshops, hospitals, mines rescue stations etc.
GM/HOD	General Manager/Head of Department, i.e., the officer holding the charge of overall administration & control of all the functions in a mine, HQ – department, or other field unit.
Hazard	Source with potential to cause injury and ill health.
HRIS	Human Resource Information System – Computerized database of executives in MCL/CIL.
IMS	Integrated Management System. In the context of this manual, the compliance of the requirements of the following three standards integrated into one Management system – ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018.
Incident	Occurrence arising out of, or in course of, work that could or does result in injury and ill health.
Interested Party/ Stakeholder	Person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity.
MCL	Mahanadi Coalfields Limited, a public-sector subsidiary company of Coal India Limited for mining of coal in its leaseholds in the state of Odisha in India.
MoU	Memorandum of Understanding.
Nodal Officer (IMS)	The officer of MCL headquarter designated to assist MR/TS to Director (Tech./Operation) in executing the apex level processes of IMS, viz., controlling system documentation,

TERM/ACRONYM	DEFINITION/MEANING
	planning/coordinating of internal audits, collating information on system performance, and facilitating apex review of the system by MCL's top management. For all other field units, the same process is carried out by an officer identified by the respective head of the unit to act as nodal person at unit level.
Nonconformity	Non-fulfilment of a requirement.
OH&S	Occupational health and safety.
OH&S performance	Performance related to the effectiveness of the prevention of injury and ill health to workers and the provision of safe and healthy workplaces.
OH&S Risk	Combination of the likelihood of occurrence of a work-related hazardous event(s) or exposure(s) and the severity of injury and ill health that can be caused by the event(s) or exposure(s).
Policy	Intentions and direction of an organization as formally expressed by its top management.
Process	Set of interrelated or interacting activities that use inputs to deliver an intended result.
Product	Output of an organization that can be produced without any transaction taking place between the organization and the customer.
Record	Document stating results achieved or providing evidence of activities performed.
Risk	Effect of uncertainty.
Service	Output of an organization with at least one activity necessarily performed between the organization and the customer.
Top Management	Person or group of people who directs and controls an organization at the highest level.
Unit	Unit is a part of colliery/ mine. One colliery or mine may have various units.
WIM	Work Instruction Manual of a unit containing all the process plans of jobs being performed in the unit or HQ department.

3.2 CONVENTIONS

1. For ease of reference, the corresponding clause numbers of the standards, ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 have been given in boxes throughout sections 4 to 10 of this manual along the headings of every subsection, as relevant.
2. Throughout this document, any text/matter appearing in a box shall mean that it is a specified way of carrying out a process.

4. MAHANADI COALFIELDS LTD. – COMPANY PROFILE

4.0 AN INTRODUCTION

Public sector company named Coal Mines Authority Limited (CMAL) was formed to manage non coking mines. CIL started functioning in 1975 with 5 subsidiary companies under it. These were Bharat Coking Coal Limited (BCCL), Eastern Coalfields Limited (ECL), Central Coalfields Limited (CCL), Western Coalfields Limited (WCL), and Central Mine Planning & Design Institute Limited (CMPDIL)..

Mahanadi Coalfields Limited (MCL) was carved out of South Eastern Coalfields Limited in 1992 with its headquarters at Sambalpur. It is a "MiniRatna" Central Public Sector Enterprises (CPSE), which is a wholly owned subsidiary of Coal India Ltd., the single largest coal producing company in the world. The Joint Ventures of MCL are

- Mahanadi Basin Power Limited (SPV)
- MJSJ Coal Limited
- MNH Shakti Limited
- Mahanadi Coal Railway Limited

MCL has a future vision to diversify its business into power generation and transmission as well as solar power so as to emerge as an integrated energy firm. Considering the criticality of evacuation of coal, MCL has expanded its business horizon to coal logistics as well. Mahanadi Coal Railway Limited established on 31st August 2015, is a company based on equity participation between MCL, Indian Railway Construction Company Ltd. and Odisha Industrial Infrastructure Development Corporation (OIDCO).

MCL is the first subsidiary of Coal India Ltd. to introduce surface miner equipment for coal production. About 91% of coal is being produced by Surface Miner technology ensuring high productivity and minimum environmental impact.

The structure of MCL is given on https://www.mahanadicoal.in/About/egoadmin.php and the details of MCL are available in its official website: http://www.mahanadicoal.in/Welcome.php

FUNCTIONAL SPECIALITIES OF MCL

FOR COAL MINES:

A. **Product**: The only output (i.e., product) of MCL that is intended for or required by any of its customers is the mined-out coal from in-situ coal reserves within its granted leaseholds – with or without further processing/beneficiation. Being a mined-out mineral, and not a manufactured item, this product has no constituent parts. Conforming supply of coal relates to the billed quality and quantity of the dispatched consignments.

B. **Customers**: MCL mainly supplies coal to the power sector of the country as per Fuel Supply Agreement (FSA) and policy of Govt. of India. There are mainly two types of customers for coal.

1. **Major Customers**: These are regular large-scale coal consumers of core-sector like power, steel, cement, etc. For MCL, under this are mainly the super thermal power stations of various organizations.
2. **Minor Customers**: These are small and tiny consumers of small and medium sectors, having lesser coal requirement per annum. They directly approach MCL as and when they need coal and make purchases without elaborate contractual agreements or through MCL's e-auctions for coal.

C. Operational Technology: Coal mining and supply operations are done round the clock in three shifts using mechanized coalmining technology as follows:

Opencast Coal mining –

a) **Overburden Removal**: Through blasting with permitted explosives and loading into diesel-operated rear dumpers by electric/diesel operated excavators;
b) **Coal Excavation:** Major coal is produced through surface miner. Cutting through blasting with permitted explosives and/or through surface-miners/excavators and loading into diesel-operated tippers/trucks by electric/diesel operated excavators/pay-loaders;
c) **Coal/Overburden Transportation:** Through diesel-operated tippers/trucks/rear dumpers;
d) **Overburden Dumping**: At designated dumps located within and/or outside quarry.

Underground Coal mining –

a) **Coal Extraction**: Through drilling with hand-held electric drills; blasting with permitted explosives; and loading by electrically operated side-discharge-loading machines into mine-tubs and/or belt/chain conveyors;
b) **Coal Transportation:** Through belt/chain-conveyors or mine-tubs run by electrically operated rope-haulages from underground workings to surface storage yards/bunkers/coal-crushing/screening plants;
c) **Mine Ventilation:** Through large diameter electrically operated ventilation fans on surface, and booster and/or face-ventilation-fans in underground;
d) **Mine Roof Support:** Through steel arches, concrete roofing, steel and/or wooden props/poles, steel/wooden lattice structures (cogs), and steel roof bolts driven and anchored into the mine-roof;
e) **Mine Stowing**: Where specially required under DGMS impositions, through pumping of sand-water slurry into underground mine voids.

Common to both Opencast and Underground Coal mining -

a) **Coal Sizing and Stocking:** As major coal is produced through surface miners which take care of coal sizing or crushing and then transporting for storage either to loading points or at designated coal stockyards;
b) **Dispatch:** Through wagons of Indian Railways and/or customers' tippers/trucks loaded manually or diesel-operated pay-loaders and/or through other mechanized installations;
c) **Quality and quantity measurements:** Through arrangements imposed by customers under related agreements;

In-house support functions for all mining activities -

a) Planning, coordination and monitoring,
b) Allied engineering and training support
c) Repair and maintenance of equipment and infrastructure,
d) Management and storage of materials, and inventory control,
e) Environmental management,
f) Hospitals and dispensaries,
g) Establishment and employee management, and
h) Emergency rescue operations in mines.

D. Procured Inputs/Services: The inputs/services required to be procured in MCL are as follows:

1. Centralized Items like explosives, diesel, petrol, high-value/imported machinery and their spares, equipment/instruments, building materials, iron and steel, etc.
2. Decentralized Items like indigenous machine-spares, tools, implements, etc.

3. Services like coal and/or overburden removal/transportation, haul road construction, road/river diversions, repairs/maintenance of mining machinery, civil and structural constructions, cleaning and housekeeping, etc.

Procurements for the above are done by Materials Management/Contract management Cell/ function at MCL headquarters and also by the concerned units as per their delegated powers, in accordance with the corporate policy of CIL, which is a binding on MCL.

FOR WORKSHOPS:

Planning/executing of repair & overhaul of mining machineries deployed in different units through the following 3 tier setup - Central workshops, Regional workshops, and Unit / Field workshops.

FOR HOSPITALS:

MCL provides health care services to its employees through Central hospitals, Regional hospitals and Project dispensaries.

FOR MINES RESCUE STATION:

Mines rescue station of MCL is an emergency organization providing rescue services as and when necessary to all the mines of MCL, Area. Mines rescue station works under the frame work of rules and regulation of Coal Mines Rescue Rule, 1985 and by the circulars issued from Directorate General of Mines Safety from time to time.

FOR CENTRAL STORES: At Jagannath Area, Talcher, and at Lakhanpur Area, Ib-Valley - having the following functions for centralized items. Respective Areas/Units are catered to by their own Regional Stores.

Material Receipt	Receipt, arranging inspections, and maintaining necessary records of procured centralized items for respective coalfield.
Material Storage	Segregated storage of received and accepted centralized items for respective coalfield.
Material Issues	Issue of centralized items against approved requisitions from respective units of respective coalfield.

4.1 MCL AND ITS MANAGEMENT SYSTEM

Cl. 4.1, of ISO 9001; ISO 14001, ISO 45001

The top management of MCL has decided to implement an integrated management system in MCL complying with the requirements of ISO 9001, ISO 14001 and ISO 45001. Accordingly, the external and internal issues relevant to the purpose and business of MCL, which are likely to affect the ability to achieve the intended outcome(s) of this Integrated Management System are determined and given at Annexure 3. By establishing and maintaining these three management system standards, MCL gives due importance to the context of the organization and the external and the internal issues.

These issues, are periodically monitored, reviewed and suitable actions are taken by the competent authority of MCL.

4.2 NEEDS AND EXPECTATIONS OF ALL INTERESTED PARTIES OF MCL

Cl. 4.2of ISO 9001, ISO 14001, ISO 45001

MCL considers all the interested parties related to its IMS and determines their requirements during the realization of products/services. While framing the management objectives and planning to achieve them, MCL monitors and reviews the relevant information about the interested parties along with their requirements. The interested parties and their requirements related to this IMS are given in Annexure 4. MCL also considers all requirements (legal, regulatory, contractual etc.) while determining the requirements of the interested parties. Legal requirements and some of other requirements may constitute compliance obligation for MCL.

The purpose is to ensure a companywide process approach to establish, implement, maintain and improve upon this integrated management system in the company within the context of its overall business and operational activities and the associated risks.

The different platforms and frequencies of meetings with all relevant interested parties have been elaborated in the Sustainability Development Report of MCL available at https://www.mahanadicoal.in/Sustainable_Development/Sustainability_report.php

4.3 SCOPE AND CO-VERAGE OF IMSOF MCL

Cl. 4.3of ISO9001, ISO 14001, ISO 45001

The scope of this Integrated Management System of MCL is as follows:

1. Coal mining and supply operations, namely,
   a) Planning of mining and allied operations,
   b) Mining, handling, supply and transportation of coal, and
   c) Allied engineering and support operations.
2. Support services, namely,
   a) Planning, coordination, and monitoring,
   b) Repair and maintenance of mining machinery,
   c) Materials and water supply arrangements,
   d) Healthcare of workforce and their families.
   e) Establishment and employee management.
   f) Emergency and rescue operations in mines.

The requirements as under clause 8.3 and 8.5.3 of ISO 9001:2015 is not applicable to the scope of this IMS for which the justification is as given below -

MCL produces and markets coal through pre-defined coalmining processes. These are set either under customer contracts or by various statutory/regulatory bodies of Government of India like Directorate General of Mines Safety, Central/State Pollution Control Board, Ministry of Coal, Bureau of Indian Standards, etc. The products/services provided by workshops, hospitals, training centers etc. of MCL is through predefined policies, norms, Medical Council of India norms, Original Equipment Manufacturer Manuals, Part Manuals, procedures, etc. of the company or purely Governmental policies and norms. Since MCL implements all these policies, norms, procedures without any modifications at its end, the requirements as under clause 8.3 of ISO 9001:2015 is insignificant for this IMS.

None of the processes undertaken for the production and marketing of coal require the use of any property belonging to customers or external providers which are sensitive to the conformity of the product/service, and hence requirement of the clause 8.5.3 of ISO 9001:2015 is also not applicable for this IMS.

COVERAGE OF THE IMS IN MCL:

The coverage of this IMS for above scope is as follows. This covers all the functions of MCL but excludes the functions of MCL's joint-venture companies, e.g., Mahanadi Basin Power Limited (SPV), MJSJ Coal Limited, MNH Shakti Limited, Mahanadi Coal Railway Limited etc.

A. COAL MINING AREAS AND THEIR UNITS IN MCL:

SL NO	AREA NAME	OPEN CAST MINE	UNDERGROUND MINE	FIELD UNITS/ OTHER MIXED MINES
1	Basundhara	Garjanbahal OCP, Kulda OCP	----	----
2	Siarmal	Basundhara (W) OCP	----	
3	IB-Valley	Lajkura, Samleshwari	----	Central Hospital, IWSS
4	Lakhanpur	Lakhanpur, Belpahar	----	Central Store
5	Orient	----	Hirakhand Bundia Incline, Mine No. 1 & 2, Mine No. 3, and Mine No. 4	Mines Rescue station and
6	Bharatpur	Bharatpur	----	----
7	Hingula	Balram, Hingula	----	----
8	Jagannath	Ananta, Jagannath	----	Central Store
9	Bhubaneswari	Bhubaneswari	……	……
10	Kaniha	Kaniha	----	----
11	Lingraj	Lingraj	----	IWSS
12	Talcher	----	Jagannath, Nandira, Natraj, Talcher, Talcher West	Central Hospital, RRRT
13	-----	-----	-------	Central Workshop, IB-Valley and Talcher

The broad functions of the coal mining units are as follows:

For Mining & Supply Operations	For Support Services
Mining: **(In OC mines)** for following broad functions. Mining Operations Related: - Monitoring of outsourced work of overburden removal, coal transportation, etc.; - Ensuring compliance of statutory provisions. Drilling and Blasting Related: - Transport, storage of permitted explosives & detonators; - Blasting of shot holes to loosen out coal / overburden. Surveying Related: - Measurement of coal and overburden excavated in mine; - Measurement of coal stock in stockyards; - Preparation of statutory plans and drawings of mine. Safety Related: - Verifying compliance of safety rules/regulations; - Managing rescue and recovery work during emergencies; - Arranging for issue of safety gear to employees; - Maintaining statutory records relating to safety. **Mining**: **(In UG mines)** for following broad functions. Mining Operations Related: - Preparation and maintenance of UG roadways; - Preparation of coal faces for cutting; - Arranging underground strata control and roof-supports; - Loading of blasted coal and transportation to surface; - Ensuring compliance of statutory provisions. Drilling and Blasting Related: - Drilling of shot holes in UG workings; - Blasting of shot holes to loosen out coal; - Transport, storage and use of explosive & detonators. Surveying Related: - Monthly measurement of coal evacuated from the mine; - Ensuring alignment of UG roadways as per plan/drawing; - Measurement of coal stock in stockyards; - Preparation of statutory plans and drawings of mine. Safety Related: - Verifying compliance of safety rules/regulations; - Managing rescue and recovery work during emergencies; - Arranging issue of safety gears to employees; - Maintaining statutory records relating to safety. Ventilation Related: - Arranging ventilation of all UG workings areas; - Arranging operation of ventilation fan (surface & UG). Stowing Related: (Where required under DGMS permission) - Ensuring availability of suitable stowing material; Arranging operation of stowing plant and pumps. **E&M**: **(In both OC & UG mines)** for following broad functions. - Handling and transport of coal; - Mine dewatering by pumping out sump-water; - Electrical power and illumination arrangement; - Ensuring availability of cap lamps for UG workmen. **M&S:** (**In both OC & UG mines**) for following broad functions. - Loading and dispatch of coal from railway siding; - Arranging dispatch by road; - Facilitating sampling and analysis of dispatched coal.	**E&M**: (In both OC & UG mines) for electrical and mechanical maintenance and installations of machinery and infrastructure. **Civil**: (In both OC and UG mines) for following broad functions. - Construction & maintenance of haul roads & drains in OC mines - Construction and maintenance of UG dams, stoppings, haulage and conveyor foundations, etc. in UG mines; Civil maintenance of infrastructure, installations, and township in both OC and UG mines. **Personnel**: (In both OC & UG Mines) for following broad functions. - Managing professional competence of all employees; - Employee-career and welfare related activities. **Finance**: (In both OC & UG mines) for financial accounting of the mine. **Environment**: (In both OC and UG mines) for following broad functions - Monitoring of environmental performance; - Liaison with all concerned about environmental objectives and environmental management programs. **Medical**: (In both OC and UG mines) for arranging health care services for all employees and their family members. **Stores**: (In both OC and UG mines) for storage of materials for use in the mine during mining and allied operations. **Training**: (In both OC and UG mines) for providing statutory, vocational and developmental training to all employees including contractual employees as required, through the various Vocational Training Institutes in all areas.

For Mining & Supply Operations	For Support Services

B. OTHER SUPPORT FIELD UNITS:

a) Central Workshop, Talcher, and IB-Valley - having the following functions:

Section Name	Talcher	IB Valley	Product/Service Description
For executing customer jobs: [Sometimes, the below-shown Sections also provide support to other Sections as their interfaces.]			
Engine Repair	√	√	Repairing/overhauling of engines of mining machinery and their accessories.
Transmission Repair	√	√	Repairing/overhauling of transmissions, torque converters and control valves.
Electrical Repair	√	√	Repairing/rewinding of motors, generators, alternators, transformers, self-starters and coils.
Machining	√	√	Manufacturing of components of alloy steel, cast-iron, cast-steel, structural steel, and non-ferrous; and their repairing.
Structural	√	-	Fabrication of structural steel components, and their repairing.
Dozer Rehabilitation	√	-	Rehabilitation of crawler mounted equipment.
Dumper Rehabilitation	√	-	Rehabilitation of wheel mounted equipment.
Rehabilitation	-	√	Rehabilitation of wheel/crawler mounted equipment.
Transformer Repair	√	-	Repairing/rewinding transformers.
Sub-Assembly	√	-	Repairing of HEMM sub-assembly.
Reclamation & Heavy Repair	-	√	Repair & overhauling of transmissions and torque converters; and Repair of sub-assemblies of shovels, dozers, drills, and draglines.
Motor Transport	-	√	Repair/Overhaul of transmissions including their control valves; Rehabilitation and overhaul of dumpers; Rehabilitation of dozers, drills.
For providing internal support to the above Sections:			
Planning	√	√	Planning of job execution, monitoring of job progress and deliveries, preparation of progress reports, and performance analysis
Material Management	√	√	Arranging procurement, storage and issue of input materials.
Purchase	√	√	Purchase of input materials.
Civil	√	√	Maintenance of civil infrastructures of the Workshop.
Finance	√	√	Costing and billing of jobs and managing finances of Workshop.
Personnel	√	√	Managing career and welfare related activities including training of employees.
Central Maintenance	√	-	Maintenance of material handling equipment and light motor vehicles etc.
Computer System	√	√	Monitoring of job progress, job costing, recording of float stock and deliveries, ensuring functioning of 'Online Materials Management System' software, personnel information system, payroll processing
Electrical Maintenance	√	-	Maintenance of lighting arrangements, machines, installations, workshop equipment etc.
Electrical & Mechanical	-	√	Maintenance of Workshop's infrastructures and promoting safety awareness among all concerned.
Training	√		Arranging required training and maintaining employee competence records.

b) Central Hospital, Talcher and Central Hospital, IB-Valley - having the following functions:

1. **For providing health-care services:** Through in-house OPD, IPD and EMU; and/or through outdoor medical camps - Departments/functions of Internal Medicine, Surgery, Ophthalmology, Paediatrics, Otolaryngology, Gynaecology & Obstetrics, Dentistry, Orthopaedics, Psychiatry, Dermatology, Gastroenterology, Nephrology, and Industrial Health.
2. **For providing support services to the above:** Medical support like the departments/functions of Pathology, Radiology, Ultrasonography, Anaesthesia, Blood Bank, Pharmacy, and Physiotherapy & Rehabilitation. Other support like the departments/functions of sterile-supplies/autoclaving, Kitchen, Laundry, Medical-gas supply, Mortuary, Sanitation, and Ambulance.

