Applicable Appendix's to Environment & Social Management System

Applicable to SAEL Industries Limited (Renewable Energy Portfolio)

Private & Confidential

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APPENDIX A: Applicable Legal Framework

SAEL Industries Limited business shall, at all times, adhere to national and state level legislations related to environment health and safety and labour welfare and international E&S Safeguards. As a guidance note, "Applicable Regulatory Framework" has been developed describing key regulatory requirements applicable to SAEL's business activities. The framework covers both –

a) National regulatory framework applicable to SAEL and its portfolio operations and;
b) International E&S standards applicable.

The applicable national regulatory framework for SAEL and its related operations has been presented under below four categories:

- Health and Safety related regulations
- Environmental regulations;
- Social related regulations;
- Land related regulations

Key requirements of each of these regulations have been explained in the following sub-sections.

The following Table 1 is indicative of the key environmental and social related national regulations applicable to Renewable energy portfolio operations of SAEL:

Table 1 National Environmental & Social regulations applicable to SAEL and its Operations

S. No	Name of Legislation(s)	Key Requirement(s)
Environment Protection		
1.	National Green Tribunal (NGT) Act, 2010	The Act provides for compensation on account of following: • Relief and compensation to the victims of pollution and other environmental damage arising under enactment of the above acts. • Restitution of property damaged; and • Restitution of the environment. The tribunal will have jurisdiction over all civil cases relating to implementation of the following regulations: • The Water (Prevention & Control of Pollution) Act, 1974. • The Forest Conservation Act, 1980. • The Air (Prevention & Control of Pollution) Act, 1981. • The Environment Protection Act, 1986. • The Public Liability Insurance Act, 1991; and • The Biological Diversity Act, 2002 U/s 17, any person responsible for any of the following acts/incidents is liable to pay relief or compensation as determined by the tribunal, failing which a penalty (u/s 26 and 27) is imposable which may lead to imprisonment up to 3 years or fine up to INR 10 crores or both and an additional fine of INR 25,000 per day for any delay, which may further be increased to INR 1, 00,000 per day.
2.	The Environment Protection Act, 1986	This Act is an umbrella legislation that provides a single focus for the protection of the environment and seeks to plug the loopholes of earlier legislation relating to the environment. Several sets of Rules and Notifications are promulgated under the EP Act ranging from approvals required for a new development project to those required for environmental management during their operation phases. The salient provisions of the Act include but not limited to the following: • Restrict or prohibit industries, operations, or processes in specified areas. • Undertake environmental impact assessment for certain categories of industries to inform the decision making in approval of new or expansion projects. • Restrict or prohibit handling of hazardous substances in specified areas. • Protect and improve the quality of the environment and prevention, control, and abatement of environmental pollution. • Lay down standards for the quality of the environment, emissions, or discharges of environmental pollutants from various sources. • Lay down procedures and safeguards for the prevention of accidents, which may cause environmental pollution. • Bar on filling of any suit or legal proceedings against the Government or officials empowered by it for action taken in good faith, in pursuance of the Act; and • Bar of jurisdiction to Civil Court to entertain any suit or proceedings in respect of anything done, action taken, or directions issued by the Central Government, or any other authority empowered by it, in pursuance of the Act.
3.	The Water (Prevention & Control of Pollution) Act, 1974	This Act provides for the prevention and control of water pollution and maintaining or restoring good water quality for any establishment. The Act assigns functions and powers to the CPCB and SPCBs for prevention and control of water pollution and all related matters. Subject to the provisions of the Act, the functions, and powers of CPCB as well as the SPCBs have been delineated individually and with respect to each other.
4.	The Air (Prevention & Control of Pollution) Act, 1981;	The Act prohibits the construction and operation of any industrial plant without the consent of State Pollution Control Boards (SPCBs). The Act assigns powers and functions to the Central Pollution Control Board (CPCB) and the SPCBs for prevention and control of air pollution and all other related matters. For the prevention and control of air pollution, the State Government, in consultation with the SPCB has the powers to set standards for emissions from automobiles, impose restrictions on use of certain industrial plants and prohibit emissions of air pollutants more than the standards laid down by the SPCB. It can also make an application to the court for restraining persons from causing air pollution. In addition, it also has the power of entry and inspection, power to obtain information and power to take samples of air emissions and conduct the appropriate follow up. The CPCB, as well as the SPCBs are eligible for contributions from the Central as well as the State Government, respectively, to perform their functions appropriately. The Act also allows for appropriate penalties and procedures for non-compliance.

5.	Noise Pollution (Regulation and Control) Rules, 2000 and the Noise Pollution (Regulation and Control) (Amendment) Rules, 2010	As per the Noise Pollution (Regulation and Control) Rules 2000, every operating facility is required to take all possible steps to meet the ambient noise level standards prescribed in the Rules. The rules prescribe maximum permissible values of day and night-time noise levels for zones A, B, C and D representing industrial, commercial, and residential and silence zone respectively.
6.	The Indian Wildlife (Protection) Act, 1972	The Act provides for the protection of wild animals, birds, and plants; and for matters connected therewith or ancillary or incidental thereto. It extends to the whole of India, except the State of Jammu and Kashmir which has its own wildlife act. It has six schedules which give varying 5 degrees of protection. Schedule I and part II of Schedule II provide absolute protection - offences under these are prescribed the highest penalties. Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower. Schedule V includes the animals which may be hunted. The plants in Schedule VI are prohibited from cultivation and planting. The hunting to the Enforcement authorities has the power to compound offences under this Schedule (i.e., they impose fines on the offenders).
7.	The Biological Diversity Act, 2002	The Act is applicable for preservation of biological diversity in India and provides mechanism for the equitable sharing of benefits arising out of the use of traditional biological resources and knowledge. The Act was enabled to meet the obligations under Conservation on Biological Diversity (CBD) to which India is a part.
8.	The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended till date	The Rules require industries to classify wastes into categories and manage them as per the prescribed guidelines and obtain prior authorisation for handling, treatment, storage, and disposal of Hazardous Wastes. Some of the key responsibilities of the occupier as per these rules are as follows. For the management of hazardous and other wastes, an occupier shall follow the following steps, namely: - • Prevention. • Minimization. • Reuse, • Recycling. • Recovery, utilisation including co-processing. • Safe disposal. The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes. The hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an CPCB/ SPCB authorised actual user or shall be disposed of in an CPCB/ SPCB authorised disposal facility. The occupier who intends to get its hazardous and other wastes treated and disposed of by the operator of a treatment, storage and disposal facility shall give to the operator of that facility, such specific information as may be needed for safe storage and disposal.
9.	The Manufacture, Storage & Import of Hazardous Chemicals (MSIHC) Rules 1989 and Amendment 2000	These rules apply to the activities, which involve handling, storage and import of hazardous chemicals as specified in Schedule 1 of the Rules. The indicative criteria are specified in the Part 1 of the same schedule. The rule also applies to the industrial activity involving isolated storage in the quantities mentioned in Schedule 2. The information on various requirements and clearances under the MSIHC Rules will have to be furnished to the SPCB office. The MSIHC Rules also require provision for the proper storage and handling of chemicals. Definition and classification of the chemicals as dangerous/hazardous is specified under the MSIHC Rules and listed in Schedules 1, 2 & 3.
10.	E-Waste Management Rules 2022	Ministry has notified the E-Waste (Management) Rules, 2022 on 2nd November 2022. These rules will replace E-waste (Management) Rules, 2016 and will be effective from 1st April 2023. These rules will launch a new Extended Producer Responsibility (EPR) regime for e-waste recycling. The salient feature of new rules is as under • Applicable to every manufacturer, producer, refurbisher, dismantler and recycler. • All the manufacturer, producer, refurbisher and recycler are required to register on portal developed by CPCB. • No entity shall carry out any business without registration and also not deal with any unregistered entity. • Authorization has now been replaced by Registration through online portal and only manufacturer, producer, refurbisher and recycler require Registration. • Schedule I expanded and now 106 EEE has been include under EPR regime. • Producers of notified EEE, have been given annual E-Waste Recycling targets based on the generation from the previously sold EEE or based on sales of EEE as the case may be. Target may be made stable for 2 years and starting from 60% for the year 2023-2024 and 2024-25; 70% for the year 2025-26 and 2026-27 and 80% for the year 2027-28 and 2028-29 and onwards.