3. **For providing other support to the hospitals:** Departments/functions of Civil Engg., E&M Engg., Computer Systems, Material Management, Electronics & Telecommunication, Personnel, Finance and Medical Waste Disposal.

c) Management Training Institute, Sambalpur, and **all Vocational Training Institutes**: To provide required statutory, vocational and developmental training to all employees including contractual employees.

d) Central Stores at Jagannath Area, Talcher, and **Central Stores at Lakhanpur Area, IB Valley**: Having the following functions for centralized items. Respective Areas/Units are catered to by their own Regional Stores.

Material Receipt	Receipt, arranging inspections, and maintaining necessary records of procured centralized items for respective coalfield.
Material Storage	Segregated storage of received and accepted centralized items for respective coalfield.
Material Issues	Issue of centralized items against approved requisitions from respective units of respective coalfield.

e) Integrated Water Supply Scheme (IWSS) at Lingaraj Area, Talcher, and **Integrated Water Supply Scheme (IWSS), IB Valley Area**: To ensure domestic water supply to all the establishments of respective coalfields.

f) Mines Rescue Station (MRS) at Orient Area, IB Valley, and **Rescue Room and Refresher Training Centre (RRRT) at Talcher Area, Talcher:** To ensure availability of required mines rescue equipment and competent/trained persons for rescue operations in MCL, and to undertake rescue work during emergencies and/or accidents in MCL.

C. FUNCTIONS OF CORPORATE HEADQUARTERS AT SAMBALPUR:

For overall administration of the company and support to all field-units, functioning either as separate departments or merged with any other. The brief of the broad functions / activities of MCL-HQ departments are as follows.

NAME (arranged alphabetically)	BROAD FUNCTIONS
Civil Engg.	Arranging major civil engineering constructions; coordinating related procurements; monitoring of all civil engineering works.
Contract Management	Coordinating and executing major contracts entered into by the company for contractual works within MCL
Corporate Planning	Project implementation programming; coordinating mine development work; monitoring project implementation work.
Company Secretary	Arranging MCL board meetings; maintaining records of its proceedings.
Computer Systems	Facilitating maintenance of all computer systems and LANs; monitoring usage and smooth running of computer systems.
Electrical and Mechanical Engg	Coordinating spares procurement for machinery repairs and maintenance; monitoring of P&M performance; monitoring coal handling plant construction in Projects.
Environment	Coordinating environmental management; monitoring progress of environmental protection measures; arranging environmental clearances and licenses.
Excavation	Coordinating spares procurement for HEMM repairs; monitoring of HEMM performance.
Finance	Arranging financial approvals of functions not covered by other sections of Finance; coordination of financial activities of other departments in the finance directorate; facilitating external financial audits; monitoring compliance of audit reports; and reporting progress to auditing agencies.
Finance (Accounts)	Maintaining financial accounts and financial statements for MCL; monitoring expenditure against budget provisions.

NAME (arranged alphabetically)	BROAD FUNCTIONS
Finance (Costs & Budget)	Budgeting of capital and revenue expenditure, and operating costs; monitoring of budget utilization; monitoring actual Vs projected costs.
Human Resource Development	Planning of training needs of MCL employees; arranging employee training; coordinating/monitoring the activities of field training centers updating of training records.
Industrial Engg	Setting optimal performance limits for man and machines in mining and allied operations; monitoring performance against set norms.
Innovation Cell	Implementing innovative and conventional or unconventional solutions to problems faced by the MCL.
Legal	Managing legal affairs of MCL units.
Medical Services	Coordinating health care services in MCL, including health check-ups of employees; monitoring of all hospitals and dispensaries.
Materials Management	Material budgeting; centrally purchasing high value, imported, and 'centralized' items; monitoring of supplier-performance.
Personnel and Administration (including Welfare, EE, IR, Comm. Dev.)	Manpower budgeting; managing career-growth and welfare of employees; community development activities; settling personnel claims/grievances of HQ personnel; transfers/posting of employees; maintaining service records; monitoring P&A services rendered in field units; industrial relations management.
Public Relations	Managing outward information flow about MCL to press; managing public relations.
Production Coordination	Apex planning of production targets; coordination, monitoring and review of production performances against set targets.
Quality Control	Arranging for annual coal grade declaration; monitoring of grade slippage in coal supplies to customers.
Land & Revenue	Coordinating/facilitating and monitoring of land acquisition, rehabilitation, and resettlement work.
Marketing and Sales	Finalizing coal supply contracts with customers; informing customers on coal availability for sales; coordinating with Projects on their rake allocations; monitoring coal supplies to customers from Projects.
Safety & Rescue	Monitoring of safety performance, e.g., accidents, use of safety equipment, etc.
Security	Maintaining security of MCL's infrastructure and property against pilferages and theft.
Stores	Monitoring the inventory in company's CST and other unit stores.
Survey	Coordination of surveying activities of all coalmines
Town Administration	Maintaining MCL's offices, townships, and guest houses in Sambalpur
Technical Secretariat, CMD	Assisting CMD in strategy formulation and apex administration; obtaining/providing inputs to top management for apex reviews.
Vigilance	Ensuring the implementation of company rules in all MCL establishments; handling of cases of malpractices, if any.
Washery	Coordinating and executing contract for setting–up of washeries in command areas of MCL, Monitoring the construction work of washeries, Coordinating for R&D Projects collaboration with institutions of repute and other govt agencies related to coal

The details of the activities of MCL –HQ departments are given on the website link - https://www.mahanadicoal.in/Welcome.php

4.4 INTEGRATED MANAGEMENT SYSTEM AND PROCESSES OF MCL

Cl. 4.4 of ISO 9001, ISO 14001, ISO 45001

This manual describes an Integrated Management System complying with the requirements of the ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 international standards. The purpose is to adopt a process approach to establish, implement, maintain, and continually improve the System in the company within the context of its overall business and operational activities and manage the associated risks in accordance with the requirements of the above international standards. The application of the process approach in this Integrated Management System enables MCL in:

a. understanding and consistency in meeting requirements;
b. considering the processes in terms of added value;
c. achieving the required process performance; and
d. Improving the processes through evaluation of available data and information.

For the scope as under Section 4.3, the processes and their interactions in MCL are given in Management System Plan under Annexure 1. This management system plan also shows the relationship/interaction of the core processes with other systemic processes under the IMS.

Besides this, the generalized process flow of realizing the product by open pit mining and underground mining are given in Annexure 2A & 2B respectively.

The process flow for each jobs are identified by the departments under their department specific work instruction manual and are maintained by respective General Managers/Head of Departments that contain at least the following details:

1. Main processes/activities undertaken in the concerned department;
2. The inputs required, and the outputs expected from these processes;
3. The resources needed for these processes and ensure their availability;
4. The sequence and interaction of sub-processes involved in the main process;
5. The responsibilities and authorities for these processes;
6. References of external/internal document(s) specifying the method to carry out these sub-processes;
7. References of office-files, checklists, records, etc., containing output records of every sub-process;
8. Reference to the risks and opportunities as determined in accordance with the requirements under section 6.1; and
9. Approval/acceptance methods and criteria (including monitoring, measurements and related quality, & environment performance indicators) needed to ensure the effective operation and control of these processes.

In order that the processes achieve their intended results, the General Managers/Head of the Departments review and evaluate periodically the processes and the necessity for making any changes in the processes which will ultimately lead to continual improvement in the IMS.

In general, there is an awareness and understanding amongst all for managing these interrelated processes as a system, thus contributing to the organization's effectiveness and efficiency in achieving the intended results. This approach enables MCL to control the interrelationships and interdependencies among the processes of the system, so that the overall performance of the organization is enhanced.

5. LEADERSHIP

5.1 LEADERSHIP AND COMMITMENT

Cl. 5.1, of ISO 9001, ISO 14001, ISO 45001

CMD, MCL demonstrates leadership and commitment towards the IMS by -

a. taking accountability for the effectiveness of the IMS;
b. ensuring that the IMS policy, objectives and targets are defined, established, implemented, maintained and are compatible with the strategic direction of the MCL;
c. ensuring the integration of the requirements of these four management system standards into the MCL's key business processes;
d. promoting the use of the process approach and risk-based thinking;
e. ensuring that the resources needed for the IMS are available;
f. communicating the importance of effective integrated management system and of conforming to the IMS requirements;
g. ensuring that the IMS achieves its intended results;
h. engaging, directing and supporting persons to contribute to the effectiveness of the IMS;
i. Promoting continual improvement of IMS.
j. Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.
k. Supporting the establishment and functioning of health and safety committee.
l. ensuring that results are measured and reported at determined intervals
m. Conducting management reviews at planned intervals; and
n. Taking overall responsibility and accountability for the prevention of work-related injury and ill health, as well as provision of safe and healthy workplaces and activities.
o. Protecting the workers from reprisals when reporting incidents, hazards, risks and opportunities.
p. Ensuring the organization establishes and implements a process (es) for consultation and participation of workers.

CMD, MCL also demonstrates leadership and commitment with respect to customer focus by ensuring that:

a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;
b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;
c) the focus on enhancing customer satisfaction is maintained.

5.2 MANAGEMENT POLICY

Cl. 5.2 of ISO 9001, ISO 14001, ISO 45001

The Management Policy of MCL had been framed considering the requirements of international standards being implemented in MCL. With the decision to continue the integrated management system in MCL, the earlier approved management policy has been endorsed by CMD, MCL with the approval of this document. The management policy of MCL is given in page 2, Section 0 of this manual.

This policy is communicated through suitable displays to all concerned and is also available on MCL's website for all interested parties. This policy is reviewed periodically and if required, updated for its continuing suitability.

5.3 ORGANIZATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES

Cl. 5.3 of ISO 9001, ISO 14001, ISO 45001

CMD, MCL takes overall custody of this Integrated Management System of MCL. The roles, responsibilities and authorities related to the management system is given under **Annexure 5** of this manual. Apart from these, some specific authorities and responsibilities of various functionaries in MCL are as follows:

a. **Overall functionary related roles & responsibilities** – As mentioned in the company's approved 'Delegation of Power', maintained by the Company Secretary.

b. **Related to this Integrated Management System** – The following specific functionaries have been made for the effective implementation of the IMS -

   1. **Nodal Officer (IMS) MCL HQ** – MR/TS to DT(Operation) designates an officer as Nodal Officer (IMS) to assist him in the control of IMS documentation, internal auditing, performance monitoring, facilitating apex reviews, and liaison with external auditors and or worker's representative on matter related to this IMS.
   2. **Nodal Officer (IMS) for unit level** – GM / Head of the unit designates an officer as 'Nodal Officer (IMS)' to assist all concerned in the unit for implementation of the system in right spirit and provide guidance to them on matter related to this IMS.

For specific roles as per IMS, CMD has designated following functionaries to take below defined charges of the IMS, in addition to their other responsibilities.

A. Heads of all Areas, Heads of all other support field-units, and Heads of HQ-departments -

a. To ensure that processes established under the IMS are implemented and maintained in their respective functions in accordance with the requirements of the standards;
b. To promote awareness of MCL's management policy and objectives at all levels;
c. To communicate the defined responsibilities and authorities under the IMS to all concerned to facilitate effective implementation of the management system;
d. To ensure the promotion of awareness towards the requirements of customers and other Interested Parties in MCL;
e. To ensure that operation and control of the IMS remain effective based on suitably defined criteria and methods;
f. To report performance of IMS and recommendations for its improvement to MR / TS to Director (T/O); and
g. To ensure that the integrity of IMS is maintained when changes are planned and implemented.

B. Management Representative (MR):

a. To undertake corporate coordination and liaison for all the above;
b. To control apex documentation of IMS;
c. To manage internal audits;
d. To liaise with all external Interested Parties on matters relating to IMS;
e. To provide necessary support to CMD for review of the IMS as may be necessary; and
f. To ensure the promotion of awareness of the requirements of customers and all other interested parties within MCL.
g. To ensure that the integrity of IMS is maintained when changes are planned and implemented.

5.4 CONSULTATION AND PARTICIPATION OF WORKERS

Cl. 5.4 of ISO 45001

ISO 45001 requires the organization to establish, implement and maintain a process (es) for consultation and participation of workers at all applicable levels and functions and worker's representatives to be engaged in development, planning, implementation, performance evaluation and improvement of system. Accordingly, Head of Safety ensures the following:

a) provide mechanisms, time, training and resources necessary for consultation and participation;
b) provide timely access to clear, understandable and relevant information about the OH&S management system;
c) determine and remove obstacles or barriers to participation and minimize those that cannot be removed
d) Emphasize the consultation of non-managerial workers on the following:
   1. Determining the need and expectations of interested parties.
   2. Establishing the OH&S policy;
   3. Assigning organizational roles, responsibilities and authorities, as applicable
   4. Determining how to comply legal requirements and other requirements.
   5. Establishing OH&S objectives and planning to achieve them.
   6. Determining applicable controls for outsourcing, procurement and contractors.
   7. Determining what needs to be monitored, measured, and evaluated.
   8. Planning, establishing, implementing and maintaining audit programme(s)
   9. Ensuring continual improvement

e) Emphasize the participation of non-managerial workers in the following: -

   a. Determining the mechanism for their consultation and participation
   b. Identifying hazards and assessing risks and opportunities.
   c. Determining the actions to eliminate hazards and reduce OH&S risks
   d. Determining competence requirements, training needs, training and evaluating training.
   e. Determining what needs to be communicated and how this will be done.
   f. Determining control measures and their effective implementation and use.
   g. Investigating incidents and nonconformities and determining corrective actions.

6. PLANNING

6.1 ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES

Cl. 6.1 of ISO9001, ISO 14001& ISO 45001

MCL has determined the risks and the opportunities during the planning of its management system considering the following –

- the external and internal issues that are relevant to its purpose and strategic direction of MCL
- the scope and coverage of the IMS,
- the needs and expectations of the interested parties,
- Fulfilment of all compliance obligations, including those related to environment, health & safety.

The IMS plan of MCL -

- assures the achievement of the intended results of this management system;
- enhances its desirable effects;
- prevents or reduces the undesired effects of the risks; and
- Achieves continual improvement.

RISK & OPPORTUNITIES RELATED TO CONFORMITY OF PRODUCT AND SERVICES:

During planning of coal production and other processes, MCL identifies all the possible risks associated with its business processes/ QMS processes and take required actions to address these risks & opportunities on an ongoing basis to ensure achievement of the business objectives without any interruptions. MCL regularly takes actions at all levels to minimise the risks involved in its products/services so that conformity of product is not compromised.

The details of some of the identified key risks and planned actions of MCL are given under Annexure11.

For other associated services, respective unit head determines risks and opportunities related to their work under respective Work Instruction Manual and undertake suitable actions to mitigate/minimize the risks.

RISKS & OPPORTUNITIES RELATED TO ENVIRONMENTAL ASPECTS AND OH&S HAZARDS:

MCL identifies risks and opportunities associated with its environmental aspects and OH&S hazards, compliance obligations & other issues on the basis of a structured review based on defined criteria as given below.

MCL has come out with a “Risk Management Charter”, available with the Corporate Planning Department which incorporates the plan for risk assessment, risk treatment and evaluation of the effectiveness of the actions taken.

A risk management committee has been set up with the individual roles as mentioned in the “Roles & Responsibilities Charter” to facilitate the implementation of this Risk Management System including the options to avoid risks, minimize risk, sharing risks, taking risks to pursue an opportunity, etc. that are proportionate to the potential impact on the conformity of the product and services.

ENVIRONMENTAL AND OH&S REVIEWS

All operational activities of MCL have been assessed to determine their possible environmental impacts and OH&S risks followed by the identification of those that are 'significant' for MCL. The requirements, arrangement, scope, procedure, etc. for such an assessment is as follows:

A. Environmental Aspects and OH&S Hazards of product (i.e., coal): Coal is a mineral that occurs in nature as in-situ layers/strata of the earth's crust without having any interaction with the environment on its own. It interacts with environment and/or causes health-and-safety concerns only when it is put to use by its users. Even this interaction during its use is characterized by the inherent natural properties of this mineral, which do not get altered at the time of its mining. Further, MCL can neither control nor influence this interaction of coal with the environment and/or its effects on health-and-safety during its use by the consumer.

B. Environmental Aspects and OH&S Hazards of Operations: These relate to all operational activities of MCL, which fall under the following categories:

a) **Core activities**, i.e., the planned ones for actual/core operations, like blasting, loading, transportation etc. of coal and overburden, etc.

b) **Support activities**, i.e., the planned ones for supporting the core operations, like maintenance and repairs of machinery, providing health care service etc.; and

c) **Emergency situations,** e.g., the unplanned situations during operations, like fire in coal-face/stockyards, HEMM equipment, failure of slopes/roof/supports, spontaneous combustion, accidents of machinery, etc.

C. Environmental and OH&S Review:

For OH&S Review: - As given in DGMS(Tech)(S&T) Circular No. 05 dtd. 02/04/2016, a Safety Management Plan (SMP) of all the mines (OC/UG) have been prepared which takes care of OH&S review and risk assessment. However, for Central workshops and other service units covered under the scope 4.3 of this IMS and not covered under above circular following process is employed for OH&S & environmental review both.

Environmental& OH&S review: To form a basis of this IMS, the identification of environmental aspects and OH&S Hazards of all operations of MCL (except OH&S review of units mentioned in above para), is done through an initial environmental/ OH&S review as per the guidelines given under clause A.6.1.2, Annexure-A, of standard ISO 14001:2015 and clause 6.1.2.1, 6.1.2.2 and 6.1.2.3 of ISO 45001:2018

Initial environmental/OH&S review is a specific concept under ISO 14001 and ISO 45001 requiring composite expertise towards environment, OH&S, concerned technical-operations, and system concepts under ISO 14001 and ISO45001. Trained lead auditors and internal auditors of MCL are acting as key agents. Most of them are designated as Nodal Officer for this IMS and have requisite trainings to conduct this review (as per Record Format 11.2) for their respective unit/HQ. This review is being conducted just one month before the start of the next financial year. The basis for this environmental/OH&S reviews in MCL are done considering the following:

1. Routine and non-routine activities of all Personnel of MCL;
2. Human behaviour, capabilities, and other human factors;
3. Hazards possibly originating outside MCL's workplaces but are capable of becoming an OH&S concern for MCL workplaces;
4. Infrastructure, equipment and materials provided at the workplace by either MCL or its Suppliers/Subcontractors;
5. Applicable legal and other obligations;
6. Design and/or status of workplaces, processes, machinery/equipment, installations, operating procedures, and work organization, including their adaptation to human capabilities.

During the review process, MCL considers the following:

a) For every function of MCL, all the existing and planned operational activities and sub-activities that can interact with Environment and/or can have any OH&S concern were listed under a specially designed check sheet – including the outsourced ones - and confirmed through site-visits;

b) For each of the above-identified Environmental Aspects and/or OH&S Hazards, all possible Environmental Impacts and OH&S Risks that can occur under normal/core, abnormal/support, and possible emergency situations are identified under each of the following categories and confirmed through site-visits.

i. Emission to Air, including noise, radiations and vibrations;

ii. Release to water bodies, both surface and sub-surface;

iii. Release to land;

iv. Effects on flora and fauna;
v. Wastage of resource; and
vi. Impact on persons, both employees and public – relating to quality of human life and dangers due to handling, exposure to hazardous substances, and slips, trips and falls.

Each of the above-identified Environmental-Impact/OH&S-Risk is rated on a scale of 1 to 5 against the following 5 factors for its relative significance:

Factor	Point Score	Significance of the Impact/Risk
Severity of effect	1	Effect limited within operational area (e.g., mine, shop floor)
	2	Effect beyond operational area but limited within boundary of concerned unit (e.g., Project, workshop, hospital)
	3	Effect extends/can-extend beyond unit boundary to nearby locality
	4	Effect extends/can-extend to regional/state/zone level
	5	Effect extends/can-extend to global level
Probability of occurrence	1	Chances of occurrence are very remote; never occurred in the past
	2	Chances of occurrence are quite low; only a few past-instances
	3	Chances of occurrence are moderate; once a year or so
	4	Chances of occurrence are high; almost every month
	5	Chances of occurrence are very high, almost daily; inherent in the technology
Duration of effect	1	Effect remains only up to one hour after occurrence
	2	Effect remains only up to one shift (8 hrs.) after occurrence
	3	Effect remains only up to one day after occurrence
	4	Effect remains only up to one month after occurrence
	5	Effect remains continued beyond one month
Risk to human health and safety	1	Can cause minor curable health disorders
	2	Can cause problems needing long term treatment
	3	Can cause untreatable disorders; or permanent disablement
	4	Can cause death in the long-term
	5	Can cause immediate death
Legal implication	1	Does not attract any legal and/or punitive liability
	2	Not under any legislation, but may cause liabilities due to public litigation
	3	Covered under legislation, but required controls are generic
	4	Covered under legislation/permit/license, and required controls are project/mine-specific
	5	Maximum permissible limits specified under legislations/permits/licenses

This is on the consideration that, significance, here is an expression of priority for MCL upon overall concern for the society vis-à-vis the handling ease and not any academic/theoretical magnitude determined through empirical measurements.

Significance ratings for each Impact/Risk against each of the above five factors were compounded to arrive at Overall Significance Score of that Impact/Risk.

Depending upon the scores of this review the concerned unit/Area/HQ considers at least top 05 significant environmental aspects and 05 significant hazards for finalization of objectives for the next financial year and propose the targeted actions accordingly for achieving of the same.

D. Documentation of Review Results: Above review results were comprehensively compiled and maintained under record 11.2 by MCL's respective Nodal Officer (IMS) in an MS Excel sheet for -

a) Maintaining this information for all future references; and
b) Distribution of its relevant portions to all concerned functions for awareness& taking actions.

E. Identification of Legal and Other Obligations: During documentation of this IMS, all legal impositions and other subscribed obligations related to Environmental Impact and OH&S Risks have been comprehensively identified. These are listed under Annexure-7of this manual for reference.

F. Updating of Environmental/OH&S Review Results: Government of India or other authorities approve specific technology and infrastructure for entire life of concerned operations in MCL. So, identified Environmental Aspects and Impacts, and OH&S Hazards and Risks of MCL are not normally changeable. However, the Environmental/OH&S Review Record is reviewed and revised, if necessary, through the following:

A.	Head (Environment) and Head (Safety), HQ decides the need for review of identified environmental aspects & impacts, and OH&S hazards & risks, and/or related significance in January every year due to possible change in any of the following: a) Changes or proposed changes in MCL's organization, activities, facilities, infrastructure, Key characteristic & their limits (refer Annexure – 10) and technology of mining, b) Modifications to this IMS, and their possible impacts on operations, processes, and activities, c) Changes or proposed changes in statutory and/or obligatory requirements, or d) Need emerging due to any emergency situation like accidents or technology change.
B.	**Head (Environment) and Head (Safety) HQ arranges review and needed modification** of Environmental/OH&S Review Record, if considered necessary through above, in January every year as per the mechanism given above – through appropriate participation and involvement of all concerned.

One of the basic focus of this management system is to ensure that environmental impacts / OH&S risks are at their minimum while different activities are being carried out. Considering all the environmental aspects/OH&S hazards of the activities as discussed above a review is done annually to determine their possible environmental impacts / OH&S risks.

All the legal and other regulatory requirements and compliance obligations related to the environment, OH&S, Mining, etc. are determined and placed at Annexure 7. These are also taken into consideration while establishing, implementing and maintaining this IMS. Access to and updating of all these external documented information is ensured through the procedure as given in Section 7.5.

Relevant actions on compliance obligations are being taken and maintained by the Environment, Company Secretary, Legal and the Safety Departments of MCL. Communication of relevant information on legal and other obligations is ensured to all employees and other interested parties through arrangements as under Section 7.4.

Planning has been done to tackle the potential emergency situations like fire, accidents, flood, terrorism, mine safety and others that have potential risks.

CMD, MCL has ensured that a well-planned IMS is established, implemented and being maintained in the Company. The processes/elements of this IMS are depicted in Annexure1, 2A & 2B and are elaborated throughout the documentation of this IMS. The integrity of this IMS is always maintained, particularly due to administrative, functional, and structural changes in MCL and when making changes in the documentation of this IMS.

6.2 MANAGEMENT OBJECTIVES AND PLANNING TO ACHIEVE THEM

Cl. 6.2, of ISO 9001, ISO 14001; ISO 45001

With a view to measure the performance of MCL in a comprehensive and focused manner, CMD, MCL ensures that suitable and measurable management objectives are established at relevant functions and levels under Management Objectives, Targets, Action Plans and Achievements. (Format 11.3).

To keep these objectives continually suitable and relevant, CMD, MCL ensures that all these are reviewed every year considering the following parameters:

a. MOU as determined by MCL and accepted by apex company CIL;

b. MCL's focuses under the management policy;
c. Past year's achievements against earlier objectives, targets, and programs;
d. Identified significant Environmental-Aspects/OH&S-Hazards;
e. Applicable legal and other obligatory requirements;
f. Views of the nearby community, employees, and other Interested Parties;
g. Financial, operational and business requirements of MCL;
h. Available technological options;
i. Improvement opportunities emerged during the previous year;
j. Improvement efforts made during the previous year; and
k. Key characteristic and their limits (as given under Annexure- 10)

The achievements against these objectives are recorded in the same Record format 11.3 by the Nodal Officer, IMS. The half yearly achievements against these objectives are presented for Apex review during the Management review meetings.

All Unit Heads ensure that the quarterly achievements against the set targets, etc., related to their functions are suitably recorded under Record Format 11.3. All field unit Heads send the copies of above recorded achievements to respective Area GM. All Heads of MCL HQ departments send these achievements to TS to D(T-Op)/ MR, quarterly, for collation and placing before CMD and DTs.

All Unit Heads also review the achieved monthly performances of their functions and undertake needed actions to pursue continual improvement in their functions.

6.3 PLANNING OF CHANGES

Cl. 6.3, ISO 9001

Whenever any changes are required in this Integrated Management System, the modifications are done in a planned manner by the Nodal Officer, IMS, MCL HQ with due consideration to -

a) the purpose of the changes and their potential consequences;
b) the integrity of the elements of this IMS;
c) the availability of resources; and
d) the allocation or reallocation of responsibilities and authorities.

6.4 EMERGENCY PREPAREDNESS AND RESPONSE

Cl. 8.2 of ISO14001and ISO 45001

Keeping in view the Environmental and OH&S concerns arising due to emergency situations, the required control on potential Environmental Impacts and OH&S Risks of various operations have also been planned as follows:

a. **Possible Emergencies**: The emergency and hazardous situations that may result into adverse Environmental Impacts and/or OH&S Risks – apart from dangers to the infrastructure - are specially identified during initial Environmental/OH&S review.

b. **Emergency Preparedness**: Prevention of the emergency and Hazardous situations along with the procedures to mitigate their Environmental Impacts and OH&S Risks is specifically covered under various statutes for coalmining sector especially under Coal Mines Regulations, 2017, and related circulars of Directorate General of Mines & Safety (DGMS). In line with the requirements under all these external documents, preparedness to prevent and respond to these situations, and own procedures to mitigate their impacts are declared under the following documents – Emergency Response Plans & Disaster Management Plans.

c. **Review of Emergency Preparedness**: Since the procedures for preparedness and response to emergencies are formulated by statutes, MCL has no authority to review and/or revise their content. However, under section 24 of Mines Act, 1952, the DGMS is bound to review and revise all these emergency preparedness and response documents after the occurrence of every accident or emergency situation. Accordingly, emergency preparedness and response plans are revised as per the revised DGMS documents and instructions.

d. **Periodic Testing and Improvement in Emergency Preparedness:** As required under chapter 11 of Coal Mines Regulation, 2017, a specially designated person in each mine, Safety Officer, periodically checks the preparedness against all such emergency situations as per the arrangements declared under the Emergency Response Plan and Disaster Management Plan.

For all the other units, the designated officer prepares the emergency response plan for their units considering all the possible emergency situations. The respective Head of the unit reviews and finally approves the Emergency Preparedness and Response Plan for the use of all in their unit.

All units of MCL also periodically test the procedures to respond to emergency situations through conducting mock drills and where necessary revise its emergency preparedness and response procedures. The records pertaining to the mock drills, their findings and actions taken are recorded by the concerned unit and retains for future reference.

7. SUPPORT

7.1 RESOURCES

Cl. 7.1 of ISO 9001, ISO 14001and ISO 45001

All HODs identify the needed resources i.e. both for people and infrastructure, based on annual requirement and respective DTs approve them through normal official communication channels.

GM (MM) and GM (Personnel) prepare an action program for indicating schedule for provision of material and manpower respectively within the overall budgetary limits. The document indicating program of different activities of all departments and schedule for providing resources is issued by June for the current financial year. GM (Finance) arranges the financial concurrences as per available budget to meet the required resources. GM (MM) and GM (Personnel) arrange materials and manpower respectively for aiding in the implementation of the system. All such resources especially relate to the following:

- Resources needed to implement and maintain the IMS, and continually improve its effectiveness.
- Resources needed for enhancing customers' satisfaction in meeting their requirements, and
- Resources that needs to be obtained from external providers including services.

GM (Finance) maintains the comprehensive list of infrastructures and other various assets under company's Asset Register. This is reviewed and updated annually and depreciated as per the existing Government rules.

The maintenance arrangement of the available infrastructure is declared under the Maintenance Manual. The list of such infrastructure is as follows:

- Buildings, workspaces, transportation and associated utilities - by GM/HOD (Admin), GM (Town Administration).
- All opencast, underground and other working equipment, both hardware and software – by respective GM/HOD
- Computer communication and information services including hardware and software – by GM/HOD (System) and GM/HOD (Telecommunication).

ENVIRONMENT FOR OPERATION OF PROCESSES

Suitable work environment is important not only to ensure the conformity of product/service requirements, but also to ensure efficient functioning. Accordingly, MCL considers that appropriate work environment falls under the categories of 'Workplace Conditions' and 'Operational Safety'. The operational instructions as declared under the Operational Manual of MCL also considers the actions to maintain suitable work environment. Arrangements to manage these components of work environment are as follows:

Workplace Conditions: Under this, the work environment needed in workplaces and machinery are maintained to specially ensure the following:

1. Proper functioning of provided equipment and amenities;
2. Safe and congenial work-areas;
3. Access to the facilities of clean toilet, potable water, and hygienic food storage to all personnel; and
4. When any dormitory facilities are provided to personnel, ensuring that they are clean, safe, and meet at least the basic needs of occupants.

While the arrangements/methodologies relating to '1' and '2' above are specified under the Maintenance Manual, '3' and '4' are ensured through routine arrangements in MCL.

Operational Safety: Safety during different operations is ensured as per related rules, regulations, legislations, etc. These are also integrated into work instructions documented under Operational Manual and Maintenance Manual. Apex coordination and monitoring of such safety aspects for entire

MCL is done by the Safety Department of HQ through the arrangements defined under their departmental work instruction manual/process plan.

Additionally, the operational safety aspect also emphasizes the following:

1. Special prevention of exposure of persons to any situation – in or outside MCL's workplaces - that may be Hazardous and/or unsafe for their physical and/or mental health and development.
2. Safe and healthy workplace conditions to all its Personnel; and, as far as reasonably practicable, minimizing the inherent causes of Hazardous workplace environment – bearing in mind the prevailing knowledge and specific Hazards of the industry – to prevent potential accidents and injury to their health arising out of, associated with, or occurring in the course of their work-activities.
3. Establishing suitable systems to detect, avoid, or respond to potential threats to the health and safety of its Personnel; and maintaining written records of all accidents that occur in the workplaces, residential and other premises.
4. Providing appropriate personal protective equipment to all its Personnel; and in the event of a work-related injury, providing necessary first aid followed by entire follow-up medical treatment as required.

MONITORING AND MEASURING RESOURCES

When monitoring or measuring is used to verify the conformity of products and services, all users in MCL ensure that the resources provided are suitable for the specific type of monitoring and measurement activities being undertaken and are maintained to ensure that they are fit for their purpose.

The list of measuring equipment is maintained by respective departments containing the following details.

Equipment Used		Monitoring/ Measurement requirement			Fitness checking requirement			
Name	ID No.	Characteristics to be measured	Measuring parameters	Needed accuracy	Method	Frequency	Responsibility (Name)	
							Internal	Ext.

The measuring equipment can be of any of the following two types - those, which **cannot** go out of setting due to repeated use and those, which **can** go out of setting due to repeated use. The first type of equipment only requires proper and safe use. So, to ensure needed accuracy only suitable and good quality equipment are procured and maintained to keep them fit.

For second type of measuring equipment, the following controls are exercised to ensure valid results through them.

A. Getting the equipment calibrated/adjusted through designated arrangement as declared under the calibration record, prior to the due dates.	By GM/HODs
B. Declaration of status on equipment after calibration/adjustment as through 'A' above - through stickers on equipment showing (1) equipment identification number, (2) their 'OK' status, and (3) due date for their next checking.	By Designated Officer

<table>
<tr><td>C. Maintaining the records as under.
i. <u>If calibration/adjustment done internally</u> – separately for each equipment, under a specific register, using the following format.
<table>
<tr><th colspan="4">Verification / Calibration Details</th><th rowspan="2">Fitness Status (OK / Not OK)</th><th rowspan="2">Sign/ Date</th></tr>
<tr><th>Date</th><th>Value of Used Measurement Standard</th><th>Reading Before Adjustment</th><th>Reading After Adjustment</th></tr>
</table>
ii. <u>If calibration/adjustment done externally</u> – through certificates issued by the designated external agency.</td><td>By Designated Officer</td></tr>
<tr><td>D. Safeguarding and protecting the equipment to prevent damage and deterioration of their present adjustment during use and handling.</td><td>By All users</td></tr>
<tr><td>E. Undertaking actions as follows, when any equipment is found to be unfit for use -
i. Immediately withdrawing the equipment from operation, and informing concerned GM/HOD for arranging its fitness;
ii. Assessing the validity of previous measurement results, and recording the result of this assessment on the face of related measurement record itself;
iii. If any job or any of its process output is found to be adversely affected, deciding and arranging suitable actions immediately.</td><td>By All users</td></tr>
</table>

If any computer software is used for above mentioned monitoring/measurement activity, concerned GM/HODs confirm through available sources, prior to the release of such software for use that related computer software can satisfy the intended monitoring /measurement application.

Most of the operations are routine and administrative in nature. Persons placed at MCL HQ have acquired their knowledge either through on job or through some basic orientation training to achieve the conformity of services.

When addressing changing needs and trends that may affect the outcome of its services, MCL considers its current knowledge and determines how to acquire or access any necessary additional knowledge and required updates through its HRD Department.

The monitoring and measuring equipment which are calibrated or verified or both at required interval, are to be calibrated or verified against a measureable standards traceable to national or international measurement standards.

The employees of MCL are well versed and trained in their respective fields of operation and activities. The employees are selected based on their qualification and experience to ensure basic level of competency. Knowledge gained from experience, lessons learned from failures and successful operations are shared among all concerned.

7.2 COMPETENCE

Cl. 7.2 of ISO 9001, ISO 14001, ISO 45001

In MCL, only competent persons, who could affect the performance and effectiveness of this IMS are deployed for various jobs. However, if the newly recruited or transferred-in persons are not found competent for a job as per this IMS requirement, they are either suitably trained in-house within the department or by the HRD function of MCL or by specific actions of the competent authority. Head (P&A) maintains records of all manpower deployment in various functions of MCL.

The records of the actions taken are maintained as per following arrangement:

- GM/HOD (HRD) updates the training records immediately upon completion of training course.
- GM/HOD (Personnel) updates the education and skills records immediately upon receipt of information from concerned GM/HOD.
- Each executive updates his/her skill database through HRIS database available on CIL website, link – https://www.coalindia.in/employee-corner/hrms/

- IMS related competence requirements, based on appropriate education, training, skill and experience, for various functionaries are given in Annexure-6.

MCL identifies personnel training needs, provides required training, and evaluates the effectiveness of the training provided. Persons assigned to perform specific tasks, operations and processes are qualified on the basis of appropriate education, experience or training. Employees are made aware of the relevance and importance of their activities and how they contribute to the achievement of management objectives. Records of qualifications of the personnel and training are maintained.

7.3 AWARENESS

Cl. 7.3 of ISO 9001, ISO 14001, ISO 45001

All the persons execute the allocated jobs under controlled condition and are aware of the following -

1. Basic thrust points of the Management Policy, objectives with targeted actions and the importance of conformity with this policy, procedures as per the IMS requirements;
2. Their contribution to the effectiveness of the IMS, including the benefits of improved performance and the implications of not conforming with the IMS requirements;
3. The roles, responsibilities and authorities in achieving the requirements of IMS including emergency preparedness and response requirements;
4. The significant environmental aspects/OH&S hazards and related actual or potential environmental impacts/OH&S risks associated with their work;
5. The procedure (s) of OH&S consequences, actual or potential, of their work activities, their behaviour, and the OH&S benefits of improved personal performance;
6. The ability to remove themselves from work situations that they consider present an imminent and serious danger to their life or health, as well as the protecting them from undue consequences for doing so.
7. Incidents and outcome of investigations that are relevant to them.

7.4 COMMUNICATION

Cl. 7.4 of ISO 9001, ISO 14001, ISO 45001

On matters relating to IMS, Head (TS), Nodal Officer (IMS), MCLHQ, GM (Safety) and GM (Env.) have authority to communicate directly with all in MCL. The means of routine internal and/or external communication are as follows:

1. **For downwards communication**, methods like e- office, office orders, circulars, digital signage, memos, etc., as per MCL's procedures and practices. Even the various platforms of social media are used for communication.
2. **For upwards communication**, routine personal interactions and periodic formal/informal meetings.

After every Management Review and internal audit, MR/Nodal Officer (IMS), MCL HQ determines the need for internal and external communications relevant to this Integrated Management System and also communicates the effectiveness of IMS at various levels and functions in MCL.

The information concerning the environmental, and OH&S performance of MCL is communicated within the company through proper channel. Formal/informal meetings with different interested parties also ensure communication with them.

Nodal Officer (IMS), MCL HQ with due consent of MR/ GM (Env & Forest), MCL is responsible for all the external communication relevant to the IMS of MCL, and as required by its compliance obligations. The records of all these communications are suitably maintained by the concerned departments. Official web site, news- letter and press release by PRO are also used as communication channels on the matter related to IMS.

7.5 DOCUMENTED INFORMATION

Cl. 7.5 of ISO 9001, ISO 14001, ISO 45001

This manual and all the documents and records referred in this manual constitute the IMS documentation of MCL. This documented information is maintained in MCL in hardcopy and/or in softcopy media.
The important documents to assist the implementation of this IMS are as follows -

1. **Integrated Management System Manual:** This manual describes the company, its compliance strategy of IMS (QMS, EMS, and OH&S), Management policy, Management objectives, targets & action plans and arrangements to meet the requirements of standards ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. This also describes the scope and boundaries of IMS, the procedures (under the boxed texts) for implementing various IMS elements, systemic record formats (under section 11) for recording the results of implementation of systemic processes under IMS and annexures (under Section 12) containing some useful and related information.
2. **Operational Manual:** This manual contains the details of planned arrangements, operating criteria, operational instructions, recording arrangements, etc., as necessary for executing critical operational processes in MCL. This Operation manual is in following two parts -
   a) Part A – For coal mining and allied processes carried out in the coalmines.
   b) Part B – For the support units, such as, workshops, hospitals, training centres, stores and Mines Rescue Station.

   No such elaborate documentation is necessary for any of the HQ-departments since their activities are basically administrative in nature. The limited controls required for these are included under their operational process flows contained in the departmental work instruction manual.
3. **Maintenance Manual:** This manual, referenced under the Integrated Management System Manual, contains the following:
   a) Methodology for maintaining infrastructure;
   b) Methodology for maintaining work-environment; and
   c) Details of outsourced maintenance processes and required controls on them.
4. **Reference Documents:** These supporting documented information, as mentioned under this manual fall under the following categories -
   a) **Work Instruction Manual (WIM),** i.e., the documents of internal origin that contain the process plans of all jobs with related instructions, checklists, recording-formats, etc., showing the processes and sub-processes, acceptance criteria, roles and responsibilities, and time frame of every process.
   b) **Norms/Standards, Rules/Regulations**, i.e. the documents of both external and internal origin, that are declared under the above work instruction manual containing the specifications and criteria for the related process and are considered statutory / regulatory obligations. These include OEM/part manuals, standards and codes, designs and drawings, and administrative rules and procedures.