		• Management of solar PV modules /panels/ cells added in new rules. • The quantity recycled will be computed on the basis of end products, so as to avoid any false claim. • Provision for generation and transaction of EPR Certificate has been introduced. • Provisions for environment compensation and verification & audit has been introduced. • Provision for constitution of Steering Committee to oversee the overall implementation of these rules.
11.	Batteries (Management and Handling) Rules, 2022	Ministry of Environment, Forest and Climate Change, Government of India published the Battery Waste Management Rules, 2022 on 24th August, 2022 to ensure environmentally sound management of waste batteries. The rules function based on the concept of Extended Producer Responsibility (EPR) where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of waste batteries and use of recovered materials from wastes into new batteries. EPR mandates that all waste batteries to be collected and sent for recycling/refurbishment, and its prohibits disposal in landfills and incineration. To meet the EPR obligations, producers may engage themselves or authorise any other entity for collection, recycling or refurbishment of waste batteries. On the principle of Polluter Pays Principle, environmental compensation will be imposed for non-fulfilment of Extended Producer Responsibility targets, responsibilities and obligations set out in the rules. The funds collected under environmental compensation shall be utilised in collection and refurbishing or recycling of uncollected and non-recycled waste batteries.
12.	Bio-Medical Waste Management Rules, 2016, as amended	Bio-medical waste generated at manufacturing facility (medical/ first aid facility) will attract provisions of Bio-Medical Waste Management Rules, 2016. Biomedical waste generated to be disposed of through authorized agency.
13.	Construction and Demolition Waste Management Rules, 2016 and amendments thereafter	Construction and demolition waste (C&D) is generated during the construction, renovation, and demolition of buildings or structures. These wastes include materials such as concrete, bricks, wood and lumber, roofing, drywall, landscape, and other wastes. It clearly defines the duties of Waste Generator, Service providers and Contractors, State Government and Local Authorities and Pollution Control boards. According to the rules every waste generator will have to follow below mentioned measures; and SAEL will follow the same during construction and demolition phases • Every waste generator shall segregate construction and demolition waste and deposit at collection centre or handover it to the authorised processing facilities. • Shall ensure that there is no littering or deposition to prevent obstruction to the traffic or the public or drains. • Large generators (who generate more than 20 tons or more in one day or 300 tons per project in a month) shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodelling work. • Large generators shall have environment management plan to address the likely environmental issues from construction, demolition, storage, transportation process and disposal / reuse of C & D Waste. • Large generators shall segregate the waste into four streams such as concrete, soil, steel, wood and plastics, bricks, and mortar: and • Large generators shall pay relevant charges for collection, transportation, processing, and disposal as notified by the concerned authorities.
14.	Ozone Depleting Substances (Regulation) Rules, 2000 as amended in 2005	As a party to the Vienna Convention on the protection of the ozone layer and the Montreal Protocol, India has released the Ozone Depleting Substances (Regulation) Rules 2000 pursuant to the Environment (Protection) Act, 1986. The Rules regulate production, consumption, export, import, sale, purchase and use of ozone depleting substances in specified time bound programme in line with the Montreal Protocol. The Rules subject many activities to prior registration or to obtaining a license from the relevant authorities. Of the 20 chemicals controlled under the amended Montreal Protocol, India uses and produces seven (7) ODSs. These include – Chlorofluorocarbons (CFC-11, CFC-12, and CFC-113), Carbon tetrachloride (CTC), Methyl Chloroform (MCF), and Halons (H-1211, and H-1301).
15.	Direction for Use of Fly Ash and Ash based Products under EPA 1986 and thereof amended in 2008, 2009	Fly ash is a fine powder, which is the by-product of burning carbon in power plants. It includes substantial amounts micron sized earth elements of oxides of silica, aluminium, and calcium. Element like Arsenic, Boron, Chromium, lead etc. are also found in trace concentrations. Central Government has made it mandatory for use of fly ash bricks in construction activities happening 500 km around thermal power plants. The rules seek 100% use of fly ash generated from power plants for construction activities.
16.	Guidelines/Criteria for evaluation of proposals/requests for Ground water abstraction (With effect from	The prime objective of the guidelines for evaluation of proposals/requests for the withdrawal of ground water, is to focus on a specific part of ground water management viz. ensuring sustainability of ground water both in terms of quantity & quality and also focus on land-based management of ground water resources, looking into the variations of availability of water in different climatic regions and diverse hydrogeological conditions in various states of the country.

	16.11.2015) and CGWA Guidelines, 2020	Regulation of Ground Water development is through district administrative heads assisted by Advisory Committees under the provisions of Section 4 of the EPA, 1986. All issues pertaining to granting of NOC's for ground water withdrawal, checking violations, sealing of ground water abstraction structures, launching of prosecution against offenders, attending to complaints, etc., are to be addressed by the Authorized Officers. This is applicable to all sectors such as Industries/Infrastructure/Mining & De-watering units/Residential Units/Individual Houses etc
17.	The Public Liability Insurance Act, 1991	An Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected there with or incidental there to. Some of the key obligations according to this act are as follows: • The company to provide relief, as specified, in case of death, or injury to any person (other than workman) or damage to any property from an accident, on principle of no fault. • The company to draw insurance policy. • The company to pay additional amounts, as prescribed, to the insurer not exceeding the amount of premium, as contribution to the Environmental Relief fund to be established under the Act. • The company to pay the amount of an award as specified by the collector in the prescribed manner. • The company to provide any information required by the central government or agencies authorized by it for ascertaining compliance with the provision of Act. • The company to allow entry and inspection of any person empowered by the Central Govt. to the place where activity involving hazardous chemical is being carried out at all reasonable times, to ascertain compliance with the provision of the act.
18.	Fly ash Notification, 2016	To reduce the requirement of land for disposal of fly ash in ponds and to address the problem of pollution caused by the Fly ash, the Ministry of Environment, Forests and Climate Change (MoEF&CC) has issued various notifications for fly ash utilization. First notification was issued on 14th September 1999 which was subsequently amended in year 2003, 2009 and 2016 vide notifications dated 27th August 2003; 3rd November 2009 and 25th January 2016 respectively. Through 2016 notification, the Ministry has widened the scope of fly ash utilization, besides engraining upon power utilities to bear the cost of transportation.
19.	Regulation of Persistent Organic Pollutants Rules, 2018	Whereas the Stockholm Convention on Persistent Organic Pollutant (hereinafter referred to as the said Convention) came into force on the 17th May, 2004 and India ratified the said Convention on the 13th January, 2006. In exercise of the powers conferred by section 3 and section 6 of the Environment (Protection) Act, 1986 (29 of 1986), read with rule 13 of the Environment (Protection) Rules, 1986. As per these rules, The manufacture, trade, use, import and export of the following seven chemicals shall be prohibited, namely:-Chlordecone; Hexabromobiphenyl; Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octa-BDE); Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial penta-BDE); Pentachlorobenzene; Hexabromocyclododecane; and Hexachlorobutadine. Also, the Annex A- chemicals to be eliminated with specific exemptions; Annex B - chemicals to be restricted; and Annex C - minimisation of unintentional releases of listed chemicals to be followed.
Social Regulations		
20.	The Bonded Labour System (Abolition Act) 1976	Constitution of India (Part III, Fundamental Rights No 23): Right against Exploitation The Bonded Labour (Abolition) Act 1976: States that all forms of bonded labour stand abolished, and every bonded labourer stands freed and discharged from any obligations to render any bonded labour (Ch II, Section 4)
21.	Factories Act, 1948 and rules therein	The Factories Act was promulgated in 1948, to ensure general welfare of the industrial workers. The Act is divided into nine chapters with three chapters exclusively on health and safety (H&S) issues. The Act in its preamble states that "it is the general duty of the occupier (defined in the act as person having the ultimate control over the affairs of the factory) to ensure as far as practicable health, safety and welfare of all workers while they are at work in the factory".
22.	The Apprentices Act 1961	The law provides guidelines on the engagement and hiring of apprentices in industries. A person shall not be qualified for being engaged as an apprentice to undergo apprenticeship training in any designated trade, unless he- (a) is not less than fourteen years of age, and (b) satisfies such standards of education and physical fitness as may be Prescribed. Some of the key features of apprentice training covered under this act are as follows:

		• Contract of apprenticeship • Novation of contract of apprenticeship • Period of apprenticeship training • Termination of apprenticeship contract • Number of apprentices for a designated trade • Practical and basic training of apprentices • Related instruction of apprentices • Obligations of employers
23.	The Child Labour (Prohibition and Regulation) Act, 2012	The Constitution of India (Part III, Article 24 - Fundamental Rights) describes that no child below the age of fourteen (14) years shall be employed to work in any factory or engaged in any other hazardous employment. • The Act prohibits employment of children below 14 years in certain occupations such as automobile workshops, bidi-making, carpet weaving, handloom and power loom industry, mines, and domestic work. Considering the Right of Children to Free and Compulsory Education Act, 2009, the Bill seeks to prohibit employment of children below 14 years in all occupations except where the child helps his family after school hours. • The Act adds a new category of persons called "adolescent". An adolescent means a person between 14 and 18 years of age. The Bill prohibits employment of adolescents in hazardous occupations as specified (mines, inflammable substance, and hazardous processes). • The penalty for employing a child was increased to imprisonment between 6 months and two years (from 3 months-one year) or a fine of Rs. 20,000 to Rs. 50,000 (from Rs. 10,000-20,000) or both. • The Act empowers the government to make periodic inspection of places at which employment of children and adolescents are prohibited.
24.	The Minimum Wages Act, 1948	Minimum Wages Act, 1948 requires the Government to fix minimum rates of wages and reviews this at an interval of not more than 5 years. The Payment of Wages Act, 1936, amended in 2005. Every employer shall be responsible for the payment to persons employed by him of all wages required to be paid under this Act.
25.	The Contract Labour (Regulation & Abolition) Act, 1970 and Rules	As per the contract labour act, every principal employer is required to get the establishment registered before employing any contract labour. The contractors are also required to provide at minimum amenities like canteen, urinals, restrooms, or alternate accommodation (if night halting labour), first aid, safe drinking water, etc. in case of contractor's failure to provide these amenities, the principal employer is liable to provide such amenities at its cost.
26.	Employees Compensation Act (erstwhile Workmen Compensation Act), 1923	Workmen's Compensation Act, 1923 requires if personal injury is caused to a workman by accident arising out of and in the course of his employment, his employer shall be liable to pay compensation in accordance with the provisions of this Act.
27.	Employees Provident Funds and Miscellaneous Act, 1952	An Act to provide for the institution of provident funds, pension fund and deposit-linked insurance fund for employees in factories and other establishments. Subject to the provisions contained in section 16, it applies - • To every establishment which is a factory engaged in any industry specified in Schedule I and in which twenty or more persons are employed and • To any other establishment employing twenty or more persons or class of such establishments which the Central Government may, by notification in the Official Gazette, specify, in this behalf: Provided that the Central Government may, after giving not less than two months‟ notice of its intention so to do, by notification in the Official Gazette, apply the provisions of this Act to any establishment employing such number of persons less than twenty as may be specified in the notification.
28.	Employees State Insurance Act, 1948	▪ The ESI Act provides for certain benefits to employees in case of sickness, maternity and employment injury.

		▪ These includes periodical payments to any insured person in case of his sickness certified by a duly appointed medical practitioner, periodical payments to an insured woman in case of confinement or miscarriage or sickness arising out of pregnancy, confinement, premature birth of child, periodical payments to an insured person suffering from disablement as a result of an employment injury sustained as an employee, or periodical payments to such dependents of an insured person who dies as a result of an employment injury sustained as an employee amongst others. ▪ Applicable to employees with less than or equal to a maximum of basic salary of INR 15000 per month
29.	The Equal Remuneration Act, 1976	As per the Equal Remuneration Act 1976, it is the duty of an employer to pay equal remuneration to men and women workers for same work or work of a similar nature.
30.	The Industrial Disputes Act, 1947	The objective of the Industrial Disputes Act is to secure industrial peace and harmony by providing machinery and procedure for the investigation and settlement of industrial disputes by negotiations. The laws apply only to the organised sector. Chapter V-B, introduced by an amendment in 1976, requires firms employing 300 or more workers to obtain government permission for layoffs, retrenchments, and closures. A further amendment in 1982 (which took effect in 1984) expanded its ambit by reducing the threshold to 100 workers. The Act also lays down: • The provision for payment of compensation to the workman on account of closure or lay off or retrenchment. • The procedure for prior permission of appropriate Government for laying off or retrenching the workers or closing industrial establishments • Unfair labour practices on part of an employer or a trade union or workers.
31.	The Industrial Employment (Standing Orders) Act, 1946	The Act require employers in industrial establishments formally to define conditions of employment under them. Whereas it is expedient to require employers in industrial establishments to define with sufficient precision the conditions of employment under them and to make the said conditions known to workmen employed by them. It applies to every industrial establishment wherein one hundred or more workmen are employed or were employed on any day of the preceding twelve months.
32.	The Industrial (Development and Regulations) Act, 1951	The industries (Development and Regulation) provide for the development and regulation of certain industries in India. The specific industries covered under the Act are provided in Schedule 1. The Act states the decision-making authority and functions to be assigned to them in terms of the operation and monitoring of these industries.
33.	The Interstate Migrant Workmen (Regulations of Employment and Conditions of Service) Act, 1979	The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 is an Act of the Parliament of India enacted to regulate the condition of service of inter-state labourers in Indian labour law. The Act's purpose is to protect workers whose services are requisitioned outside their native states in India. Whenever an employer faces shortage of skills among the locally available workers, the act creates provision to employ better skilled workers available outside the state.
34.	The Maternity Benefit Act, 1961	As per the Maternity Benefit Act, 1961 no employer shall knowingly employ a woman in any establishment during the six weeks immediately following the day of her delivery or her miscarriage. No pregnant woman shall, on a request being made by her in this behalf, be required by her employer to do during the period any work which is of an arduous nature, or which involves long hours of standing, or which in any way is likely to interfere with her pregnancy or the normal development of the foetus or is likely to cause her miscarriage or otherwise to adversely affect her health.
35.	The Payment of Bonus Act, 1965	An Act to provide for the payment of bonus to persons employed in certain establishments based on profits or based on production or productivity and for matters connected therewith. It shall apply to: • every factory; and • every other establishment in which twenty or more persons are employed on any day during an accounting year:
36.	The Payment of Gratuity Act, 1972	The act provides for a scheme for the payment of gratuity to employees engaged in factories, mines, oilfields, plantations, ports, railways, shops, or other establishments. The payment of gratuity shall be payable to an employee on the termination of his employment after he has been rendered continuous service for not less than five years. • On his superannuation • On his retirement or resignation • On his death or disablement due to accident or disease.

37.	The Payment of Wages Act, 1936	The main objective of the Act is to avoid unnecessary delay in the payment of wages and to prevent unauthorized deductions from the wages. Every person employed in any factory, upon any railway or through sub-contractor in a railway and a person employed in an industrial or other establishment. The State Government may by notification extend the provisions to any class of persons employed in any establishment or class of establishment. The benefit of the Act prescribes for the regular and timely payment of wages (on or before 7th day or 10th day of after wage period is greater than 1000 workers) and preventing unauthorized deductions being made from wages and arbitrary fines.
38.	Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013	The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 is a legislative act in India that seeks to protect women from sexual harassment at their place of work. This statute superseded the Vishakha Guidelines for prevention of sexual harassment introduced by the Supreme Court of India. Some of the main features of this act are as follows: • The Act defines sexual harassment at the workplace and creates a mechanism for redressal of complaints. It also provides safeguards against false or malicious charges. • The Act also covers concepts of 'quid pro quo harassment' and 'hostile work environment' as forms of sexual harassment if it occurs in connection with an act or behaviour of sexual harassment. • The definition of "aggrieved woman", who will get protection under the Act is extremely wide to cover all women, irrespective of her age or employment status, whether in the organised or unorganised sectors, public or private and covers clients, customers, and domestic workers as well. • Every employer is required to constitute an Internal Complaints Committee at each office or branch with 10 or more employees. The District Officer is required to constitute a Local Complaints Committee at each district, and if required at the block level. • The Complaints Committees have the powers of civil courts for gathering evidence. • The Complaints Committees are required to provide for conciliation before initiating an inquiry, if requested by the complainant. • The inquiry process under the Act should be confidential and the Act lays down a penalty of Rs 5000 on the person who has breached confidentiality.
39.	The Trade Unions Act, 1926	The Trade Union Act, 1926: Provides procedures for formation and registration of Trade Unions and lists their rights and liabilities. It encompasses any combination, permanent or temporary, that gets formed to regulate relationship between workmen and their employers.
40.	The Un-organized Workers' Social Security Act, 2008	The Un-organised worker's social security act provides for the social security and welfare of the unorganised workers and for other matters connected therewith or incidental thereto. The Act applies to any home-based worker, self-employed worker or a wage worker in the unorganised sector and applies to a worker in the organised sector who is covered under any of the other labour acts.
41.	The Weekly Holiday Act, 1942	The Weekly Holiday Act provides for the requirements for holidays to be provided to staff employed in an organisation.
Land Related Regulations		
42.	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (the LARR Act), was passed by both the houses of Parliament and given the President's assent on 26th September 2013. The new law came into force in January 2014 and is applicable to the project. The new law stipulates mandatory consent of at least 70% of affected people for acquiring land for Public Private Partnership (PPP) projects and 80% for acquiring land for private companies. It also requires that payment of compensation for the owners of the acquired land will be four times the market value in rural areas and twice in urban areas. It also stipulates that the land cannot be vacated until the entire compensation is awarded to the affected parties. The law has the provision that the companies can lease the land instead of purchasing it. Besides, the private companies will have to provide for rehabilitation and resettlement if land acquired through private negotiations is more than 50 acres and 100 acres in urban and rural areas, respectively.
43.	Forest Rights Act, 2006	The Act seeks to recognize and vest rights for habitation and occupation in forest land for forest dwelling Scheduled Tribes (STs) as well as Other Traditional Forest Dwellers (OTFDs) who have been residing in such forests for generations but whose rights could not be recorded. The Act is an enabling legislation with a motive to undo the historical injustice done to these communities.
44.	Public Liability Insurance Act 1991	An Act to provide for public liability insurance for the purpose of providing immediately relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected there with or incidental there to. Some of the key obligations according to this act are as follows: • The company to provide relief, as specified, in case of death, or injury to any person (other than workman) or damage to any property from an accident, on principle of no fault. • The company to draw insurance policy.

		• The company to pay additional amounts, as prescribed, to the insurer not exceeding the amount of premium, as contribution to the Environmental Relief fund to be established under the Act. • The company to pay the amount of an award as specified by the collector in the prescribed manner. • The company to provide any information required by the central government or agencies authorized by it for ascertaining compliance with the provision of Act. • The company to allow entry and inspection of any person empowered by the Central Govt. to the place where activity involving hazardous chemical is being carried out at all reasonable times, to ascertain compliance with the provision of the act.
45.	State specific Land Acquisition, Rehabilitation and resettlement Acts and Rules	This Act provides for: • The consultations with institutions of local self-government and Gram Sabhas established under the Constitution in a humane, participative, informed, and transparent process for land acquisition for industrialisation, development of essential infrastructural facilities and urbanisation. • Least disturbance to the owners of the land and other affected families. • Provide just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or are affected by such acquisition. • Make adequate provisions for such affected persons for their rehabilitation and resettlement; and • For ensuring that the cumulative outcome of the compulsory acquisition should be that the affected people become partners in the development leading to an improvement in their post acquisitions social and economic status.
Occupational Health & Safety		
46.	Factories Act 1948	The Factories Act was promulgated in 1948, to ensure general welfare of the industrial workers. The Act is divided into nine chapters with three chapters exclusively on health and safety (H&S) issues. The Act in its preamble states that "it is the general duty of the occupier (defined in the act as person having the ultimate control over the affairs of the factory) to ensure as far as practicable health, safety and welfare of all workers while they are at work in the factory". A general policy with respect to H&S (including occupational H&S) of the workers at work should be in the form of a written statement and brought to the notice of the workers per the provision of the Act. The Act covers guidelines on health aspects as following: • Cleanliness. • Disposal of waste & effluent. • Dust and fumes. • Artificial humidification. • Drinking water. • Latrines and Urinals. • Overcrowding. • Lighting. • Spittoons. The Act in its Chapter 4 deals with the provisions relating to Safety. The specific areas of safety are those relating to the usage of machinery, handling of hazardous substances and the latest amendments include safety measures for hazardous processes. For the usage of machinery there are Acts related to the fencing, casing of the machinery. Restriction of young persons and the employment of women and children to work on machines that is dangerous in nature. The Act also has regulations for working near machinery in motion; development of adequate safety measures during installation and various types of operation of the machinery. The Act also explains preventive and protective measures in safety including proper consideration of explosive or inflammable substances so that the workers are not exposed to hazards during operation. Some of the sections deal with various precautions that are required for handling pressure plants, fire, inflammable dust, gas or explosive. The factory occupier is responsible to maintain safety of the buildings and machinery per this legislation. The Act also gives power to States to make relevant rules to supplement the need of safety in the facility.