In addition, other documents, books, manuals, etc., of both external and internal origin, are also required for knowledge up gradation or as study material. These are maintained in MCL by the concerned departments. During the creation and updating of each document, the concerned GM/HOD ensures appropriate identification, description, format, review and approval for suitability and adequacy.

The availability and use of appropriate and relevant documents is ensured through the following.

A. Review, update, and change of documents 1. Internal documents (Integrated Management manual, Operational manual, maintenance manual & WIM) – Revising the text with latest changes shown in italics, and specifying on every changed page its current revision number and the effective date on the respective page footer, 2. External documents (Norms & Standards) – Reviewing their current relevance and revising their references and current validity. 3. Whenever the internal documents are revised /updated/changed based on the revision of any of these four standards or on inclusion/deletion of any other management system standard, the next higher/new version of these manuals will be approved and released for implementation. It is ensured that changes are in conformity with the latest versions of the standards ISO 9001, ISO 14001 and ISO 45001 and integrity of IMS is maintained.	By Nodal Officer (IMS), MCL HQ (For IMS manuals) By GM/HODs (For all ref. docs. and WIMs)
B. Approval of documents as follows, to declare them as authorized practices of MCL. 1. IMS Manuals, e.g., Integrated Management System Manual, Operational Manual & Maintenance Manual (internally generated) – initially through dated signature in the first/approval page of the IMS Manual after review & vetting by the Nodal Officer (IMS), MCL HQ. 2. Internally generated reference documents (i.e. WIM) – with dated signature on cover page and each page header or footer. 3. External reference documents – with following identifier on the cover page of every document. **AUTHORIZED & CONTROLLED** **Document ID &Name:** …….. **Location:** …….. **GM/HOD** (Sign/Date)	By CMD By GM/HODs By GM/HODs
C. Release of documents as follows for their distribution as per 'D' below. 1. IMS Manuals – along with copies of the related 'Document Issue/Amendment Record (Format 11.1)', 1) To all controlled hard-copy holders (refer section 1.1), With each page footer stamped as "Controlled Copy" in blue ink; and 2) To LAN server administrator (refer section 1.2), electronic copies of all pages. 2. Internally and externally generated reference documents – by handing over the hard copies to his authorized person for upkeep and controlled issue, and maintaining, unique identification numbers and other details of every document.	Nodal Officer (IMS), MCL HQ By GM/HODs

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

D. Distribution and maintenance of documents as follows to ensure their availability, accuracy, and identification at points of use. 1. **Hard-copies** – by, *a.* Ensuring ready availability to all for reference, and issue. *b.* Issue of duly authenticated copies of formats, checklists, etc. for use. *c.* If required for training/awareness, marking the cover page as "**For awareness only**" and the issue date. *d.* Suitable displays of Management policy and objectives in any form by maintaining their accuracy during reproduction. 2. **Electronic copies** - by immediate loading on the server computer with, *a.* Absolute accuracy of the files (in terms of their content, layout, style, etc.), and hyper linking the required page. *b.* Complete safety of the loaded computer files even against any inadvertent infringement or disturbance; *c.* The display of its revision status and effective date on every page; *d.* Either disabling any possibility of copying of the displayed pages, or displaying a warning reading "Copying this screen on any media is illegal" prominently and constantly on computer screen when the document is accessed through the network; *e.* Ensuring that the document remains available on the computer network for use; Safeguarding the originally received electronic files and all their intermediate transformations and conversions against unauthorized use, and that such file are permanently deleted as soon as they are loaded on the server computer.	Nodal Officer (IMS), MCL HQ for IMS Manuals& GM/HODs for WIM LAN Server Administrator of IMS
E. Disposition of obsolete documents/pages as follows to prevent their unintended use. 1. IMS Manual / internally generated reference documents - Retaining pages of own copy after stamping them as "Obsolete but Retained" and advising other copyholders to deface/destroy their superseded pages. 2. Externally generated reference documents – Stamping all existing copies as "Obsolete but Retained" in red ink for any possible use in future.	By Nodal Officer (IMS), MCL HQ and GM/HODs
F. Re-approval of the documents – Whenever any changes in the whole document or in some of the pages are done, the brief of these changes is recorded in the Record format 11.1 and subsequently signed by the Nodal Officer (IMS), MCL HQ after approval of the CMD, MCL. Changes in the documents may be due to the following reasons - a) IMS Manual – On any of the following, • Revision and/or amendment in any of the four standards. • Change in scope and coverage of IMS. • Basic change decided for IMS processes. b) Reference documented information – When there is some change in the technology and/or related statutes/regulations concerning the processes and/or services of the department/division.	Nodal Officer (IMS), MCL HQ MR By GM/HODs

In MCL, the records to provide evidences of effective implementation of system and conformity to requirements are of the following types -

a) **Systemic Records**, i.e., the records related to overall systemic controls in MCL. The self-prompting generic formats of all these are contained in Section 11 of this manual.

b) **Operational Records**, i.e., the records related to the technical and operational functioning in MCL as given under Annexure8 of this manual. The self-prompting formats and/or registers layouts for all these are contained / linked in the related Work Instruction Manual of each department/division.

c) **Project Files**, i.e., the files containing all working papers of the execution of respective jobs. All these files and their listing are available in every department/division.

d) **Office Files**, i.e., the files containing general records of functioning of a department/division. All these files and their listing are available in every department/division.

All these records are maintained in hard copies or soft copies through e-office or in electronic media or in the server computers. All these are controlled by the designated process owner through the following.

A. All concerned maintain unique identification of records to ensure their traceability, through the following.

a. For electronic records: through unique computer file-names.

b. For hardcopy records: through the following:

1. For loose papers maintained in office files - through at least the concerned office file number and the record opening/receipt date;
2. For running entries in registers, diaries, field books, etc. - through date and serial number maintained under the related register, diary, field book, etc.

Unique identification of office files, registers, diaries, field books, etc., is maintained by placing/stamping the following identifier on their covers.

Mahanadi Coalfields Limited **Unit/HQ-department** (Name) ……	
File/Register/Diary/Field Book (Name)**:** ……	
File/Register/Diary/Field Book (Number)**:** ……	
Date of Opening……	**Retain Up to:** …… (Write till what period this file, register, etc., is to be retained after it is closed)

[For case-specific office files (e.g., relating to a particular proposal, etc.), in addition to the above identifier, the file-movement details are also maintained at the inner file cover, to show the dates of its receipt and clearance from each functionary participating in its processing.]

B. All concerned ensure adequate storage and protection of records, as follows -

a. For electronic records: through controlled access (e.g., passwords), suitable virus protection, and maintaining suitable backups at different locations.

b. For hard copy records (files, registers, diaries, field books), by deciding:

1. Methods for proper storage to ensure continuing legibility, identification, retrieval, and
2. Required access control and confidentiality.

C. All concerned arrange to retain records ('hardcopy' records), till the following time limits with declaration of the retention time on the face of registers/office-file or with field book identifier, refer 'A' above.

a) For all records of common nature pertaining to 'supportive/facilitative functions of MCL' (e.g., Personnel, Finance, and Establishment): As per The Public Record Act, 1993.or company's policy.

b) For all records of substantive nature pertaining to 'specific/technical functions of MCL' (e.g., Mining, Planning):

i. Till the time set by MCL in consultation with the National Archives (as required under clauses 111(1)(d) and 95(d) of GOI's 'Manual of Office Procedure' and 'Manual of e-Office Procedure' respectively) under MCL's own formally issued 'Retention Schedule for Records of MCL's Substantive Functions';

ii. OR, pending the issue of above in MCL, till 3 years from date of creation in case of electronic record and till 3 years from date of closure of file etc. in case of hardcopy record.

[For convenience of handling, office-files/registers/diaries/etc. may be continued into consecutive volumes (e.g., Volume-1, 2, etc.) after closing the currently open volume, and marking the closing date on the cover.]

D. All concerned arrange to dispose the records after the expiry of declared retention time, as follows, referring to section 9 of the Public Records Rules.

a. For electronic records: by deciding to

1. Delete/overwrite the electronic files and their back-ups, or
2. Convert electronic softcopies into hardcopy prints for storage in office file and deleting the softcopy, or
3. Backup electronic files in some removable-disks to retain till the decided extended period, and deleting original electronic file from hard disk.

b. For hardcopy records: by deciding to

1. Either destroy them, or
2. To extend the retention period as may be necessary.

[However, while extending the retention period of an office file, selective destruction of some of its papers may be done, if those are found not relevant on that date.]

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

8. OPERATION

8.1 OPERATIONAL PLANNING AND CONTROL

Cl. 8.1of ISO 9001, ISO 14001, ISO 45001

All the operational and maintenance processes in MCL are done as per process flows given under Annexure- 2. The planning and realization of the processes are done according to the designated roles & responsibilities. The output of this planning is suitable for all the operational processes of the organization, like, achieving the MoU targets with CIL, timely completing the targeted action plans to achieve the objectives, the risk mitigation plan, and protection of the environment etc.

All departments of MCLHQ and Area offices document their respective Work Instruction Manuals (WIM) that include – the requirements for the products/services, the criteria for the processes & the output services, the resources required and the controls for the processes.

Some of the processes that are generally outsourced in different units of MCL are the following -

1. Coal and overburden extraction, loading and/or transportation.
2. Explosive transportation and charging.
3. Haul roads and mining related constructions/maintenance.
4. Repair/maintenance of mining machinery/installations.
5. Construction/maintenance of infrastructure like buildings, roads, etc.
6. Monitoring and mitigation of environmental impacts, like measuring pollutant levels, a forestation, etc.
7. Industrial safety and security arrangements.
8. Managing some employee facilities like canteen, etc.
9. Transport facilities.

Necessary controls on all outsourced processes are exercised through the following, especially when the conformity of product/service is likely to be affected.

a) Communicating the needed controls to such service-providers through contract /supply orders issued to them; and
b) Regular monitoring and verification against defined process specifications by the authorized functionaries during related operations.

Necessary controls are imposed on the outsourced service providers as per the respective work/ supply orders issued to them for ensuring the quality of service, protection of the environment and health & safety during and after their activities. All the relevant quality, environmental and OH&S related issues & requirements associated with the outsourced activities are communicated to external providers, including contractors, etc.

For any unintended changes in the processes involved in this management system, MCL prepares an intricate plan and reviews the consequences and ensure specific actions to mitigate the adverse effects, if necessary.

8.2 REQUIREMENTS FOR PRODUCTS AND SERVICES

Cl. 8.2, ISO 9001

In India, the nationalized coal sector is required to sell its coal according to the 'Coal Distribution Policy' of the Government of India.

Accordingly, the customers of coal are of the following types -

1. **Major Customers:** These are regular large-scale coal consumers of core-sector like, power, steel, cement, etc. For MCL, under this are mainly the super thermal power stations of various organizations.
2. **Minor Customers:** These are small and tiny consumers of small and medium sectors, having lesser coal requirement per annum. They directly approach MCL as and when they need coal and make purchases without elaborate contractual agreements or through use of MCL's e-auction portal for sale of coal.

Apart from these, the customers of workshops and hospitals are generally the coal mines and employees of MCL, respectively.

The various communications with the customers include:

1. providing information relating to products and services;
2. handling enquiries, contracts or orders, including changes;
3. obtaining customer feedback relating to products and services, including customer complaints;
4. handling or controlling customer property;
5. establishing specific requirements for contingency actions, when relevant, and
6. all internal/inter departmental communications.

While determining the requirements for the products/services offered by MCL to customers it is ensured that –MCL can meet the requirements of the customers. During determination and review of the requirements of customers, all applicable legal, statutory, regulatory requirements are also considered by MCL.

The requirements for the products/services are reviewed considering the following -

a) all requirements specified by the customer and MCL;
b) any unstated requirements of the customer, if known;
c) statutory and regulatory requirements applicable to the products and services; and
d) contract or order requirements differing from those previously expressed are resolved accordingly.

The arrangements for finalizing the coal supply requirements of the above two types are governed by 'Coal Distribution Policy' of the Government of India. The arrangements in brief are as follows:

A. Arrangement for Major Customers: The existing governmental procedure for resolution of requirements of every major customer and deciding its coal supply allocation requires the following steps:

1. Specific endorsement and clearance of the coal-based project of a party from concerned ministry of the Government of India;
2. Placement of this approved coal requirement by the party to the chairman of the SLC (i.e., Standing Linkage Committee – the high power inter-ministerial committee of Government of India set-up for deciding coal supply allocations to all major coal consumers in the country);
3. Obtaining information about coal supply capabilities from coal producing agency (e.g., MCL) by SLC on party's behalf;
4. Review and resolution of prospective consumer's coal requirements by SLC on behalf of the coal producing companies (e.g., MCL) and deciding specific coal allocation in terms of quantity, grade, source, and transport arrangements for the coal supply;
5. Communication of finalized coal allocation to the party to Ministry of Coal by SLC;
6. Communication of above allocation by Ministry of Coal to both the customer and the identified coal producer like CIL.

7. Conducting auctions as per offered quantity by Coal India Limited.
8. Issue of LoAs (Letter of Assurance) by CIL to the customer, which within the specified time period need to be converted to a specific coal supply contracts by the coal producer like MCL in the form of a fuel supply agreement (FSA); and
9. Finalization of the FSA between MCL and the customer in consideration of SLCs overall allocations.

B. Arrangement for Minor Customers: The arrangement for the sale of coals to minor customers is of the following two types -

1. Residual Coal quantity as communicated by Area to MCL HQ is put for spot auction, and subsequently Road Delivery Order is issued to successful bidders, followed by billing of the same.
2. MCL also periodically offers coal to minor customers through 'e-auction'. Its procedure is declared on MCL's website https://www.mahanadicoal.in
3. Annual e-auction programs are accordingly declared periodically indicating details of quantity and quality of the coal proposed for forward e-auction. After the e-auction process, specific sale/delivery-orders are issued to the successful minor customers, against which the customers receive the specified quantity and grade of coal from the concerned mine.

The procedures given below relates to determination, review and finalization of following customer contracts - FSA, in case of major customers and Sale/Delivery-order, in case of minor customers.

Procedures/Activities	For Major customers	For Minor customers
A. Determination of coal supply requirements, considering - a. Exact requirements in terms of grade, quantity and delivery. b. Statutory and regulatory requirements, as applicable. b. Unstated and any additional requirements towards coal supply, as decided by MCL.	CMD (through GM (M&S)	Head (M&S) or his representative in Area
B. Review of coal supply requirements, to ensure the following. a. That requirements determined above fully describe all the coal supply requirements of the customer. b. That conflicting/deviant coal supply requirements have been resolved with the SLC that represents the major customer and/or the minor customer; c. That all the required coal supply is achievable in MCL.	CMD (through GM (M&S)	GM (M&S) or his representative in Area
C. Recording of the above review in terms of the following. a. Results of review: In the form of mine-specific coal supply specifications under quarterly/monthly 'coal movement action plan' in line with agreed FSA; or sale/delivery-order, as applicable. b. b. Actions arising from review: In the form of agreed and mine-specific terms of coal supply.	GM (M&S)	GM (M&S) or his representative in Area
D. Communication of the FSA, and sale/delivery-order to the mine for compliance.	GM (M&S)	GM (M&S) or his representative in Area

C. Changes in customers' coal supply requirements:

a. For **major customers** –

1. When a mine is not able to meet the committed coal supply due to temporary operational constraints, e.g., major breakdowns, industrial unrest, etc. In this case the quarterly/monthly 'coal movement plans' are suitably revised.

2. When the customer needs a change in quality, quantity, and/or delivery schedule in coal supply from the already agreed one: In this case the changed requirement is considered as a fresh case by the SLC, and so, is processed by the SLC, and so is operationalized in MCL as directed by SLC.

b. For **minor customers** – When concerned mine is not able to meet quality/quantity of coal as per the sale/delivery-order, or when the customer himself declines the allocated coal delivery: In this case, the sale/delivery-order is reprocessed.

D. Arrangements for communication with customers:

a. **For information regarding coal availability**:
   1. for 'major customers': Through Notices on various forums/platforms Website/ Offices, or Meetings
   2. for 'minor customers': By GM (Marketing & Sales) through general announcements, notices, meetings etc.

b. **For information relating to enquiries, contracts, and/or supply, including amendments**: By GM (Marketing & Sales) with authorized representatives of both types of customers.

c. **For customer feedback, including complaints**:
   1. By Head (Quality Control) with representatives of both types of customers for routine customer feedback (refer 11.4) and complaints relating to coal quality; and
   2. By Project Officers / Agents with representative of both types of customers for all other complaints.

Results of the reviewed requirements are properly documented. In case of changes to the requirements of the services, relevant document is amended and concerned persons are made aware of these changes.

8.3 DESIGN AND DEVELOPMENT OF PRODUCTS/SERVICES

Cl. 8.3 of ISO 9001

MCL executes the coal mining and supply operation only through pre-defined specifications. These are set either under customer contracts or by various statutory/regulatory bodies of Government of India like Directorate General of Mines Safety, Central/State Pollution Control Board, Ministry of Coal, Bureau of Indian Standards, etc.

The products/services provided by MCL is through predefined policies, norms, procedures, etc. of the company or purely Governmental policies and norms. Since MCL implements all these policies, norms, procedures without any modifications at its end, this requirement of the clause 8.3 of ISO 9001:2015 is not applicable for this IMS.

8.4 CONTROL OF EXTERNALLY PROVIDED PROCESSES, PRODUCTS & SERVICES

Cl 8.4 of ISO9001, Cl 8.1.4 ISO 45001

As a corporate binding, the purchase process in MCL is governed and controlled by apex procedures of Coal India Limited as documented under the Purchase Manual, Civil Engineering Manual, and Contract Management Manual etc. These procurement processes also take care of conformity of occupational health and safety system. The procurement arrangement for different categories of inputs is as follows -

a) **For Centralized Items: -** As per Spare Parts Procurement Policy of CIL, the Material Management department arranges all centralized items required for all open cast and underground mines. However, some items of high capacity equipment have been identified for procurement at CIL level.

b) **For Decentralized Items: -** The respective mine/unit**s** directly procure such items if the value of proposed purchase is within their financial powers. If not, these items are also purchased as at 'a' above.

c) **For Services**: Similar to above, authorities like Head of Area/ Unit procure the required services, depending upon their nature.

Suppliers and contractors are usually selected and approved through e-tendering, GeM Portal etc i.e., case-specific evaluation of market vendors as per methodology specified in above CIL manuals. Successful bidders are evaluated based on the selection criteria as given in the 'Notice Inviting Tender'.

The selection criteria and records of evaluation and selection of such suppliers/contractors are maintained under the 'Tender Committee Reports' **(TCR)**. Relevant competent authority approves the TCR based on the findings recorded under such reports. Purchase/supply orders and civil engineering contracts/work orders are issued only to the recommended Supplier/Contractor as per the concerned tender committee report, after financial concurrence and competent approval.

The following information is covered under the prepared purchase/supply orders and contracts/work orders. The signing authority ensures the adequacy of these orders, prior to putting his signature on it for its release to the approved supplier/contractor.

A. Material/Service Description containing -

1. Name of the item/service and the price, quantity etc.;
2. Specifications of the item/service, both towards suitability for related use and improving performance;
3. Required documents to be provided along with supply parameters for procurement of concerned outsourced processes;
4. Competence requirements of Supplier's/contractor's personnel, as applicable;
5. Management system requirements, if any; and
6. Arrangements for pre-dispatch inspection verification, at Supplier's/contractor's premises, if applicable.

B. Financial, legal, and other terms/conditions, as required by MCL.

The competent officials at the stores verify conformity of all procured materials against the criteria/specifications defined under the related purchase/supply order and record their findings under respective inspection reports. After acceptance of quality of supplied item and documents submitted, the supply is accepted, and store receipt voucher is prepared for enabling payment to supplier. The accepted materials are issued by stores to user department for use.

Since the conformity of services cannot be verified before the start of its delivery, the concerned officials of MCL continuously verify the service during its delivery and initiates for midcourse corrections as may be considered necessary.

MCL coordinates with its contractors, in order to conform the requirements related with health & safety of the employees and other interested parties.