		The Act also covers provisions for hazardous processes for an occupier to take all practicable measures to ensure prevention of any sorts of explosion due to manufacturing process which are hazardous. There are permissible limits for exposure of chemicals and toxic substances in the workplace. Workers have the right to know about imminent danger and their participation in safety management. The Act also requires medical check-ups of workers with access to workers to look for outcome of the medical reports. An occupier is to develop a safety policy and form safety committees and provide power to the Central Government to appoint inquiry committee if some extraordinary situation had occurred in the factory which is engaged in the hazardous process. The Factories Amendment Bill 2016 has been passed by the Lok Sabha and would be applicable to SAEL operations across its projects. State specific amendment to the Factories act will be applicable basis the location of the facility.
47.	The Occupational Safety, Health and Working Conditions Code, 2020	The Occupational Safety, Health and Working Conditions Code, 2020 was introduced in Lok Sabha on 19 September 2020 and was passed on 23 September 2020 in Rajya Sabha. The bill received the presidential assent on 28 September 2020, but the date of coming into force is yet to be notified in the official gazette. The code aims to consolidate and amend the laws regulating the occupational safety, health and working conditions of the persons employed in an establishment.
48.	Building and Other Construction Workers Act 1996	The act aims to provide for regulation of employment & conditions of service of the building and other construction workers as also their safety, health and welfare measures in every establishment which employs or employed during the preceding year ten or more workers. The exception made is only in respect of residential houses for own purpose constructed with a cost not exceeding Rs. 10 lakh (1 million) and such other activities to which the provisions of Factories Act, 1948 and Mines Act, 1952 apply. Some of the other main provisions of the Act are given below: • Provision for registration of each establishment within a period of sixty days from the commencement of work to ensure that there are no malpractices and to discourage non-compliance of law by circumventing: penalties of fine and imprisonment for violation and contravention of Act. • Provision for registration of building workers as beneficiaries under this Act. • Provision for immediate assistance in case of accidents, old age pension, loans for construction of house, premium for group insurance, financial assistance for education, to meet medical expenses, maternity benefits etc. apart from constitution of safety committees (in case of more than 500 workers and appointment of safety officers) • Provision for health and safety measures for the construction workers in conformity with ILO convention No.167 concerning safety and health in construction revising the Safety Provisions (Building) Convention, 1937. For this purpose, comprehensive Central Rules i.e., Building, and other Construction Workers (Regulation of Service and Conditions of Service) Central Rules, 1998 have been notified by the Central Government. • Provision for Penalties of fine and imprisonment for violation and contravention of the Act.
49.	The Petroleum Act, 1934 and the Petroleum Rules	This Act and Rules provide procedures and safety measures to be taken up for handling, storage and transportation of petroleum products. The Rules define the quantity and class of petroleum for which prior permission from the concerned authorities are required. The storage requiring prior licenses are as following: • Petroleum class A (having flash point less0 than 23ºC) not intended for sale of the total quantity in possession does not exceed 30 liters. Petroleum Act, 1934, Section 8); • Petroleum class B (having flash point from 23 to 65ºC) if the total quantity in possession at any one place does not exceed 2,500 liters and none of it is contained in a receptacle exceeding 1,000 liters; (Petroleum Act, 1934, Section 7); • Petroleum class C (having flash point above 65 to 93ºC) if the total quantity in possession at any one place does not exceed 45,000 liters (Petroleum Act, 1934, Section 7).
50.	Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010	The Central Electricity Authority Regulation, 2010 are regulations framed by Central Electricity Authority of India under Indian Electricity Act, 2003, to regulate measures relating to safety and electric supply for persons engaged in the generation, transmission, distribution or trading of electricity, or use of electricity supplied or installation, maintenance or use any electric line or electric plant
51.	Gas Cylinder Rules, 2016 as amended	Gas Cylinder Rules 2016 were framed to restrict handling and transportation of gas cylinders and provide procedures and approvals for manufacturing detail of the cylinder including the reference of safety relief devices, its manufacturing and usage specification. The rules also describe labelling of cylinders by colour to identify the type of gas present in the cylinder.
52.	Motor Vehicle Act, 1988 and Rules	The Motor Vehicles Act, 1988 is an Act of the Parliament of India which regulates all aspects of road transport vehicles. The Act came into force from 1 July 1989. It replaced Motor Vehicles Act, 1939 which earlier replaced the first such enactment Motor Vehicles Act, 1914.The Act provides in detail the legislative provisions regarding licensing of drivers/conductors, registration of motor vehicles, control of motor vehicles through permits, special provisions relating to state transport undertakings, traffic regulation, insurance, liability, offences, and penalties, etc. A 2016 amendment to the act has been cleared by the cabinet and the same is to be introduced in the parliament.

53.	State specific Fire Safety Act and Rules	The State specific Fire Safety Act and Rules provides for maintenance of a fire service and to make more effective provisions for the fire prevention and fire safety measures in certain buildings and premises within the jurisdiction of the state. The Fire No Objection Certificate (NOC) is also issued under these rules based on scrutiny of the building and other premises in accordance with the rules.
54.	State specific Lift Acts and Rules	The state specific lift acts and rules lays out the procedures for obtaining permission for erection of lifts, obtaining licenses for functioning lifts, issue of competency certificates, safety guidelines for lifts and hoist installations etc.

55.	The Indian Boilers Act	The act governs the installation and functioning of steam boilers in factory premises or otherwise. Following are some of the key features of the Act:
		• Section 2(b) definition of a boiler
		• Section 6: on the prohibition of use of unregistered or uncertified boiler
		• Section 7: Registration of a boiler: The owner of any boiler which is not registered under the provisions of this Act 29[may apply to the Inspector along with such other documents as may be prescribed by regulations to have the boiler registered]. Every such application shall be accompanied by the prescribed fee.
		  • On receipt of an application under sub-section (1), the Inspector shall fix a date, within thirty days or such shorter period as may be prescribed from the date of the receipt, for the examination of the boiler and shall give the owner thereof not less than ten days' notice of the date so fixed.
		  • On the said date the Inspector shall inspect the boiler with a view to satisfying himself that the boiler has not suffered any damage during its transit from the place or manufacture to the site of erection and forward a report of the inspection along with the documents to the Chief Inspector within seven days.]
		• Section 23: Penalty for illegal use of boiler: Any owner of a boiler who, in any case in which a certificate or provisional order is required for the use of the boiler under this Act, uses the boiler either without any such certificate or order being in force or at a higher pressure than that allowed thereby, shall be punishable with fine which may extend to one lakh rupee], and, in the case of a continuing offence, with an additional fine which may extend to one thousand rupees for each day after the first day in regard to which he is convicted of having persisted in the offence.

56.	The Dangerous Machines (Regulations) Act, 1983	The act provides for the regulations of trade and commerce in, and production, supply, distribution and use of, the product of any industry producing dangerous machines with a view to securing the welfare of labour operating any such machine and for payment of compensation for the death or bodily injury suffered by any labourer while operating any such machines and other associated matters. The act provides the following: • Appointment of the responsible authority, along with the required qualifications, roles, and responsibilities to implement the requirements of the Act. • Regulations for issue, SAEL and cancellation of manufacturer and dealer licenses. • Duties and responsibilities of the manufacturer/dealer of a dangerous machine. • Duties and responsibilities of the user. • Inspection, examination, and seizure of machinery; and • Punishments to be implemented.
57.	National Disaster Management Act, 2005	The Act provides for "the effective management of disasters and for matters connected there with or incidental thereto. The Act calls for the establishment of National Disaster Management Authority (NDMA), with the Prime Minister of India as chairperson. The NDMA which was initially established on 30 May 2005 by an executive order, was constituted under Section-3(1) of the Disaster Management Act, on 27 September 2006.The NDMA is responsible for "laying down the policies, plans and guidelines for disaster management" and to ensure "timely and effective response to disaster". Under section 6 of the Act, it is responsible for laying "down guidelines to be followed by the State Authorities in drawing up the State Plans"

APPENDIX B: Existing HR Policies

Name of policy	Document no.	Effective date	Reviewed by	Approved by
Human Resource Policies I. Updated POSH Policy II. Attendance Management Policy III. Employee Leave Policy IV. Dress Code Policy	SAEL/ESMS/HR Policy/Revision 1	July,2023	Chief Human Resource Officer- Supreet Gupta	CEO-Laxit Awla

POLICY ON PREVENTION OF SEXUAL HARASSMENT(POSH) OF EMPLOYEES IN WORKPLACES

1. PREAMBLE

1.1 SAEL Industries Limited (hereinafter referred to as "SAEL Group", which expression shall, include its successors, Affiliates, sister concerns incorporated in India") is committed to creating a safe and healthy work environment that enables its Employees to work without fear of prejudice, gender bias and Sexual Harassment. The SAEL Group is committed to providing equal employment and career opportunities, without discrimination or harassment on the basis of race, colour, sex, age, disability, religion, region, marital status, ancestry, political belief or activity, genetic characteristics or any other category protected by law. The SAEL Group also believes that all its Employees have the human right to be treated with dignity. Any person who is involved in the acts of Sexual Harassment at the Workplace or in the course of official duties shall be considered a grave offence and shall be subject to appropriate disciplinary action.

1.2 The Supreme Court of India in its landmark judgement of 1997 in 'Vishaka and others vs. State of Rajasthan', laid down guidelines making it obligatory for every employer and other responsible persons to provide a mechanism to redress grievances pertaining to workplace sexual harassment and evolve a specific policy to combat sexual harassment in the workplace and enforce the right to gender equality of working women.

1.3 The Government of India notified The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013 ("Act") on prevention of sexual harassment against female employees at the workplace on December 9, 2013. The said Act provides protection against sexual harassment of women at the workplace and for the prevention and redressal of complaints of sexual harassment and for the matters connected therewith or incidental thereto. This Policy goes a step further and provides protection against sexual harassment to all Employees irrespective of gender and also provides a redressal mechanism for such matters and the Internal Complaints Committee shall have the discretion to address cases of special nature on a case-to-case basis to ensure protection and justice for all.

1.4 The Indian Penal Code 1860 ("IPC") prescribes punishment for offenses against women such as sexual harassment (354A), assault or use of criminal force (354B), voyeurism (354C), stalking (354D), rape (376), making gestures or sounds with an intent to insult the modesty of a woman (509) and other such offences. The punishments for such offences range from simple to rigorous imprisonment, for a term between one year up to life imprisonment.

1.5 With this background, the SAEL Group's Prevention of Sexual Harassment Policy ("Policy") has been formulated to create and maintain a safe working environment. This Policy seeks to:

a. Encourage the Employees to play an active role in the prevention of Sexual Harassment at Workplace.
b. Instil in Employees the understanding of creating a sexual harassment-free work environment.
c. Discourage Employees from committing any form of Sexual Harassment.
d. Assure all Employees that they can rely upon the organization's support in resolving their concerns related to Sexual Harassment in the Workplace.

1.6 This Policy is not intended to impair or limit the right of any Employee seeking a remedy available under law. Proceedings under this Policy shall continue notwithstanding any other proceedings initiated by an Employee against an alleged perpetrator, or any person involved in such an act under any other law in force.

1.7 The Policy is prepared and governed in consonance with SAEL Group's Code of Conduct and provisions of the Act.

2. PURPOSE:

To create and maintain a safe work environment, free from Sexual Harassment & discrimination for all its Employees.

3. SCOPE:

This Policy shall be applicable to all Employees of the SAEL Group.

4. DEFINITIONS:

For the purpose of the Policy the following terms have been defined-

"Act" means The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013.

"Aggrieved Individual" means in relation to a Workplace, is a person, of any age, whether an Employee or not, who alleges to have been subjected to any act of Sexual Harassment.

For instance, a visitor, a guest, a customer, an employee of an affiliate etc. shall also be qualified as being an Aggrieved Individual.

"Committee" shall have the meaning as ascribed to it in Article 5 of the Policy.

"Complainant" is any Aggrieved Individual (or if the Aggrieved Individual is unable to make a Complaint on account of his/her physical or mental incapacity or death or otherwise, any other person permitted under the Act) who makes a Complaint alleging Sexual Harassment under this Policy.

"Employee" Employee means a person employed by the SAEL Group, for any work on regular, temporary, ad hoc or daily wage basis, either directly or through an agent, including a contractor, with or, without the knowledge of the principal employer, consultant, whether for remuneration or not, or working on a voluntary basis or otherwise, whether the terms of employment are express or implied and includes a co-worker, a contract worker, probationer, intern, trainee, apprentice or called by any other such name.

"Employer" shall mean the Managing Director of the SAEL Group.

"Policy"- shall mean Prevention of Sexual Harassment Policy of the SAEL Group

"Respondent"- The person against whom a complaint of Sexual Harassment has been made.

"Sexual Harassment"- Sexual Harassment at the Workplace means and includes but is not limited to inter-alia:

- unwelcome sexual advances (verbal, written or physical) implicit or explicit.
- a demand or request for sexual favours.
- Physical contact and advances such as touching, stalking, sounds which have explicit and /or implicit sexual connotation/overtones, molestation.
- any other type of conduct of sexual nature including but not limited to sexually coloured remarks including but not limited to vulgar / indecent jokes, gestures, letters, phone calls, WhatsApp/text messages, e-mails, etc.
- Showing pornography or the likes.
- verbal abuse or sexual "jokes".
- Teasing, innuendos and taunts, physical confinement and /or touching against one's will and likely to intrude upon one's privacy.
- Verbal or non-verbal communication, any conduct of sexual nature which offends the individual's sensibilities and that has the effect of interfering with an individual's work performance or creating an intimidating, hostile or offensive

work environment and/or submission to such conduct is either an explicit or implicit term or condition of employment and /or submission or rejection of the conduct is used as a basis for making employment decisions.

- The following circumstances, among other circumstances, if they occur or are present in relation to or connected with any act or behaviour of sexual harassment may amount to sexual harassment:

A. Implied or explicit promise of preferential treatment in the employment.
B. Implied or explicit threat or detrimental treatment in the employment.
C. Implied or explicit threat about the present or future employment status.
D. Interference with the work or creating an intimidating or hostile work environment.
E. Humiliating treatment likely to affect health or safety.

The point of consideration should be the effect or impact that the conduct of one person has on another rather than whether the behaviour was intentionally offensive or not. Further, not only face to face harassment, but Sexual Harassment by electronic means, such as by the use of public or private social media as well shall constitute Sexual Harassment. Sexual Harassment does not have to be repeated or continuous to be against the Policy, even a single such act shall amount to sexual harassment and is liable to be actionable under this Policy.

The following behaviour is indicative of the behaviours that is considered inappropriate within the SAEL Group working environment and is liable for disciplinary action:

Verbal harassment

a) A demand or request for sexual favours.
b) Comments about a person's sex or private life.
c) Sexually coloured remarks.

Physical harassment

a) Offensive gestures.
b) Touching in a sexual manner.
c) Assault or coerced sexual acts.

Written or graphic harassment

a) Unsolicited forwarding of pornographic pictures or videos/ clips/ memes etc. through email, or any other medium.
b) The display of sexually suggestive objects, pictures, magazines, posters or cartoons in the work-area.
c) Written communication that has sexual implications

Emotional harassment

a) Demanding sexual favours in return for or with a promise of favourable performance appraisals, promotions, sustained employment and provision of employment.
b) Implied or explicit detrimental treatment for refusal to provide sexual favours.
c) Interference with the work or creating an intimidating or offensive or hostile work environment.
d) Humiliating treatment likely to affect health or safety.

Third Party Harassment

As per the Act, if Third Party Harassment occurs as a result of an act or omission by any third party or outsider, the SAEL Group will take necessary and reasonable steps, as per law, to assist the affected person in terms of support and preventive action including assisting an Employee who wishes to file a complaint with the local police.

"Workplace" means and includes:

a. Premises, locations, establishments, enterprises, institutions, offices, branches or units established, owned, controlled by the SAEL Group.

b. All of the SAEL Group-related activities performed at any other place away from the SAEL Group's premises.

c. Any social, business or other gathering whether within or outside SAEL Group workplaces.

d. Places visited by Employees arising out of or during the course of employment including transportation whether or not provided by the SAEL Group for undertaking such journey.

e. Any misbehaviour in the nature of Sexual Harassment on any public or private social networking platform shall also be considered Sexual Harassment at Workplace irrespective of whether such sexual behaviour was shown during or outside of office hours.

5. CONSTIUTION, COMPOSITION, POWERS OF THE INTERNAL COMPLAINTS COMMITTEE:

5.1 The SAEL Group shall constitute an "Internal Complaints Committee" at the Workplace.

5.2 The Internal Complaints Committee shall consist of the following members:

a. Presiding Officer who shall be a woman employed at a senior level at Workplace.

b. Not less than two Members from amongst Employees preferably committed to the cause of women or who have had experience in social work or have legal knowledge;

c. One member from amongst non-governmental organisations or associations committed to the cause of women or a person familiar with the issues relating to sexual harassment or a person who is familiar with labour, service, civil or criminal law.

5.3 At least one-half of the total Members so nominated shall be women.

5.4 The Presiding Officer and every Member of the Internal Complaints Committee shall hold office for a period up to three years, from the date of their nomination and may be reappointed at the discretion of the Management.

5.5 Internal Complaints Committees have been formulated for all applicable sites. While the Internal Complaints Committee at corporate level will handle all Complaints received in New Delhi, 2 representatives from the applicable sites will be co-opted into the Internal Complaints Committee to cover the respective sites of SAEL Group.

5.6 For Internal Complaints Committee constitution at the subsidiaries/ associate companies/ sister concerns, 2 members will be co-opted from the respective companies to form the respective Internal Complaints Committees.

5.7 The co-opted members would participate in any investigations / POSH related initiatives that are required to be conducted in their respective sites/ companies. All other sites/ companies where co-option is not possible, will be governed by the Internal Complaints Committee established at corporate level at New Delhi.