8.5 PRODUCTION AND SERVICE PROVISION

Cl. 8.5, ISO 9001

All the products/services provided by MCL are carried out under controlled conditions, by ensuring,

a) The availability of documented information that is needed for conformity of the products/services provided according to the requirements;
b) The availability and use of suitable monitoring and measuring of the resources;
c) The implementation of monitoring and measurement activities at appropriate stages;
d) The use of suitable infrastructure and environment for the operation of processes;
e) The appointment of competent persons, including any required qualification;
f) The validation of the ability to achieve planned results of the processes for service provision for the outputs that cannot be verified by subsequent monitoring or measurement;
g) The implementation of actions to prevent human error;
h) The implementation of release, delivery and post-delivery activities, to ensure conformance of the services to the requirements.

The services are undertaken according to the laid down MCL/CIL and/or governmental procedures, policies, norms, etc. and hence there is no scope of process validation.

All concerned persons in MCL ensure identification of products/services and their conformance status through suitable means. Where traceability is required, such identifications are unique to the concerned products/services and are suitably controlled and recorded.

For the scope as mentioned in Section 4.3, none of the processes undertaken require the use of any customer property which are sensitive to the conformity of the product/service. However, customer property in MCL primarily includes his/her personal data/information, documents, records, etc.

The background papers, information, documents, records, etc. related to the customers and are critical to MCL's operation stored in a secured and safe place prior to their further processing. The electronic copies of all these are preserved if required on the removable media with a back-up copy on hard drive of an identified computer having a password protection system. The outputs of MCL are preserved throughout the process of production and service provision to ensure conformity with requirements.

When the post-delivery activities are required in MCL, the following requirements are adhered –

a) statutory and regulatory requirements;
b) the potential undesired consequences associated with its products and services;
c) the nature, use and intended lifetime of its products and services;
d) customer requirements; and
e) customer feedback.

The Top Management has ensured the establishment of IMS in MCL. The processes/elements of this IMS are depicted in Annexure 1 and are elaborated throughout this documented information. In conjunction with the Functional Directors of MCL, the Top Management also ensures the integrity of the IMS during any change. The changes in IMS may be due to administrative, functional, and structural changes in MCL and/or changes in IMS documentation.

8.6 RELEASE OF PRODUCTS AND SERVICES

Cl. 8.6, ISO 9001

The output of MCL is released to various customers after the realization of the work as specifically planned for the product/service. The requirements as determined for the products/services have been monitored at appropriate stages.

The final products/services are released only after the satisfactory completion of all the planned arrangements. If it is required to release the products/services without the completion of processes, then it is done only after the approval by a competent authority of MCL or as advised by the customers. Records for such release are maintained by the concerned department.

8.7 CONTROL OF NONCONFORMING OUTPUTS

Cl. 8.7, ISO 9001

For the coal as output there is no scope of any Nonconforming coal supply to customers, because

a. Major customers are billed based on actually delivered quantity and grade in coal; and
b. Minor customers collect the coal of their choice from the designated stockpiles of the mines after fully satisfying themselves.

However, to pursue operational efficiency, MCL considers the coal supply to be a Nonconforming one when internal assessment indicates either (i) over/under-loading of coal during dispatch; or (ii) excessive slippages in grade of coal supplies.

Also, there may be some nonconforming stage output during the execution of a process.

All such Nonconforming outputs are identified and controlled as follows:

A. **Head (Quality Control), HQ, ensures annual assessment of coal grades for all mines** as per related procedures set by the Coal Controller, Government of India, and arranges their formal declaration.

B. **Nonconforming Products are identified** as follows -

a) **P.O/Unit Heads identify Nonconforming coal supply** by analyzing the coal dispatch and sampling registers in first week of every month and considering that supply as Nonconforming one if any of the following situation is detected; with recording under Nonconforming Coal Supplies Register.

1. **Grade slippages** (as against the one declared for the mine through 'A' above) in more than 10 % of the samples analyzed over the previous month.
2. **Quantity deviation** being one of the following.
   i. Where the coal supply is through Indian Railways: Total penalty payment during the month to Indian Railways amounting to 5 % or more of the total coal sale value due to under-loading and/or overloading of wagons.
   ii. Where the coal supply is through customer's transport arrangement: The customers' coal transport vehicles not released within 12 hours.

b) **All concerned identify Nonconforming stage outputs of coal mining, supply, and allied processes** by analyzing such Products/services before use, and considering the one as Nonconforming if it does not conform to the requirements of next stage.

C. **Nonconforming Products are reported** as follows

a) **P.O./ unit head report Nonconforming coal supplies** to Dispatch Officer through Nonconforming Coal Supplies Register; and

b) **All concerned report Nonconforming stage outputs of coal mining, supply, and allied processes** to the responsible functionary of the concerned process through usual office communications.

D. **Reported Nonconforming Products are handled** as follows as per procedure under section 8.5.2, with related recording

a) **By P.O. / unit head for Nonconforming coal supply** - under the Nonconforming Coal Supplies Register, and informing Head (Quality Control) for arranging re-declaration of coal grades for the mine if considered necessary e.g., under Fuel Supply Agreement (FSA).

b) By **concerned persons for Nonconforming stage outputs of coal mining, supply, and allied processes** – under the concerned office record/communication.

For the case of service e.g. training, health care etc., MCL ensures that any non-conforming service is appropriately identified and controlled to prevent unintended use or delivery to customers as per the arrangement described in their respective work instruction manual.

Nonconformities are recorded appropriately and handled through the following procedure -

Suitable marking of nonconformities by the concerned dealing officer to prevent their unintended use, delivery or further processing

Deciding actions on the nonconformity by the concerned GM/HOD as following

1. Rework to eliminate the detected nonconformity;
2. Authorizing its further processing after obtaining the approval of Competent Authority;
3. Recall the concerned documented information related to the delivered service with specific instructions.

Deciding Corrective Actions and Preventive Actions by the concerned GM/HOD, to remove the cause of the nonconformity and the potential effects of the nonconformity respectively.

Monitoring of the implementation of decided actions by the concerned GM/HOD.

9. PERFORMANCE EVALUATION

9.1 MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION

Cl. 9.1 of ISO 9001, ISO 14001, ISO 45001

MCL has determined the aspects of IMS that are required to be monitored and measured, as well as the methods to be utilized and the records to be maintained. Monitoring and measurement of the processes, as defined in Section 4.4, ensure that MCL constantly evaluates the performance and effectiveness of its integrated management system by -

a) Monitoring and reviews of performance, implementation and system effectiveness
b) Annually monitoring, measuring and analysing the key characteristics of all operations that determine the environment and OH&S performance.
c) Monitoring the controls implemented for significant impact on the environment and OH&S risks.
d) Monitoring the environmental performance with appropriate indicators.
e) Monitoring the actions for compliance obligations related to environment and health & safety.

For the products/services rendered to customers, MCL arranges to obtain the perception of all interested parties to know the degree to which their needs and expectations have been fulfilled. For coal mining and supply, perception of the customers is obtained and used as follows -

A. Head (Marketing& Sales), HQ, ensures to obtain feedbacks from all major coal customers of MCL - through compilation of the following.
   a) Feedback obtained through Customer Feedback Record (refer section 11.4);
   b) All other communications received from customers about quantity and/or quality of delivered coal;
   c) All bills of delivered coal, which were disputed/not-accepted by customers;
   d) All other communications, positive or negative, received from any one regarding delivered coal.

B. Head (Marketing & Sales), HQ, evaluates customer feedback by collating all the feedbacks compiled through 'A' above - to indicate the percentage of positive responses separately against each of the five feedback elements contained under the Customer Feedback Record - and forwards the results as follows.
   a) To all concerned for using the information for taking appropriate action.
   b) To the Nodal Officer (IMS), HQ for input to apex management review (refer section 11.7).

C. All concerned receive customer complaints by any means (other than the Customer Feedback Record) and forwarding them to the concerned Unit Head for appropriate action.

D. All Agents/Unit Heads handle customer complaints received through 'C' above, by immediately deciding whether or not the received complaint relates to any genuine problem, and
   a. If suggesting genuine problem, deciding and undertaking suitable actions, and if required, initiating action through procedure under section 10; or
   b. If found unrelated, sending a suitable response to the customer under information to the concerned persons in MCL.
   and (1) using it in management review; and (2) forwarding copy of above actions to Head (Marketing &Sales), HQ for inclusion in next feedback-evaluation as under 'A' and 'B' above.

Concerned person analyses the received perceptions and the outcome of the analysis is sent to Nodal Officer (IMS), MCL HQ for use in finalizing the agenda for Management Review and for suitable actions. The perception of the external coal customers is obtained by GM (Marketing & Sales) in the Record Format 11.4.

Suitable data analysis is done in MCL to demonstrate the suitability and effectiveness of this IMS and to explore the areas for continual improvements in system effectiveness. For this, the arrangement has been defined under Annexure– 9 under 'Data Analysis Plan'. This defines the identified data, their sources, applicable analytical techniques, and the responsible functionary for analysis.

Accordingly, the designated persons carry out specified analyses with a view to compile information relating to -

a) conformity of products and services,
b) the degree of customer satisfaction,
c) the performance and effectiveness of IMS,
d) effective implementation of the planned activities,
e) effectiveness of actions taken to address risks and opportunities,
f) performance of external providers,
g) the need for improvement to the IMS.

The actions and events that could impact the effectiveness or performance of the IMS are suitably recorded. Opportunities for improvements are identified, suitably implemented, and communicated to all interested parties with a view to ensure that the IMS achieve its desired objective.

Every year, MCL evaluates its compliance with all legal and other specified requirements including environment and health & safety and reports at the Management Review.

9.2 INTERNAL AUDIT

Cl. 9.2 of ISO9001, ISO 14001, ISO 45001

The internal audits are planned and conducted in MCL twice in a calendar/ financial year to determine whether the IMS conforms to MCL's own requirements and to the requirements of these International Standards. This audit is effectively implemented and maintained. The audit program is planned considering the importance of the processes and the results of previous audits. The following procedure is adopted for internal audit:

Planning the audits, by making specific audit-plan (Record format 11.5) for every audit to define at least the following: • Scope, criteria, and thrust/focus for the audit; • Methodology of the Audit; • Lead Auditor, auditors & audit team to take charge of the audit; and • Dates of audit for Area/unit/department/function-wise. While making audit-plans as above, suitable consideration is given to the following: • Results of previous audit. • Status and importance of processes and functions to be audited.	By Nodal Officer (IMS), MCL HQ
Announcing the audits, through circulation of the decided audit-plan to heads of all field units, HQ departments and identified lead auditor for the internal audit.	
Conducting the audits, strictly as per the planned arrangement, through selected auditors such that no auditor audits his own work and submitting the audit findings to auditee head for initiating the required action and a copy to Nodal Officer (IMS), MCL HQ for comprehensive reporting as given below.	By Audit Team Leader& auditors
Reporting the audit results: a) Comprehensively for the entire audit in the 'Internal Audit Report' (Record format 11.8) to all concerned based on inputs provided by each audit team leader, along with the decided corrections, and corrective actions as per procedure under Section 10.2 of this manual. b) Submission of Audit findings to the concerned auditee c) for each unit just after the completion of internal audit on site for initiating required action on the reported nonconformities and record of the same.	By Nodal Officer (IMS), MCL HQ By Audit team leader
Reporting the outcome of follow up audits, for review to Nodal Officer (IMS), MCL HQ within 30 days of initial audit in the 'Internal Audit Report' (Record format 11.6), after verifying the completion and effectiveness of the decided actions.	By Audit Team Leader
Analysis of audit findings with identification of failure/weak areas and reasons for the same, and placing it under the input agenda of management review.	By Nodal Officer (IMS), MCL HQ

The Nodal Officer (IMS), MCL HQ retains the record of internal audit as evidence of its implementation and for the use during next cycle of internal audit.

9.3 MANAGEMENT REVIEW

Cl. 9.3 of ISO 9001, ISO 14001, ISO 45001

The performance of the IMS is reviewed by the CMD, MCL or either of the two Directors (Tech), MCL, half yearly to ensure its continuing suitability, adequacy and effectiveness.

The Nodal Officer (IMS), MCL HQ prepares the agenda for this management review based on the following considerations:

1. The status of actions from previous management reviews;
2. Changes in i) external and internal issues that are relevant to the IMS, ii) needs & expectations of interested parties including compliance obligations related to IMS, iii) significant environmental aspects/OH&S hazards, iv) risks and opportunities;
3. Customer satisfaction and feedbacks obtained from all interested parties;
4. IMS performance and conformity of provided services, trends in nonconformities, corrective & preventive actions and status of incident investigations;
5. Monitoring and measurement results, audit results, fulfilment
6. of management objectives and compliance obligations;
7.
8. The adequacy of resources and the performance of external providers;
9. Relevant communication(s) from interested parties, including complaints;
10. The effectiveness of actions taken to address risk and opportunities;
11. Review of management policy, environmental and OH&S performance;
12. Results of participation & consultation and the evaluation of compliance with legal & other requirements; and
13. Opportunities and recommendations for improvement.

The Nodal Officer (IMS), MCL HQ records the following decisions of the review (in Record format 11.7) and forwards to all concerned for necessary action at their end -

a) Conclusions on the continuing suitability, adequacy and effectiveness of the IMS;
b) changes in the environment and OH&S performance of MCL;
c) changes in the management policy/system;
d) opportunities for improvement;
e) actions when IMS objectives have not been achieved;
f) any need for changes to the IMS;
g) any implications for the strategic direction of the organization; and
h) any need of resources.

The Nodal Officer (IMS), MCL HQ retains this output as an evidence of the results of management reviews.

10. IMPROVEMENT

10.1 GENERAL

Cl. 10.1 of ISO 9001, ISO 14001and ISO 45001

MCL determines and selects opportunities for improvement and takes required actions to meet the requirements of all interested parties. Improvement in the effectiveness of IMS is ensured through the following.

A. Implementation of actions to improve the quality of delivered products/ services to meet requirements as well as to address future needs and expectations;
B. Ensuring actions emerging through the review of achievements towards management objectives, findings of audit results, data analysis, and Corrective Actions;
C. Improvement in the performance and effectiveness of the IMS; and
D. Output of the management reviews and implementation of the decided actions.

10.2 INCIDENTS, NONCONFORMITY AND CORRECTIVE ACTION.

Cl. 10.2of ISO 9001, ISO 14001, ISO 45001

The methodology followed at MCL HQ for the identification of cause of nonconformity and taking suitable Corrective actions to eliminate the causes of existing nonconformities is as follows.

A. Identifying, reviewing the Nonconformity and investigating the incident surfaced through the following. a) Verification of processes at different stages; b) IMS audit reports; c) Assessment of Nonconforming product /service, and incident reported; d) Assessment of customer feedbacks; and/or e) Any other adverse observation or report.	By GM/HODs And Nodal Officer (IMS), MCL HQ
B. Determining the causes of Nonconformity, from the following reasons - Deficiency of procedures/instructions; Lack of awareness, understanding, or commitment; Non-availability of appropriate resources; Deficiency of purchased inputs/services; Freak and Any others.	
C. Evaluating the need for some actions with the participation of workers and the involvement of other relevant interested parties, deciding suitable Corrective Actions and assigning Responsibility with time frame to carry out the actions to plug the root-cause as identified, in consultation with the concerned persons, if needed.	By GM/HODs And Nodal Officer (IMS), MCL HQ
D. Arranging for the review of the compliance and effectiveness and recording the results of undertaken Corrective Actions and Preventive Actions as assessed through the follow-ups.	Concerned Nodal Officer
E. Updating risks and opportunities determined during planning, if necessary and make changes to the IMS if necessary.	

Nodal Officer (IMS), MCL HQ maintains the record for entire MCL comprehensively as evidence of the nature of incidents, nonconformities, any subsequent actions taken and the results of the corrective actions taken.

10.3 CONTINUAL IMPROVEMENT

Cl. 10.3 ISO 9001, ISO 14001 and ISO 45001

MCL continually improves the suitability, adequacy and effectiveness of the IMS using its management policy and objectives, audit results, analysis of monitoring results, corrective and preventive actions, and management reviews. MCL promotes participation of workers in implementing actions for continual improvement of IMS specially related to OH&S.

11.1 DOCUMENT ISSUE/AMENDMENT RECORD

Name of Documents (Internally generated):……

(Integrated Management System Manual/Operational Manual/ Maintenance Manual / Hospital Management Manual/ Work Instruction Manual, etc.)

Sl no	Section	Page no	Clause/ Para/ Line (as Applicable)	Date of previous issue/ amendment	Date of Amendment	Reasons of amendment	Signature of issuing authority

11.2 INITIAL ENVIRONMENTAL/OH&S REVIEW RECORD

Name of Area / Field Unit / HQ …… F.Y: …… Date of review: ……..

Nodal Officer (IMS), MCL HQ and Nodal Officer (IMS) of respective field unit to maintain this record for the processes of HQ departments and Field unit, respectively and finalize the management objectives for the significant one as per defined criteria.

Sl No	Process of units/ HQ Depts/ Functions	Environmental Aspect/ OH&S Hazard- Element of the activity that can interact with the environment/pose risk	Whether the process is outsourced (Tick)	Responsible Unit /Dept / Function	Effect on the Environment /OH&S risk (tick one)						Possible Environmental Impact / OH&S Risk	Rating score against individual factors					Total score (13 X 14 X 15 X 16X17)	Significance Ranking
					Emission to Air (including noise)	Release to water bodies (surface/UG)	Degradation of land	Effects on flora and fauna	Depletion / Wastage of resources	Impact on persons, employees, & public		Severity of effect	Probability of occurrence	Duration of effect	Risk to human health & safety	Legal Implications		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

Name & Signature of Nodal Officer: ……..

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

11.3 MANAGEMENT OBJECTIVES, TARGETS, ACTION PLANS & ACHIEVEMENTS

Name of Area / Field Unit / HQ: …… **Financial Year_____**

QUALITY OBJECTIVES – The quality objectives for each field units and HQ departments is set based on the MoU targets finalized by CIL for the financial year. Apart from that MCL finalizes its Annual Action Plan that will be considered for setting of the quality objectives for the concerned units/HQ Depts. The functions / departments of MCL HQ also set their department specific objectives and is maintained under their respective Work Instruction Manuals. GM/HOD, Corporate Planning records the half yearly & annual achievements of MoU and sends to CIL for evaluation of the performance of MCL.

ENVIRONMENTAL / OH&S OBJECTIVES - Based on the significance ranking of the processes/facilities as generated in Environmental/OH&S Review record 11.2.

Sl. No	Environmental / OH&S Objectives	Targeted Action	Resources required	Responsible functionary	Quarterly Targets				Quarterly Achievements			
					Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
1	2	3	4	5	6	7	8	9	10	11	12	13
1												
2												
3												
4												
5												

NOTE:

Environment/OH&S objectives and action plan **proposed & recorded** in columns 2 to 9 by Unit / HQ Dept Head/ GM (Env**)** : Name…… Signature ……

Environment/ OH&S objectives and action plan in columns 2 to 9 **reviewed by Area Head/ TS to CMD for HQ Dept:** Name …… Signature ……

Environment/ OH&S objectives and action plan in columns 2 to 9 **approved by DT (P&P), MCL:** Name ……Signature ……

Approved record distributed to the concerned functionary by Nodal Officer (IMS), MCL HQ for initiating actions on the set targets.

Concerned functionary to record quarterly achievements in columns 10 to 13and send a copy of the quarterly achievements to Nodal Officer (IMS), MCL HQ for further collation & input for Apex review.

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

11.4 CUSTOMER FEEDBACK RECORD

(For external customers only)

GM/Head of Department (Marketing & Sales) MCL HQ to obtain feedback half yearly from major coal customers.	
Date:	Customer ……..Address……

Based on your experiences with MCL, give your overall perceptions in a scale of 1 to 5. [1(extremely poor), 2(poor), 3(good), 4 (very good) and 5(excellent)] and send it to **GM (M&S), Mahanadi Coal Fields Limited, P.O.Jagruti Vihar, Burla Dist – Sambalpur, Orissa- 768020.**This will help us improve our performance.

Your perceptions towards the following -	**Perception scale rating (1 to 5)**	**If less than 3, please elaborate a little.**
Did our coal supplies meet your expectations?		
Could we supply you coal on time?		
How was the overall quality of the coal supplies?		
How comfortable were you during the interactions with our persons?		
If you had contacted our Marketing& Sales Department, have all problems/queries been resolved to your complete satisfaction?		

Should you have any further comments that you would like us to know about that have not been addressed by this survey, please enter them below:

Reported By: Name_____Designation_____

Company_____Signature/Date_____

(We don't mind if you choose not to disclose your identity) Official Seal/Rubber Stamp

11.5 INTERNAL AUDIT PLAN

Nodal Officer (IMS), MCL HQ to arrange to conduct half yearly internal audits as per audit program using the plan given below.

Audit Scope/Coverage: All field units (Mines, Workshops, Hospitals, MRS, and Training Centres etc.) of MCL, and departments of MCL HQ at Sambalpur.

Audit Objective: _____ Date/ Duration: _____

Audit Criteria: _____

Audit Leader &Auditors with details of team: _____

Audit Criteria/ Section elements (as per IMS Manual)	**Field units /Departments/Divisions covered**														
Audit Dates →→→															
4.1															
4.2															
4.3															
4.4															
5.1															
5.2															
5.3															
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8.6															
8.7															
9.1															
9.2															
9.3															
10.1															
10.2															
10.3															

Prepared by [Nodal Officer (IMS), MCL HQ]**:** Name _____ Signature/ Date _____

Distribution: (To all concerned Unit Heads, concerned Lead auditor/auditors- for necessary action)

11.6 INTERNAL AUDIT REPORT

Date_____

Nodal Officer (IMS), MCL HQ to finalize consolidated audit report just after the completion of the audit activities in consultation with all audit team leaders. Respective audit team leaders also submit their findings to concerned auditee on site for advance action and record.

PART – A: Details of Audit.

Audit duration:_____

Audit Checklist &Notes: (specify and enclose if required)

Covered IMS Elements of Manual:	4.1	4.2	4.3	4.4	5.1	5.2	5.3	5.4	6.1	6.2	6.3	6.4	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	8.6	8.7	9.1	9.2	9.3	10.1	10.2	10.3
Observed Conformity (tick) Nonconformity(write numbers)**:**																														

Observation/Scope for Improvement:

PART – B: Report of Nonconformities and Their Handling (expand if necessary)

***Root Cause of Nonconformity: A** (Inadequate documentation), **B** (Lack of awareness, commitment), **C** (Lack of resources), **D** (Deficient inputs/services), **E** (Freak), **F** (Any other).

Sl. No	**Nonconformity Statement**	**Section no of IMS Manual**	**Root Cause***	**Correction** (with responsibility)	**Proposed Corrective Action (CA)** (with responsibility)	**By Date**	**Follow-up Report** (Actions complete? and effective?)

Nodal Officer (IMS), MCL HQ**: Name** **Signature/Date**

Distribution by Nodal Officer (IMS), MCL HQ**:**

1. Original with enclosures to Nodal Officer (IMS), MCL HQ for analysis and records
2. Copy to …….. (concerned GM/HOD) - for needed actions, information, etc.
3. Copy to Audit team leader for follow-up and submission of final status of corrective action taken and verification of their effectiveness

11.7 MANAGEMENT REVIEW RECORD

Date……..

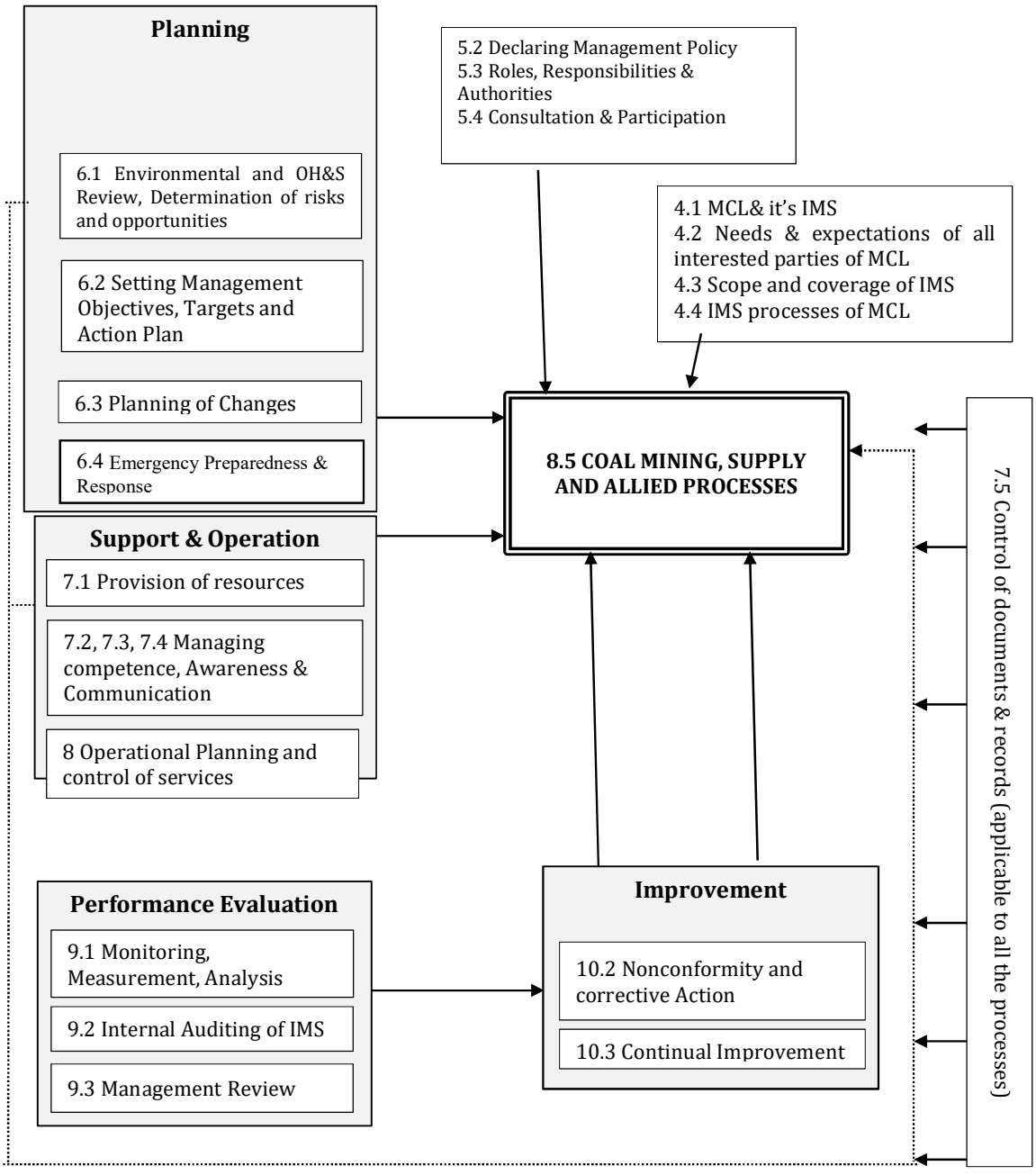
Nodal Officer (IMS), MCL HQ to decide the agenda as in column 1 and record decisions under columns 2 to 4 against each agenda item; arrange communication of decisions to all concerned for needed actions and maintain the record.				
Review is - REGULAR / SPECIAL		Review held on _____		
Review attended by: ……..				
Review Agenda (Write specific issues as necessary under all headings below, and attach required explanatory notes for each)	**Review Decisions**			**Completed on** (Date)
	Actions / Decisions	**To be taken by** (Functionary)	**Completion Schedule** (Date)	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1. The status of actions from previous management reviews				
2. Changes in i) external and internal issues that are relevant to the IMS, ii) needs & expectations of interested parties including compliance obligations related to IMS, iii) significant environmental aspects/OH&S hazards iv) risks and opportunities				
3. Customer satisfaction and feedbacks obtained from all interested parties				
4. IMS performance and conformity of provided services, trends in nonconformities , corrective & preventive actions and status of incident investigations				
5. Monitoring and measurement results, audit results, fulfilment of management objectives and compliance obligations				
6. The adequacy of resources and the performance of external providers				
7. Relevant communication(s) from interested parties, including complaints				
8. The effectiveness of actions taken to address risk and opportunities				
9. Review of management policy, environmental, and OH&S performance				
10. Results of participation & consultation and the evaluation of compliance with legal & other requirements				
11. Opportunities and recommendations for improvement.				
Nodal Officer (IMS), MCL HQ: Name _____ Signature/Date _____				
Distribution: …… …….. …….. ……..				

11.8 STATUTES COMPLIANCE RECORD

Date of Filing	Return for the period	Ref No of Filing	Return filed in time		Any adversity noted in return? (If so, write details of action taken)
			Yes	No	
Name of Return:			**Periodicity of Submission:**		
Name of Return:			**Periodicity of Submission:**		
Name of Return:			**Periodicity of Submission:**		

ANNEXURE 1

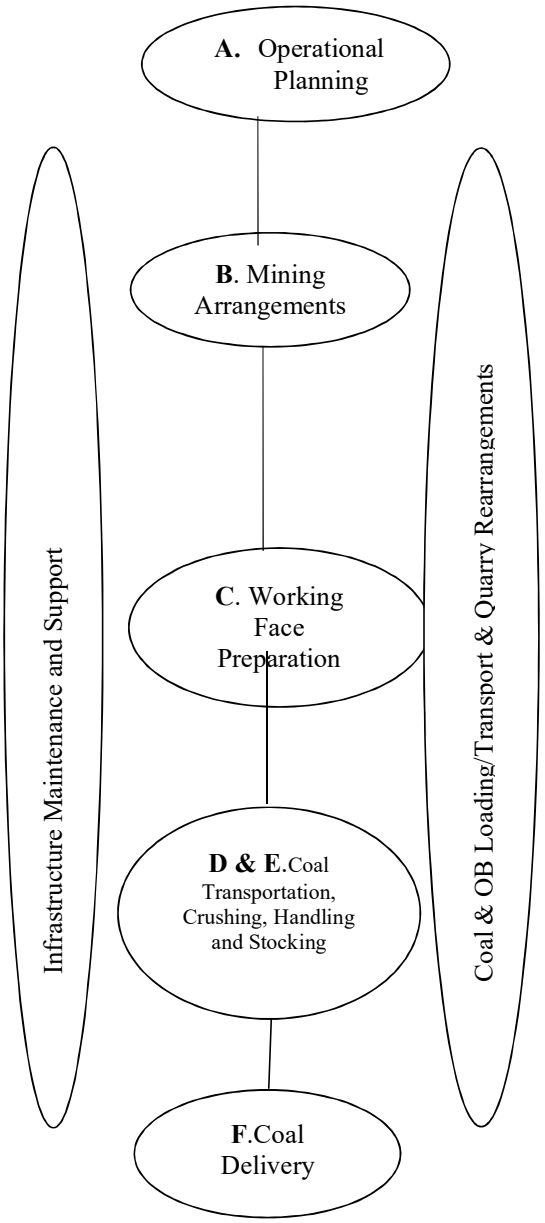
MANAGEMENT SYSTEM PLAN OF MCL



NOTE: Each box shows a process of IMS as described in this manual under referred section number.

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

ANNEXURE 2A
OPERATIONAL PROCESS FLOW IN OPENCAST MINING

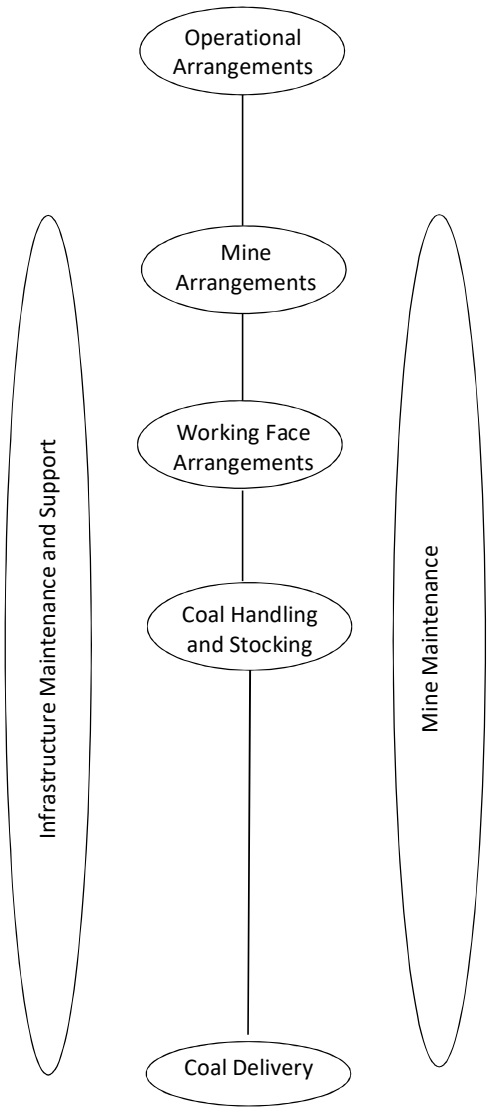


MAIN PROCESSES / SUB-PROCESSES	Document Reference
A. OPERATIONAL PLANNING	
1. Annual Coal Grade Declaration & Periodic Checking	(Coal Grades Declaration Doc)
2. Annual Operations/Resources Planning & Benchmarking	As per MOU
3. Monthly Operations/Resources Planning Deployment	(As decided)
4. Daily Operations/Resource Planning & Monitoring	(As decided)
B. MINING ARRANGEMENTS	
1. Open-pit Mine Surveying	OO.1
2. *Quarry Preparations and Advance Stripping	OO.2
3. *Pit and Dump Slope Stabilization	OO.3
4. *Quarry Dewatering Arrangement	OO.4
5. *Monsoon Preparation	OO.5
6. Electrical Power Arrangement and Mine Lighting	OO.6
C. WORKING FACE PREPARATION	
1. Quarry Bench Preparation	OO.7
2. *Drilling and Blasting in Quarry Benches	OO.8
D. COAL-OB LOADING/TRANSPORT & QUARRY REARRANGEMENT	
1. *Coal & OB Loading & Transportation	OO.9
2. *Haul Road Making and Modification	OO.10
3. * Drain Cutting and Modification	
4. HEMM Relocation	OO.11
5. Rearrangement of Other Machinery	
E. COAL CRUSHING, HANDLING & STOCKING	
1. *Coal Crushing, Handling, Sizing	0.1
2. Coal Grade Identification in Stockyard	(Section 8.2)
3. Coal Stock Preservation	0.2
4. *Shale Picking from Coal-stock	
F. COAL DELIVERY	
1. *Wagon Loading & Dispatch	0.1
2. *Coal Dispatch by Road	
3. Sampling of Coal	
G. INFRASTRUCTURE MAINTENANCE & SUPPORT	
1. Mine Safety Arrangements	(DGMS norms)
2. Material Storage, Receipt & Issue	(CIL Stores Manual)
3. *Maintenance of Offices, Workplaces, Utility Setups	MA.1 to MA.7
4. *Maintenance of Mining Machinery	MB.1
5. *Maintenance of Other Machinery	MC.1 to MC.6
6. *Maintenance of support facilities – mining/beneficiating/supply	MD.1 to MD.4 & MD.1.O
7. *Maintenance of support facilities – transport / communication	ME.1 to ME.2
8. *Maintenance of support facilities – domestic / community	MF.1 to MF.8

1. * - indicates that some parts of these sub-processes are outsourced as required. Details of these and controls over them are given in the related document specified under last column above.
2. Documents referred under last column above are contained in Operational-Manual/Maintenance-Manual; and contain process details, obligatory requirements, and resource requirements, operational instructions with related responsibilities/authorities to control associated Environmental-Impacts and OH&S-Risks, and arrangement for verification, monitoring & recording.

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

ANNEXURE 2B
OPERATIONAL PROCESS FLOW IN U/G MINING



MAIN PROCESSES	SUB-PROCESSES	Document Reference
	A. OPERATIONAL ARRANGEMENTS	
	1. Annual Coal Grade Declaration & Periodic Checking	(Coal Grades Declaration Doc)
	2. Annual Operations/Resources Planning & Benchmarking	As per MOU
	3. Monthly Operations/Resources Planning Deployment	(As decided)
	4. Daily Operations/Resource Planning & Monitoring	(As decided)
	B. MINE ARRANGEMENTS	
	1. Surveying of Underground Workings	UO.1
	2. Mine Dewatering Arrangements	UO.2
	3. Mine Ventilation Arrangements	UO.3
	4. Power Supply & Lighting for Underground Workings	UO.4
	5. Installation/shifting of Plants and Machinery	UO.5
	6. * Stabilization of Mined-out Areas	UO.6
	C. WORKING FACE ARRANGEMENTS	
	1. Preparation of Underground Working Faces	UO.7
	2. Drilling and Blasting or Mechanized Coal Cutting	UO.8
	3. Coal Evacuation from Face to Surface	UO.9
	D. MINE MAINTENANCE	
	1. Maintenance of Underground Roadways / Tunnels	MD.7.U
	2. Maintenance of Underground Water Dams	MD.8.U
	3. Maintenance of Underground Ventilation Stoppings	MD.9.U
	4. Underground Strata Control	MD.10.U
	5. Maintenance of Mine Entries	MD.11.U
	E. COAL HANDLING AND STOCKING	
	1. Coal Crushing, Handling and Sizing	O.1
	2. Coal Grade Identification in Stockyard	(Section 8.2)
	3. Coal Stock Preservation	O.2
	4. * Shale Picking from Coal Stock	
	F. COAL DELIVERY	
	1. * Wagon Loading and Dispatch	O.1
	2. * Coal Dispatch by Road / Conveyors	
	3. Sampling of Coal	
	G. INFRASTRUCTURE MAINTENANCE & SUPPORT	
	1. Mine Safety Arrangements	(DGMS norms)
	2. Materials Storage, Receipt, and Issue	(CIL Stores Manual)
	3. *Maintenance of Offices, Workplaces, Utility Setups	MA.1 to MA.7
	4. *Maintenance of Mining Machinery	MB.1
	5. *Maintenance of Other Machinery	MC.1 to MC.6
	6. *Maintenance of support facilities – mining/beneficiating/supply	MD.1 to MD.6 & MD.1.U to MD.10.U
	7. *Maintenance of support facilities – transport / communication	ME.1 to ME.2
	8. *Maintenance of support facilities – domestic / community	MF.1 to MF.8

1. * - indicates that some parts of these sub-processes are outsourced as required. Details of these and controls over them are given in the related document specified under last column above.
2. Documents referred under last column above are contained in Operational-Manual/Maintenance-Manual; and contain process details, obligatory requirements, and resource requirements, operational instructions with related responsibilities/authorities to control associated Environmental-Impacts and OH&S-Risks, and arrangement for verification, monitoring & recording.

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

ANNEXURE 3

EXTERNAL AND INTERNAL ISSUES OF MCL

EXTERNAL ISSUES:

1. In view of mismatch in quantity and quality of domestic coal availability in India, imported coal presents huge opportunity as well as a threat for MCL.
2. A potential large scale negative impact of climate change initiatives on the use of coal will have a direct impact on the business.
3. MCL's operations are extensively regulated by the Govt. of India, State Governments and various statutory and regulatory authorities. The regulatory changes as and when introduced could have an adverse effect on MCL's business, financial condition as well as environment protection.
4. Extensive governmental regulation relating to employee safety and health impose significant costs. A violation of health and safety requirements and the occurrence can disrupt its operations and increase operating costs.
5. The mines of MCL require various approvals, consents, environmental and forestry clearances and must comply with various statutory and regulatory requirements about business and operations, and any failure to comply with such requirements in a timely manner may adversely affect its operations.
6. Increase in the cost of inputs, like, fuel, materials and spares used in MCL's mining operations, or the inability to obtain a sufficient quantity of materials and supplies, can increase its operating expenses, disrupt or delay its production and adversely affect profitability.
7. Lack of control on coal logistics, creating the problem of increased inventory at mine gates.
8. Delay in land acquisition and increase in cost of land to comply with R&R policy affect the development of new mines as well as sustainability of existing mining operations.
9. With the concern for the global warming and to reduce the greenhouse gases, MCL is taking up steps to use non-conventional energy. Due to its geographical location, and huge area of operation, the coal projects have the option of using solar energy to produce electricity.

INTERNAL ISSUES:

1. A significant portion of its mining operations are in geographically remote areas with multiple obstacles like, tribal resistance, left wing extremism, etc. which create security risks and operational disruptions.
2. MCL's operations are subject to various risks inherent to mining activities. MCL's coal mining operations are subject to various operating risks, which can result in materially increased operating expenses and decreased production levels.
3. MCL mines are subjected to trade union activities and labour disputes and could lead to loss of production and increased costs.
4. Private companies are coming in the field of coal production. In such case MCL has to compete with them to maintain its productivity and profitability.
5. New changes in technological and marketing may affect the performance of MCL in coming decades.
6. DG sets used as backup for power, if not maintained properly may cause emission of nitrous fumes into air resulting into air pollution.
7. Use of paper on large scale may put further pressure on scarce of natural resource.