5.8 In accordance with Section 11(3) of the Act the Committee shall have such powers that are vested in a civil court under the Court of Civil Procedure, 1908 while trying a suit, i.e., in respect of summoning and enforcing attendance of any persons and examining a person under an oath; requiring the discovery and production of documents and any other matter that may be prescribed.

5.9 A quorum of three members is required to be present for the proceedings to be conducted in the Committee. The Quorum shall include the Presiding officer, at least two members, out of which one Member shall be a woman. No person who is a Complainant, witness, or defendant in the complaint against Sexual Harassment shall be a member of a Committee. Any Committee member charged with Sexual Harassment in a written complaint must step down as a member during the inquiry into that complaint.

The details about the current members of the Internal Complaints Committee and nominations from various sites and companies are enclosed in Annexure A.

6. PROCEDURE TO REGISTER COMPLAINTS

6.1. Upon any violation of the Policy, a written complaint can be submitted to any member of the Committee (mentioned hereinafter) within 3 months of occurrence of an act of Sexual Harassment and in case of series of events of Sexual Harassment then 3 months from the occurrence of the last incident. However, where such Complaint cannot be made in writing, the Presiding Officer or any Member of the Internal Complaints Committee, as the case may be, shall render all reasonable assistance to the Aggrieved Individual for making the Complaint in writing. The Internal Complaints Committee may, for the reasons to be recorded in writing, extend the time limit not exceeding three months, if it is satisfied that the circumstances were such which prevented the Aggrieved Individual from filing a Complaint within the said period. The Complaint may also be filed via email at the following email address icposh@sael.co

6.2. Such complaint has to be submitted by the Complainant. However, if the Complainant is unable to do so, we are providing herein below, some of the rights available to a Complainant for approaching the Committee in respect of a Complaint under this Policy:

6.2.1. In case of physical incapacity, a Complaint may be filed by the relative, friend, co-worker, or an officer of the National Commission for Women or State Women's Commission or any person who has knowledge of the incident, with the written consent of the woman Complainant.

6.2.2. In case of mental incapacity, a Complaint may be filed by the relative or friend, a special educator, a qualified psychiatrist or psychologist, the guardian or authority under whose care she is receiving treatment or care; or any person who has knowledge of the incident jointly with her/his relative or friend or a special educator or qualified psychiatrist or psychologist or guardian or authority under whose care she is receiving treatment or care

6.2.3. In case of death of the Complainant, a Complaint may be filed by any person who has knowledge of the incident with the written consent of the legal heir of the woman Complainant

6.2.4. Where the Complainant is unable to make a Complaint for any other reason, a Complaint may be filed by any person who has knowledge of the incident with the written consent of the Complainant

6.2.5. Upon receipt of any such Complaint, the Committee shall conduct an inquiry in accordance with the provisions stated in Article 7 and 8 of this Policy

7. CONCILIATION

7.1 The Internal Complaints Committee may, before initiating an inquiry and at the request of the Aggrieved Individual, take steps to settle the matter between the Aggrieved Individual and the Respondent through conciliation. It should be noted that no monetary settlement shall be made as a basis of conciliation.

7.2 Where a settlement has been arrived, the Internal Complaints Committee shall record the settlement so arrived and forward the same to the Employer to take action as specified in the recommendation and no further inquiry shall be conducted by the Internal Complaints Committee.

7.3 The Internal Complaints Committee shall provide the copies of the settlement to the Aggrieved Individual and the Respondent

8. MANNER OF INQUIRY

8.1. On receipt of the Complaint, the Internal Complaints Committee shall send one of the copies received from the Aggrieved Individual to the Respondent within a period of seven (7) working days. The Complainant shall submit to the Internal Complaints Committee, six (6) copies of the Complaint along with supporting documents and the names and addresses of the witnesses.

8.2. The Respondent shall file his reply to the Complaint along with list of documents, and names and addresses of witnesses, within a period not exceeding 10 (ten) working days from the date of receipt of the documents

8.3. The Internal Complaints Committee shall make an inquiry into the Complaint in accordance with the principles of natural justice

8.4. The Internal Complaints Committee shall conduct a fair and impartial inquiry and have the powers to summon and enforce the attendance of any person and conduct an examination, request the discovery and production of documents and / or any other matter which may be prescribed and deemed necessary for the inquiry process.

8.5. The Internal Complaints Committee shall have the right to terminate the inquiry proceedings or to give an ex-parte decision on the Complaint, if the Complainant or Respondent fails, without sufficient cause, to present herself or himself for three consecutive hearings convened by the Presiding Officer. Such termination or ex-parte order may not be passed without giving a notice in writing, 15 (fifteen) days in advance, to the party concerned.

8.6. The parties shall not be allowed to bring in any legal practitioner to represent them in their case at any stage of the proceedings before the Internal Complaints Committee.

8.7. At the discretion of the Internal Complaints Committee and with the consent of the concerned Complainant/ Respondent/ witness any or all Proceedings may be recorded by audio/ video mode. In case of refusal by concerned Complainant/ Respondent/ witness for such recording the relevant Proceeding may be undertaken in a manner that minutes are taken down simultaneously during such Proceeding.

8.8. The inquiry will be completed by the Internal Complaints Committee within 90 days.

8.9. If the Complainant or Respondent desires to cross examine any witnesses, the Internal Complaints Committee will facilitate the same and record the statements. In case Complainant or Respondent seeks to ask questions to the other party, they may give them to the Internal Complaints Committee which will ask them and records the statement of the other party.

9. ACTION DURING PENDENCY OF INQUIRY

9.1. During the pendency of the proceedings, the Committee has the power to recommend to the SAEL Group, certain interim reliefs for the Complainant, at her/his request, such as –

9.1.1. change in reporting structure if the Respondent is direct supervisor of the Complainant, or person influencing the career growth of the Complainant.

9.1.2. grant leave up to three months. The leave granted to the Aggrieved Individual shall be in addition to the leave he/she would be otherwise entitled.

9.1.3. transfer to another Workplace; or any other such relief

9.2. On the recommendation of the Internal Complaints Committee, the Employer shall implement the recommendations made above and send the report of such implementation to the Internal Complaints Committee.

9.3. The Internal Complaints Committee at the written request of the Aggrieved Individual may recommend to the Employer to restrain the Respondent from reporting on the work performance of the Aggrieved Individual or writing her/ his confidential report, and the SAEL Group may assign the same to another Employee/ official.

10. CONFIDENTIALITY

10.1. The inquiry proceedings shall be conducted in a confidential manner, all members of the Committee, witnesses, Complainant and Respondent are required to maintain strict confidentiality. All records of complaints, including contents of meetings, results of investigations and other relevant material will be kept confidential by the Company except where disclosure is required under disciplinary or other remedial processes.

10.2. Any disclosure, publication, dissemination of any information or material relating to an incident or inquiry of Sexual Harassment shall be treated as misconduct and accordingly action shall be taken against such person.

10.3. To protect the interests of the Complainant and the accused person, confidentiality will be maintained throughout the investigatory process to the extent practicable, appropriate, and legally permitted under the circumstances. The identity and the addresses of the Complainant, Respondent and witnesses and the action taken by the Company shall not be published or communicated to public, press and media in any manner, unless required by applicable law to do so.

10.4. Notwithstanding anything contained in the Right to Information Act, 2005, (22 of 2005) the contents of the Complaint, the identity and addresses of the Aggrieved Individual, Respondent and witnesses, any information relating to Conciliation and inquiry proceedings, recommendations of the Internal Complaints Committee and the action taken by the Employer shall not be published, communicated or made known to the public, press and media in any manner. However, the information may be disseminated regarding the justice secured to any Complainant of Sexual Harassment without disclosing the name, address, identity or any other particulars calculated to lead to the identification of the Aggrieved Individual and witnesses.