8. UG operations continue to be loss making. Underground mining operations are particularly hazardous and subject to unexpected disruptions which can adversely affect productivity.
9. MCL is dependent on its senior management personnel. A large chunk of its experienced executives will retire in the next couple of years. There will be a significant gap in the middle level executives as well as the availability of qualified personnel. The business and operations will be adversely affected if qualified personnel are not attracted and retained.
10. MCL depends on equipment and machinery for coal mining operations. Acquisition of mining equipment is capital intensive, and if such equipment is not utilized in a productive and efficient manner, it may not realize the benefits and its operations and profitability may be adversely affected.
11. MCL incurs material costs to comply with, suffer material liabilities or other adverse consequences because of environmental laws and regulations.

ANNEXURE 4

INTERESTED PARTIES & THEIR EXPECTATIONS

SL NO	INTERESTED PARTIES	THEIR EXPECTATIONS
1	Govt. of India	• Investment performance, • Sustained profitability and performance, • Compliance of statutory requirements. • Protection of environment.
2	CMD& Board of Directors	• The IMS meets the purpose of the organization, • Effective implementation in MCL, • User friendly system for implementation, • Continual improvement in the system, • Maintain business continuity by sustainability • Sustained profitability and performance.
3	Head of all Departments	• Healthy, safe and congenial working environment, • Improvement in work functioning, • Protection from adverse environmental impact & OH&S risks. • No interruption during work, • Better amenities, • Recognition and reward, • Provide learning opportunities, • Career growth & professional development • Respectful interaction with each other, • Better understanding of the system, • Continual improvement of the system.
4	Nodal Officer(IMS) MCL HQ and all other field units	
5	All employees.	
6	Customers and end users	• Value of their investment, • Quality of products/services, • Post-delivery performance, • Higher level of satisfaction, • Prevent environmental impacts within the life cycle. • Good logistics and delivery system.
7	Suppliers	• Mutual benefits, • Continued business opportunity.
8	Stakeholders & shareholders	• Sustained profitability and performance, • Transparency in business ethics, • Firm policies and standards, • Reputation of the company, • Protection of the environment by abatement of pollution.
9	Statutory Bodies	• Compliance of all legal, statutory and regulatory requirements.
10	Society	• Socially responsible, • Good social and ethical behavior, • Protection of social and human rights, • Protection of the environment by abatement of pollution.

ANNEXURE 5

ROLES & RESPONSIBLITIES RELATED TO THE MANAGEMENT SYSTEM

Sl No	Responsible Functionary	Roles & responsibilities relevant to this Management System
1	**CMD & Directors**	• Establishing the Management policy and objectives. • Approving the initial IMS documents as well as any changes to it. • Providing resources for the implementation of the IMS. • Demonstrating their commitment towards this IMS. • Reviewing the performance of the IMS periodically. • Assigning & communicating the relevant roles & responsibilities to all. • Ensuring specified communication with government bodies & MCL areas.
2	**GM/HOD of Departments**	• Identifying and arranging resources (financial, material, manpower etc.) for effective implementation of IMS. • Deciding and ensuring documentation of departmental Work Instruction manual & operational process-flow of their work. • Approving the departmental work instruction manual as well as any changes to it. • Providing technical and administrative assistance to all within the Department. • Deciding the need for outsourcing of any process and exercising necessary controls on outsourced process. • Ensuring that IMS is understood and implemented within the department. • Receiving customer complaints and forwarding to concerned persons for actions. • Communicating with FDs/Nodal Officer (IMS) MCL HQ/HODs and all concerned in matters related to IMS. • Continuously monitor the effectiveness of all declared controls within their functional domains. • For the respective field unit, conducting the environmental / OH&S review for all processes/facilities and propose the management objectives for the financial year as declared in the system • Any other roles and responsibilities as proposed in this IMS Manual.
3	**Nodal Officer (IMS), MCL HQ**	• Distribution of IMS manuals after approval by CMD. • Review, update, change of IMS documents, when necessary, and arranging re-approval. • Ensuring the integrity of the IMS during all changes. • Ensuring that the processes of IMS are established implemented and maintained in MCL. • Ensuring that the IMS conform to the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. • Reporting to CMD and all concerned the performance of IMS and any need for its improvement through proper channel. • Arranging to conduct internal audit periodically. • Identifying, reviewing, determining the causes and deciding upon the correction, corrective & preventive actions for non-conformities reported during internal/external audits. Reviewing the compliance and effectiveness of such actions. • Selection of external Certification Body and constant liaison with them. • Ensuring that the Management Review Meetings are conducted, documented, recorded and communicated for taking decided actions in time. • Communicating directly with all in matters related to IMS. • Conducting the environmental / OH&S review for all processes of MCL HQ and propose the management objectives for the financial year as declared in the system • Any other roles and responsibilities as proposed in this IMS Manual.

Sl No	Responsible Functionary	Roles & responsibilities relevant to this Management System
4	**Nodal Officer for field units**	• Providing assistance on defined controls of IMS. • Conducting Environmental / OH&S review for its unit and maintain the review & performance record. • Arranging to conduct internal audit periodically. • Recording, classifying, deciding and arranging responses on all received communications on IMS. • Liaison with CMPDIL, Certification Body, & Nodal Officer (IMS),MCL HQ. • Framing Management Objectives, Targets& Action Plans for the unit on the basis of initial environmental & OH&S review record. • Any other roles and responsibilities as proposed in this IMS Manual.
5	**Health & Safety Committee**	• Conduct periodic/annual OH&S risk assessment including identification, analysis and prioritization or risks. • Recommend mitigative action to GM/Head (TS), HQ on the prioritized hazards. • Reviewing the actions taken to mitigate the hazards. • Suggest for improving the health and safety conditions at the workplace. • Any other roles and responsibilities related with health & safety issues of workers.
6	**Internal Auditors**	• Apart from designated responsibilities, providing assistance for smooth implementation of the system. • Conduct internal audit periodically as per the audit plan circulated by Nodal Officer (IMS), MCL HQ. • Assisting the auditee to surface improvement opportunities through the implementation of the IMS in the company • Making himself/herself aware about the requirements of the international standards and also to act as key agents for the implementation of the system • Any other roles and responsibilities as proposed in this IMS Manual.
7	**All employees of MCL**	• Ensuring proper storage and protection of all office records. • To make himself/herself aware about the requirements of the standards and the documented arrangement of this IMS. • Understanding the benefits of system and ensuring actions to follow the system. • Committing to safeguard the company's facilities. • Utilizing the provided resources optimally.

ANNEXURE 6

PERSONNEL COMPETENCE REQUIREMENTS RELEVANT TO THIS MANAGEMENT SYSTEM

Functionary Levels	Minimum Educational Qualification	Minimum Acceptable Experience	Minimum Acceptable Training
Chairman & Directors	As per GOI rules.	As per GOI rules.	As per GOI rules.
General Manager / Heads of Departments	As given in the Common Coal Cadre Manual available with Personnel Department, MCL.		Advanced Management Training.
Nodal Officer (IMS) (For MCL HQ or Field Units)	As per CIL/ MCL norms available in the Common Coal Cadre Manual for executives & the current Cadre Scheme Manual for non-executives.		Management & Functional Skills Training. Lead Auditor Training/Internal auditor training/Awareness Training in any of the management system standard.
Internal Auditor			Internal auditor training /Awareness Training in any of the management system standard.
All other employees of MCL			Basic awareness trainings on Integrated Management System, or any other management system standard or Vocational Training

ANNEXURE 7

LIST OF LEGAL AND OTHER OBLIGATIONS

(This list includes only external documents and excludes internally generated documents. Concerned copy holder of any of these reference documents generate their own Document ID in the identifier given in Section 7.5.) The latest version and or amendments is to be considered.

Name of External Documents (Norms & Standards)	Published By
Statutes and Regulations (Also refer the following links - http://ismenvis.nic.in/Database/Standards_Rules_Regulations_6425.aspx http://legislative.gov.in/documents/legislative-references/list-of-acts-yearwise	
Mining and Allied Operations Related:	
Permission/conditionality for mining in the concerned mine	DGMS
Explosive Storage and Usage License for the mine	Explosives Controller
The Mines Act, 1952	Govt of India
Mines Rules, 1955	
The Coking Coal Mines (Emergency Provision) Act, 1971	
The Coking Coal Mines Nationalization Act, 1972	
Mines Rescue Rules, 1985	
Coal Mines Regulations, 2017	
Colliery Control Order, 2000; and related guidelines	
Mines Vocational Training Rules, 1966	
Coal Mines (Conservation and Development) Act, 1974	
Coal Mines (Conservation and Development) Rules, 1975	
Coal Mine (Special Provision) Act & Rules, 2015	
The Mines (Posting up of abstract) Rules, 1954	
The Coal Mines Pithead Bath Rules, 1959	
The Mines (Posting of Abstracts) Rules, 1954	
The Mines and Minerals (Regulation & Development) Act, 1957, (Amended in 1972, 2003 & 2016)	
The Mining Leases (modification of terms) Rules, 1956	
The Mineral Concession Rules, 1960 (Amended in 2003)	
The Coal Mines Advisory Board Rules, 1973	
The Coal Mines Conservation and Development Acts, 1974	
The Mineral Conservation and Development Rules, 1988 (Amended in 2017)	
The Factories Act, 1948	
Indian Explosives Act, 1884	
Indian Explosives Rules, 2008	
Indian Electricity Act, 1910, (Amended in 2003)	
National Mineral Policy 2019	
Indian Electricity Rules, 1956, (Amended in 2004)	
DGMS Circulars (issued against the Mines Act 1952)	
Recommendations of 1st conference on safety in mines, 1958	DGMS
Recommendations of 2nd conference on safety in mines, 1966	
Recommendations of 3rd conference on safety in mines, 1973	
Recommendations of 4th conference on safety in mines, 1978	
Recommendations of 5th conference on safety in mines, 1980	

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

Name of External Documents (Norms & Standards)	Published By
Recommendations of 6th conference on safety in mines, 1986	
Recommendations of 7th conference on safety in mines, 1988	
Recommendations of 8th conference on safety in mines 1993	DGMS
Recommendations of 9th conference on safety in mines, 2000	
Recommendations of 10th conference on safety in mines, 2007	
Recommendations of 11th conference on safety in mines, 2013	
Coal Controller's Guidelines	
IS 436, Pt-1, Sec-I:1964 – Methods for sampling of coal and coke; sampling of coal; manual sampling	BIS
IS 436, Pt-1, Sec-II:1976 – Methods for sampling of coal and coke; sampling of coal; mechanical sampling	
IS 1350, Pt-1:1984 – Methods of test for coal and coke; proximate analysis	
b. Environment Related	
Environmental clearance and conditionality for the concerned mine	MoEF&CC CPCB
Consents to operate and conditionality for the concerned mine under Air & Water Acts	
The Environment (Protection) Act, 1986	Govt. of India
The Environment (Protection) amendment Rules, 2018	
Indian Forest Act, 1927	
Forest Conservation Act, 1980	
Forest (Conservation) amendment Rules, 2017	
Water (Prevention and Control of Pollution) Act, 1974	
Water (Prevention & Control of Pollution) Rules, 1975	
Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003	
Water (Prevention and Control of Pollution) Cess Rules, 1977	
Air (Prevention and Control of Pollution) Act, 1981	
Air (Prevention & Control of Pollution) Rules, 1982	
The Hazardous & Other Wastes (Management and Trans boundary movement) Rules, 2016	
The Bio Medical Wastes (Management & Handling) Rules, 2016	
E waste Management Rules, 2016	
Plastic Waste Management Rules, 2016	
Construction & Demolition Waste Management Rules, 2016	
Batteries (Management & Handling) Rules – 2001	
National Ambient Air Quality Standards, 1994, 2009	
Noise Pollution (Regulation and Control) Rules, 2000, Amendments in 2009, 2010.	
EIA Notification, 2006 Amendment 2009.	
Municipal Solid Waste (Management and Handling) Rules, 2000	
Central Motor Vehicles Rules, 1989, 2019	
MoEF&CC Schedule VI:1996 – Water quality standards for effluent water	MoEF&CC
EIA Guidance Manual for Mining & Minerals including OC & UG	
IS 2216:1982 – Water quality standards for surface water bodies	BIS
IS 10500:2012 – Water quality standards for drinking water	
c. Establishment Related	
Coal India (Regulation of Transfer and Validation) Act, 2000	Govt. of India
Coal Bearing Areas Acquisition and Development Act, 1957, and related notifications	
Land Acquisition Act, 1894 / LARR 2013	
Land Acquisition (Mines) Act, 1885	
Building & Other Construction Workers' Act, 1996	

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

Name of External Documents (Norms & Standards)	Published By
Essential Commodities Act, 1955	
The Indian Contract Act, 1872	
Industrial Disputes Act, 1947	Govt. of India
Workmen's Compensation Act, 1923	
Trade Union Act, 1926 (Amended in 1942, 1951, 1960, 1964, 1970)	
Companies Act, 1956 (Amended in 1999)	
The Maternity Benefit Act, 1961	
Contract Labor (Regulation and Abolition) Act, 1970	
Payment of Gratuity Act, 1972	
The Payment of Gratuity (Central) Rules, 1972	
Child Labor (Prohibition and Regulation) Act, 1986 / Amendment 2016	
Mines Crèche Rules, 1966	
Coal Mines Provident Fund & Miscellaneous Provisions Act, 1948	
Coal Mines Provident Fund,1957, Coal Mines Family Pension, 1971	
Coal Mines Deposit Linked Insurance Schemes, 1976	
The Public Premises (Eviction of unauthorized Occupants), Act, 1971	
The Coal Mines (Taking over of Management), Act, 1973	
The Coal Mines (Nationalization), Act, 1973	
The Coal Mines (Nationalization) Amendment Act, 1993	
The Apprentices Act, 1961	
The Apprentices Rules, 1962	
The Employment Exchange (Compulsory Notification of Vacancies) Act, 1959	
The Official Secrets Act, 1988	
Coal Mines Pension Scheme, 1998	
Right to Fair Compensation & Transparency in Land Acquisition, Rehabilitation & Resettlement Act, 2013	
The Equal Remuneration Act, 1976	
The Right to Information Act, 2005	
The Motor Transport Act, 1961	
Goods & Service Tax Act, 2017	
The Employment Exchange (Compulsory Notification of Vacancies) Rules, 1960	
Presidential Directives on Reservation of SC/ST and O. B. Cs	
The Payment of Wages Act, 1936	
The Payment of wages (Mines) Rules, 1956	
The Payment of Un-Disbursed Wages (Mines) Rules, 1989	
The Employees Liabilities Act, 1938	
The Minimum Wages Act, 1948	
The Payment of Bonus Act, 1965	
The Payment of Bonus Rules, 1975	
The Maternity Benefit (Mines & Circus) Rules, 1963 (Amended in 1992)	
The Social Security Act, 1973 (Revised in 1993)	
The Industrial Disputes (Central) Rules, 1957	
The Industrial Employment (Standing Orders) Act, 1946	
The Industrial Employment (Standing Orders) Central Rules, 1946	
The Contract Labor (Central) Rules, 1971	
The Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1946	
The Information Technology Act, 2000	
The Arms Act, 1959 and The Arms Rules, 1962	
The Indian Penal Code, 1860	

Name of External Documents (Norms & Standards)	Published By
Code of Criminal Procedure, 1973	
The Prevention of Corruption Act, 1988	
The Industries (Development and Regulation) Act, 1951	Govt. of India
The Sick Industrial Companies (Special Provisions) Act, 1985	
The Board for Industrial and Financial reconstruction regulations, 1987	
The Negotiable Instrument Act, 1881	
The Negotiable Instrument (Amendment & Misc. provisions) Act, 2001	
The Consumers Protection Act, 1986	
The Arbitration and Conciliation Act, 1996	
The Income Tax Act, 1961	
The Motor Vehicles act, 1988 / Amendment in 2017	
The Collection of Statistics Act, 1953	
The Ancient Monuments and Archaeological Sites and Remains Act, 1958	
The Transfer of Property Act, 1882	
The Standards of Weights & Measurements Act, 1976	
Maintenance of Supplies of Essential Commodities Act, 1980	
The Essential Services Maintenance Act, 1981	
The Scheduled castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989	
The Scheduled castes and the Scheduled Tribes (Prevention of Atrocities) Rules, 1995	
The Public Records Act 1993 and The Public Records Rules 1997	
The Intellectual Property Act,	
The Public Record Act, 1993	
The Indian Boiler Act, 1923	
The Indian Boiler Regulation, 1950	
B. Rules/Procedures of CIL, MCL, Others as subscribed	
a. Mining and Allied Operations Related (In addition to OEM manuals mentioned under Maintenance Manual)	
Schedule of Rates Book – CPWD and SR	**CPWD**
Safe Usage of Explosives (in Hindi)	**CMPDI**
Code of Practice for Rear Dumper Operators (in Hindi)	
Do's and Don'ts for Belt Conveyors (both in English and Hindi)	
Do's and Don'ts for Crushers (both in English and Hindi)	
Mine Winders and Winding Systems	
Manual on Colliery Survey – Code 75.21:75.52.231 (017.22)	
Code for Uniform System of Maintenance, Control, and Verification of Coal Stock in All Mines of CIL (i.e., Surveying Yellow Book) – Jan 1992	**CIL**
Code for Uniform System of Maintenance, Control, and Verification of OB Removal in OC mines of CIL (i.e., Surveying Yellow Book) – Aug 1993	
New Code for Uniform System of Maintenance, Control, and Verification of Coal Stock in all mines of CIL – October 2011	
CIL Note on OBR Accounting as In Vogue in CIL - 1995	
Community and Peripheral Development Policy of CIL	
Occupational Health & Safety Policy of CIL	
Coal Sampling Policy	
Approved PRs /RPRs /RCEs of the concerned mine	**MCL**
Coal Price Notifications	
Annual Coal Grades Declarations	
CIL Purchase Manual	**CIL**
CIL Stores Manual	

Name of External Documents (Norms & Standards)	Published By
CIL Contract Management Manual	
CIL Resettlement and Rehabilitation Package	
CIL Finance Manual	**CIL**
CIL Civil Engineering Manual	
b. Environment Related	
File containing CIL/MCL circulars, which set out some procedure or criteria on environmental controls, etc.	**CIL/MCL**
Guidelines for Environmental Personnel in Mines	
c. Establishment Related	
CIL Conduct Discipline and Appeal Rules	**CIL/MCL**
CIL Leave Rules	
CIL House Building Advance Rules	
CIL House Rent Allowance Rules	
CIL Leave Travel Rules	
CIL Traveling Allowance Rules	
CIL Conveyance Allowance Rules	
CIL Conveyance Advance Rules	
CIL Talent Management Policy	
CIL Learning and Development Policy	
CIL Executives Communication Policy	
Role Profile of Executives in CIL	
CIL Pension Scheme	
CIL Leave Encashment Rules	
CIL Medical Attendance Rules	
CIL Common Coal Cadre	
CIL Cadre Scheme for Non-Executives	
CIL Scholarship Scheme, 2001	
CIL PRIDE Guidelines	
CIL Gratuity Rules	
Vigilance Manual published by the CVC (Two Volumes)	
Special chapters on Vigilance Management in PSEs & the roles of CVC	
Departmental Enquiries and Proceedings	
Administrative Laws	

ANNEXURE 8

LIST OF OPERATIONAL RECORDS

[Formats of all records listed below are available with the concerned functionary as under:

- If of 'external origin': Under the copy of related statute, rule, regulation, etc.
- If of 'internal origin': Under a specific office folder in the concerned unit/department.]
- The periodicity mentioned is as per existing norm may be treated as per prevailing practice of the organization.

* - for OC mines; ** - for UG mines; Others common for both

Sl	Name of the Record	Periodicity	Maintained by	Sent to
I. STATUTORY RETURNS AND RECORDS:				
A. Statutory Diaries, Registers and Records maintained within MCL				
1	Manager's charge report	On charge assumption & relinquishment	Mine Manager	DGMS, CGM/GM
2	Manager's diary	Daily		Agent
3	Safety officer's diary	Daily	Safety Officer	Mine Manager
4	Assistant manager's diary	Daily	Asst Manager	
5	Overman's report	Shift-wise	Overman	
6	Mining Sirdar's report	Shift-wise	Mining Sirdar	
7	Shot firer's report	Shift-wise	Shot firer Sirdar	
8	Workmen Inspector's report	Twice a week	Workmen Inspector	
9	Surveyor's diary	Daily	Surveyor	
10	Magazine Record	Daily	SH (BLS)	
11	Welfare Officer's Report	Annual	Welfare Officer	
12	Gas Testing Record (CMR 169) **	Weekly	Ventilation Officer	
13	Water Danger Inspection Record (CMR 149, 150) **	Monthly	Safety Officer	
14	Fire Area Inspection Report (CMR 138) **	Daily		
15	Gas Emission Register (CMR 136) **	Monthly	Ventilation Officer	
16	Old Workings Inspection Register (CMR 136) **	Monthly	Safety Officer	
17	Ventilation Officer's Diary **	Daily	Ventilation Officer	
18	Attendance Register	Shift wise	Attendance Clerk	
19	Cap Lamps & Safety Lamps Register **	Continuing	Cap Lamp Cabin Incharge	
20	Ventilation Plan **		Ventilation Officer	
21	Surface Plan **		SH (SUR)	
22	UG Plan **			
23	Vertical Projection Plan **			
24	Water Danger Plan **			
25	UG Machinery Inspection Register (CMR 213) **	Weekly	SH (E&M)	
26	Shaft / Incline Inspection Record (CMR 75) **			
27	Winder Rope Maintenance Record (CMR 85) **	Monthly		
28	Winder System Inspection Report (CMR 87) **			Mine Manager
29	Haulage Inspection Report (CMR 98, 99) **			
30	Automatic Contrivances Test Register (CMR 81) **	Weekly, Qtrly		
31	Shaft Sinking Signals Test Register (CMR 84) **	Daily		
32	Winding Rope Recapping Register (CMR 85, 87) **	Half Yrly		
33	Suspension Gear Inspection Register (CMR 86) **	Monthly		
34	Tub Examination Register (CMR 94) **	Fortnightly	SH (E&M)	
35	Haulage/Traveling Roadways Inspection Register (CMR 99) **	Weekly		

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

Sl	Name of the Record	Periodicity	Maintained by	Sent to
36	Contraventions Register (CMR 116) **	When needed	SH (MIN)	Mine Manager
37	Airborne Respirable Dust Test Register (CMR 143) **	Fortnightly	Ventilation Officer	
38	Dust Suppression Measures Inspection Register (CMR 143) **	Weekly		
39	Dust Control Plan (CMR 143) **	Continuing		
40	Dust Cleaning and Treatment Register (CMR 143) **	Daily		
41	Air Quantity and Temperature Register (CMR 153) **	Monthly		
42	Main Fan Inspection Register (CMR 156) **	Weekly	SH (E&M)	
43	Air Crossings, Ventilation Stoppings and Doors Inspection Register (CMR 158) **	Fortnightly	Ventilation Officer	
44	Old Area Reopening Gas Inspection Register (CMR 165) **	When needed		
45	Inflammable Gas Removal Register (CMR 166) **	When gas detected		
46	Old Workings (unsealed) Gas Testing Register (CMR 167) **	Weekly till sealed		
47	Explosives & Detonators Register (CMR 165)	Continuing	Magazine Clerk	
48	Compressors and Pressure Equipment Inspection Register (CMR 210) **	On repairs and 3 yrly	SH (E&M)	
49	Manpower Survey Plan (CMR 246) **	Monthly	SH (PER)	
B. Statutory returns sent to regulatory bodies:				
1	Notice of opening, closing or change in ownership of mine	1 month before opening, closing or change in ownership of mine	Agent/ Mine Manager	Indian Bureau of Mines, Chief & Regional Inspectors of Mines, District Magistrate
2	Notice regarding hours of work in form-A	Not less than 7 days before start of work		Chief Inspector of Mines
3	Notice of abandonment or discontinuance for period > 60 days	Not less than 40 days before such abandonment	Agent / Mine Manager	Chief Inspector of Mines, Regional Inspector of Mines
4	Notice of reopening in Form-I, after abandonment or discontinuance for a more than 60 day	One month before such reopening		Chief & Regional Inspectors of Mines, District magistrate
5	Notice of change in name, address, or ownership of a mine	Within 7 days of such change		Chief Inspector of Mines, Regional Inspector of Mines
6	Notice of appointment or termination of employment of an Agent, Mine Manager, Assistant Manager, Engineer, Safety Manager and Surveyor	Within 7 days of such appointment or termination		
7	Notice of accident/occurrence in Form-IVA	Within 24 hrs	Mine Manager	As above, plus District Magistrate, Coal Mines Labour Welfare Commissioner
8	Notice of Occupational Diseases in Form-V	3 days of being informed		All above, plus Inspector of Mines (Medical)
9	Notice of New Installations **	Within 60 days		Chief Inspector of Mines, Regional Inspector of Mines
10	Systematic Support Rules **	Within 30 days of start of Operation		
11	Notice of initial/periodical medical examination in Form-M	While seeking employment; or 20 days before examination	Safety Officer	To the concerned employee
12	Monthly Return in Form-II	On or before 14th of every month	Mine Manager	Chief Inspector of Mines, Regional Inspector of Mines

Rev	Effective from	Reason of Change
00	As on Page 1	Not applicable, since initial issue.

Sl	Name of the Record	Periodicity	Maintained by	Sent to
13	Annual Return in Form-III	On or before 20th of Feb. every year	Mine Manager	Chief Inspector of Mines, Regional Inspector of Mines, District Magistrate
14	Particulars of deceased/injured persons in Form-IVB	Within 7 days		Chief Inspector of Mines
15	Printing out contraventions by CIM/RIM in Form-VI	For every mine inspection	Safety Officer	Mine's notice board; Mine Manager
16	Return of accidents in Form-J	Once in a Quarter		Chief Inspector of Mines
17	Return of accidents in Form-K	Once in a year		
18	Renewal of Magazine license		Blasting Officer	Controller, Explosives
19	Air Consent Form-I	120 Days before Lapse	Agent/Unit Head	State Pollution Control Board
20	Water Consent Form-IV			
21	Hazardous Waste Authorization Form-1	Before expiry of each authorization		
22	Water Consumption Report Form-I	5th day of succeeding month	Agent/Unit Head	State Pollution Control Board
23	Environmental Statement Form V	Yearly by 30th Sept		
24	Environmental Monitoring Report	Quarterly		
25	EMP Compliance 6 Monthly Report	Half yearly by 31 Jan & 31 July		MOEF
26	Return for Bulk Consumer of New Batteries, Form-VIII			SRO, SPCB
27	Return for Recycling of Used Batteries Form IX			
28	Water Cess Payment	Upon Receipt of assessment order Within one week		Member Secretary, SPCB
29	Monitoring of Hazardous Wastes at Factory, Form-3	Annually		SRO, SPCB
30	Information Regarding Handling of Hazardous Wastes & their Disposal Form-4			
31	Accident Reporting, Form-5	When an accident occurs		
32	Compliance of Consent Conditions	As per need		
33	Environmental Aspect & Pollution Control Measures in Mine	Half yearly		
34	Safety Committee Minutes	Monthly	Mine Manager	DGMS, CGM (S&R)
II. Coal Production and Monitoring Records Prescribed by CIL/MCL				
1	Contractual Production Report	Monthly	Mine Manager	Head (TS)
2	Performance report of Feeder Breaker	Daily	E&M heads of mine	
3	CHP Report	Shift wise		
4	Production, Dispatch and Manpower Report	Daily	Mine Manager	
5	Monthly Safety Report	Monthly	Safety Officer	Head (Safety), HQ
6	HEMM Performance Report	Weekly	EXCV heads of mine	Head (Excv), HQ
7	POL Consumption Report	Monthly		
8	Statement of Tyres, Engines, Transmission	Monthly		
9	Drill Bit Statement	Monthly		
10	Cost sheet	Monthly	FIN heads of all units	Head (Fin), HQ
11	Rake Report	Rake wise	Dispatch Officers of all mines	Head (S&M/QC), HQ
12	Dispatch Report	Shift wise		
13	Analysis Result of coal samples collected jointly with linked and basket customers	Daily		
14	Performance Report of Regional Workshop	Monthly	In-charge, Regional Workshop	Head (Excv), HQ
15	Performance Report of Central Hospital	Monthly	CMS In-charge	Head (TS)
16	Monthly Inventory Report of Central Stores	Monthly	In-charge, Central Stores	Head (MM), HQ

Sl	Name of the Record	Periodicity	Maintained by	Sent to
III. Records for Process Execution in mines				
1	Mine Surveying Registers	Weekly	Survey Officers	Mine Manager
2	Mine Plans/Drawings	Monthly		
3	Contractual Works Registers	Routine	Concerned Officers	----
4	Water Survey Register	Routine	Survey Officers	
5	Water Danger Plan/Drawing	Quarterly		Mine Manager
6	Mine Water Pumping Register	Routine	Colliery Engineer	----
7	Monsoon Preparation Plan	Monthly during monsoons	Mine Manager	Agent
8	Sub-station and Electrical Equipment Log Books	Routine	Colliery Engineer	----
9	Coal Handling Plan Log Books	Routine		
10	Pump Installation Registers	Routine		
11	Drilling and Blasting Record/Report	Daily	Blasting Officer	
12	Blasting Forms 16, 32, 34, 37 & 75 of Indian Explosive Rules, 1983	Daily		
13	Explosive Transit Slip	Daily		
14	Wagon Loading Sheet	Daily	Dispatch Officer	
15	Loading Invoice	Daily		
16	Magazine Register	Routine	Mine Manager	
17	Loading Supervisors Log-book	Routine	Dispatch Officer	
18	Wagon Loading Statement Register	Routine		
19	Local Sales Register	Routine		
20	Sampling Register	Routine		
21	Weighbridge Register	Routine		
22	Explosive Consumption Report	Monthly	Blasting Officer	Agent
23	Machinery Redeployment Plans	Monthly	Colliery Engineer	
24	Plant Inspection Reports for CHP, Pumps, Sub-station	Daily		
25	Manpower Deployment Report	Monthly	Personnel Officer	
26	Shale Picking Register	Routine	Dispatch Officer	----
27	Stores Receipts Register	Routine	Stores In-charge	
28	Stores Issue Register	Routine		
29	Material Inspection Report	Routine		

ANNEXURE 9

DATA ANALYSIS PLAN

Data to be analyzed	Data Source	Analysis Method/Technique	Responsibility
Achievement against MoU objectives	Statistics department records	Half yearly, as per Govt. of India guidelines. Analyze information like coal production, OBR removal, productivity, manpower, Total costs, profit parameters, etc.	GM (Corporate Planning)
Achievement against environmental/ OH&S objectives	Record 11.3	Every quarter, plotting line graph for each objective / parameter, to show trends of quarterly achievements over the year.	Nodal Officer (IMS) – HQ and all units
Level of customer satisfaction	Record 11.4	Half yearly, plotting bar charts separately for each of the five questions under Customer Feedback Record, to show percentage of positive feedback every half yearly over the year.	GM/HOD (Marketing& Sales)
Vendor Analysis/Rating	Purchase order, Stores receipt record	Every year, as given in Clause 4.6 of Coal India Purchase Manual.	GM/HOD (MM)
Office maintenance	Administration department records	Every quarter, plotting a bar chart to show the number of instances of complaints received to those which could not be attended within the stipulated time.	GM/HOD (Admin)
Attrition from the company	Personnel department records	Half yearly, plotting bar charts for number of new executives leaving the company against the number of new executives inducted for whole of CIL including subsidiaries.	GM/HOD (Personnel)
Corporate Social Responsibility	CSR department records	Half yearly, plotting bar charts for budget consumed against the total budget available, vis-à-vis previous years.	GM/HOD (CSR)

ANNEXURE10

KEY CHARACTERISTICS AND THEIR LIMITS

Sl No	Parameters	Details / Units	Permissible limits/ Norms	Responsibility Department of Mine/Project/HQ	Source of Permissible limits/ Norms
1	**Coal Production**	In tonnes	As per MOU with CIL or internal target as set by MCL	Mining Dept.	Annual Program of MCL
2	**O B R Removal**	In cubic meter			
3	**Output per man shift**	Ratio of tonnes of coal produced per man per shift			
4	**Capacity Utilization of the mine**	Percentage utilization of the mine capacity for the year	As calculated by CMPDI for each mine at the beginning of every year		CMPDIL
5	**Ambient Air quality**	Suspended Particulate Matter (SPM)	Annual avg. 500 µg/m³	Environment Dept.	Sec 90 Table III of Environment (Protection) Rules, 1986 – For coal mines located in Raniganj Field.
		Respirable Particulate matter (RPM), (size less than 10µm)	Annual avg. 200 µg/m³		
		Sulphur Dioxide (SO_2) (SOX)	Annual avg. 80 µg/m³		
		Oxide of Nitrogen as NO_2 (NOX)	Annual avg. 80 µg/m³		
6	**Ambient Air quality -For Residential Areas.**	Suspended Particulate Matter (SPM)	Annual avg. 140 µg/m³		Notified under NAAQS by CPCB, Govt of India
		Respirable Particulate matter (RPM), (size less than 10µm)	Annual avg. 60 µg/m³		
		Sulphur Dioxide (SO_2) (SOX)	Annual avg. 60 µg/m³		
		Oxide of Nitrogen as NO_2 (NOX)	Annual avg. 60 µg/m³		
7	**Drinking Water**	Turbidity (in NTU)	Max 10		Specification as per IS 10500:1993.
		pH	6.5 to 8.5		
		Colour (in hazen units)	Max 25		
		Total Hardness as $CaCO_3$	Max 600 mg/l		
		Iron as Fe	Max 1.0 mg/l		
		Chlorides as Cl	Max 1000mg/l		
8	**Discharge Of Effluents from Workshops/Mines**	Total Suspended solids (TSS)	100 mg/1		Schedule VI of Environment (Protection) Rules, 1986
		pH value	5.5 to 9.0		
		Oil and grease (O&G)	10 mg/1		
		Chemical Oxygen Demand (COD)	250 mg/l		

Sl No	Parameters	Details / Units	Permissible limits/ Norms	Responsibility Department of Mine/Project/ HQ	Source of Permissible limits/ Norms
9	**Illumination in Open cast Mines**	Work Place of Heavy Machinery	Min 15 Lux Horz. / 25 Lux Vert.	E&M Dept	Illumination in Open cast mines are to be maintained as per Gazette Notification no G.S.R 981(E) dtd. 01.10.2018 under clause (b) of sub regulation 178 of CMR -2017
		Haul roads for Trucks and Dumpers	Min 10 Lux Horz.		
		Area where drilling rig works	Min 25 Lux Vert		
		Operators cabins of machines or mechanisms	Min 50 Lux Horz		
		Conveyors Transfer points and drive / tail end area	Min 40 Lux Horz		
		CHP- Places of crushing, screening, segregation and loading / unloading	Min 40 Lux Horz		
		Electrical Sub-station	Min 100 Lux Horz / Min 50 Lux Vert		
		Workshop	Min 100 Lux Horz / Min 50 Lux Vert		
		OB & Coal Dumps	Min 15 Lux Horz./ 15 Lux Vert.		
		Roadways & footpaths from bench to bench.	Min 10 Lux Horz.		
10	**Ambient Air Quality Standards in respect of Noise**	Industrial Area	Daytime 75 dB(A), Leq	Environment Dept.	The Noise Pollution (Regulation and Control) Rules, 2000 of Env (Protection) Rules, 1986
			Night time 70 dB(A), Leq		
		Residential Area	Daytime 55 dB(A), Leq		
			Night time 45 dB(A), Leq		
11	**Availability of Equipment**	Dragline	85 %	Excavation Dept.	CIL / CMPDIL
		Shovel – Electric Rope	80%		
		Shovel – Hydraulic	80 %		
		Dumper	67 %		
		Dozer	70 %		
		Drill	78 %		
12	**Utilization of Equipment**	Dragline	73 %		
		Shovel – Electric Rope	58%		
		Shovel – Hydraulic	61 %		
		Dumper	50 %		
		Dozer	45 %		
		Drill	40 %		
13	**Specific fuel consumption**	In liter/cubic meter of coal & OBR produced	Varies from mine to mine; as calculated by CMPDI.	Excavation Dept.	CMPDIL
14	**Burnt oil recovery**	In percentage ratio of actual volume of burnt oil recovered to the volume of lubricants issued.	As decided by MCL	M M Dept.	MCL MM Dept.
15	**Powder Factor for explosives**	Ratio of total explosives used in the blast to the volume of rock or coal blasted (kg/M^3)	Varies from mine to mine; as calculated by CMPDI.	Mining Dept.	CMPDIL

ANNEXURE11

RISK AND OPPORTUNITIES OF PRODUCTS/SERVICES OF MCL

WORK CENTER	RISK DESCRIPTION	PROPOSED MITIGATING ACTION
Corporate Office (MCL)	Strategic initiatives fail to give desired results	Monitor the performance of strategic initiatives and report the same to the top management / board for deciding suitable actions.
	Changes in regulations / policies and procedures	Raising and presenting the viewpoint and concern of MCL to the government.
	Entry of private, resource rich players in the same business.	- Improving efficiency & performance in the company; - Technology induction and assimilation to compete with others competitors.
	Failure of business development initiatives	Prepare project feasibility report (technical and financial) and ensure detailed feasibility study is to be done / vetted by external consultants.
	Loss / leakage of confidential information / critical data	Ensure to include confidentiality clause in all contracts with external parties which binds them to confidentiality requirements.
Coal production and other associated activities of MCL	Cost and time overrun during the execution of the planned activities.	a. Prepare contingency plans to counter such situations. b. Monitor closely that the mining and/or other activities are being done by experienced persons. c. Planning is to be done in advance keeping in mind all the adverse factors such as Environment, Safety, Legal and other social issues etc.
	Failure to achieve the coal and OB production target	Initiate suitable corrective action after root cause analysis of the problem to prevent the re-occurrence of the reported problem / shortcomings in future.
	Failure to meet Statutory requirements.	Consider all relevant statutory requirements prior to the commencement of work and also monitor the compliance obligation regularly so that actions can be initiated.
	Equipment failure	• Ensure standby equipment and spares which are critical in nature depending upon feasibility. • Maintain the inventory of critical items • Promote preventive maintenance of key equipment.
	Accidents / Incidents in operating areas of mining / workshops etc.	• Promote the use of PPEs and safety awareness • Provide comprehensive safety trainings to all employees as per the specific requirements
	Threats to security of people and property.	- Identify the vulnerable areas and provide required securities

WORK CENTER	RISK DESCRIPTION	PROPOSED MITIGATING ACTION
		- Install CCTVs at key offices to ensure proper security to people and infrastructures.
Human Resource Management processes	Non availability of quality human resources	- Formalize career growth / manpower planning and succession planning regularly - Impart need based training to the employees of MCL - Ensure fresh recruitment of skilled manpower.
	Attrition of skilled employees	- Ensure recruitment of fresh executive trainees and skilled manpower - Extend suitable perks and facilities to the employees - Install effective grievance redressal system in the company
Personal & Administration	Industrial disputes of surrounding environment	- Regularly held meeting with unions, local bodies and other interested parties - Extend CSR initiatives to the extent possible for the uplift of nearby community.
Material Management functions / Processes	Delay in procurement of materials and services	- Ensure rate contract for regular requirements - Take advance action for procurement of items / services
	Stock out of critical material / spares	- Develop local suppliers for critical items - Reduce the time gap between requisition and release of items to the users
System department process (IT Services)	Unauthorized access / breach / modification to information system of the company	- Establish and implement the information security management system for suitable information security control. - Ensure password control for accessing the system

THIS MANUAL OF MAHANADI COALFIELDS LIMITED IS FOR THE SOLE PURPOSE OF IMPLEMENTING AN INTEGRATED MANAGEMENT SYSTEM COMPLYING WITH THE REQUIREMENTS OF ISO 9001, ISO 14001 & ISO 45001.

NO PART OF THIS MANUAL SHOULD BE COPIED OR REPRODUCED IN ANY FORM WITHOUT THE SPECIFIC PERMISSSION FROM THE TECHNICAL SECRETARY TO CHAIRMAN-CUM-MANAGING DIRECTOR, MCL, SAMBALPUR, ODISHA.

ALL CONCERNED SHALL EXERCISE CARE TO PREVENT ITS UNAUTHORIZSED USE, LOSS AND/OR DAMAGE.