10.5. Contravening the provisions of this Article shall lead to penalty as per law.

11. INQUIRY REPORT

11.1 On the completion of an inquiry, the Internal Complaints Committee shall provide a report of its findings to the Employer within a period of ten days from the date of completion of the inquiry and such report shall be made available to the concerned parties.

11.2 Where the Internal Complaints Committee arrives at the conclusion that the allegation against the Respondent has not been proved, it shall recommend to the Employer that no action is required to be taken in the matter.

11.3 Where the Internal Complaints Committee arrives at the conclusion that the allegation against the Respondent has been proved, it shall recommend to the employer:

11.3.1 to take action for Sexual Harassment as a misconduct under the service rules and it shall recommend to the Employer to take any action including a written apology, warning, reprimand or censure, withholding of promotion, withholding of pay rise or increments, terminating the respondent from service or undergoing a counselling session or carrying out community service.

11.3.2 To deduct from the salary or wages of the Respondent such sum as it may consider appropriate to be paid to the Aggrieved Individual or to his/her legal heirs, as it may determine, in accordance with the provisions of Article 13. In case the Employer is unable to make such deduction from the salary of the Respondent due to his being absent from duty or cessation of employment it may direct to the Respondent to pay such sum to the Aggrieved Individual. Provided further that in case the Respondent fails to pay the sum referred to above, the Internal Complaints Committee may forward the order for recovery of the sum as an arrear of land revenue to the concerned District Officer.

11.3 The Employer shall act upon the recommendations of the Internal Complaints Committee within 60 (sixty) days of receipt of such recommendations.

11.4 In case the conduct of the Respondent amounts to a specific offence under the Indian Penal Code, 1860, the SAEL Group will aid the Complainant if he/she decides to report to the police.

11.5 The Employer shall act upon the recommendations of the Internal Complaints Committee within 60 (sixty) days of receipt of such recommendations.

11.6 In case the conduct of the Respondent amounts to a specific offence under the Indian Penal Code, 1860, the SAEL Group will aid the Complainant if he/she decides to report to the police.

12 FALSE OR MALICIOUS COMPLAINT AND/OR FALSE EVIDENCE:

12.1 Where the Internal Complaints Committee arrives at a conclusion that the allegation against the Respondent is malicious or the Aggrieved Individual or any other person making the Complaint has made the Complaint knowing it to be false or the Aggrieved Individual or any other person making the Complaint has produced any forged or misleading document, it may recommend to the Employer to take action against the Aggrieved Individual or the person who has made the Complaint under Article 6 in accordance with the provisions of the service rules applicable to employees. However, a mere inability to substantiate a Complaint or provide adequate proof need not attract action against the Complainant. The malicious intent on part of the Complainant shall be established after an inquiry before any action is recommended.

12.2 Where the Internal Complaints Committee arrives at a conclusion that during the inquiry any witness has given false evidence or produced any forged or misleading document, it may recommend to the Employer of the witness to take action in accordance with Article 11.

13 DETERMINATION OF COMPENSATION

While determining the sums to be paid to the Aggrieved Individual under Article XI, the Internal Complaints Committee shall keep in mind the following:

13.1 the mental trauma, pain, suffering and emotional distress caused to the aggrieved individual;

13.2 the loss in the career opportunity due to the incident of Sexual Harassment;

13.3 medical expenses incurred by the Aggrieved Individual for physical or psychiatric treatment/ counselling/ therapy;

13.4 the income and financial status of the Respondent; feasibility of such payment in lump sum or in instalments.

14 ANNUAL REPORT

The Committee shall prepare an annual report and submit the same to the SAEL Group. The annual report shall consist of the following details:

a. Number of complaints of Sexual Harassment received in the year;

b. Number of complaints disposed off during the year;

c. Number of cases pending for more than ninety days;

d. Number of workshops or awareness programme against Sexual Harassment carried out; and

e. Nature of action taken by the Company

15 DUTIES OF THE SAEL GROUP

The SAEL Group shall – _

a. provide a safe working environment to all its Employees;
b. ensure that concerns about Sexual Harassment don't become an excuse for discrimination;
c. constitute the "Internal Committee" as per this Policy and display at any conspicuous places in the Workplace as well as upload on its website, details regarding the members of these committees with their contact numbers;
d. make public the details of members of the Internal Complaints Committee at the head office;
e. ensure publicity and circulation of the present Policy in all offices/branches/project locations of the SAEL Group;
f. develop and display information and communication materials on the present policy and its provisions in a simple and local language, particularly highlighting what constitutes Sexual Harassment at Workplace, who can file a Complaint

and how, the mechanism for grievance redressal, and action that may be taken if Sexual Harassment at Workplace is determined;organize workshops and awareness programmes at regular intervals for sensitizing Employees on the provisions of the Policy as also existing laws for protection of women and children as well as all Employees.

g. organise training and sensitisation programmes for all members of the Internal Complaints Committee.
h. provide necessary facilities and resources, including secretarial assistance to the Internal Complaints Committee under the present policy for dealing with the Complaint and conducting an inquiry;
i. assist in securing the attendance of Respondent and witnesses before Internal Complaints Committee, as the case may be;
j. make available any such information to the Internal Complaints Committee as it may require during the course of the inquiry;
k. provide services of translators, interpreters, special educators, support persons and such other experts as may be called for by the Internal Complaints Committee for the purposes of inquiry;
l. aid the Complainant if she/he chooses to file a criminal Complaint against the Respondent and a recommendation is made in this regard by the Internal Complaints Committee;
m. cause to initiate action under the Indian Penal Code and/or any other law for the time being in force if the aggrieved person so desires and a recommendation is made by the Internal Complaints Committee in this regard, and where the perpetrator is not an Employee, partner or associate in the Workplace at which the incident of Sexual Harassment took place;
n. treat Sexual Harassment as misconduct under the service rules and disciplinary policy of the SAEL Group and initiate action for such misconduct;
o. monitor the timely submission of reports by the Internal Complaints Committee to the SAEL Group;

16. DUTIES OF EMPLOYEES

All Employees must understand that an allegation of Sexual Harassment is of a grave nature that will be taken up seriously and not tolerated. In addition to the Code of Conduct applicable to all Employees, the following must guide their actions and behaviour at all times: Employees are encouraged to:

a. Know the SAEL Group's Policy on Prevention Of Sexual Harassment as it may be commonly referred to.
b. Familiarise yourself with the provisions of various laws for protection of women and children and your rights and responsibilities under the civil and criminal laws applicable to all citizens.
c. Be alert and ready to help if a person is seeking help.
d. Be aware of one's own behaviour, particularly what may be perceived as inappropriate to a reasonable mind and avoid the same.
e. Be aware of cultural sensitivities.
f. Learn and internalise that it is wrong to assume that some people, particularly some women like being 'teased' and their "silence" or "no" means a "yes".
g. Say "NO" if asked to go to places, do things or participate in situations that make you uncomfortable.
h. Trust your instincts. Walk away from uncomfortable situations.
i. Say "NO" to offensive behaviour as soon as it occurs.
j. Learn to report and encourage reporting as a norm.
k. Understand that the way an individual dresses up does not make them deserve Sexual Harassment.
l. Understand that harassing women is not a proof of masculinity and make the same known to your colleagues, friends and family.
m. Remember that an unwanted and abusive display of power can undermine the self-confidence of a person and make them feel angry and resentful.
n. Maintain confidentiality regarding any aspect of an inquiry to which they or a co-worker may be party to.

Employees are encouraged not to:

o. Indulge in or encourage any form of Verbal harassment, Physical harassment, Written or graphic harassment, Emotional harassment or Third Party harassment.
p. Take discriminatory actions or decisions which are contrary to the spirit of this Policy.
q. Trivialize sexual harassment as a light-hearted joke or teasing.
r. Make false Complaints or misuse the Policy.

17 AMENDMENTS

The SAEL Group reserves the right to amend the Policy as per the prevailing laws in order to comply with any laws/rules/regulations that come into effect from time to time.

18 AWARENESS

All Employees will be made aware of this policy by circulating this policy. A copy of this policy will be given to all new Employees on joining. This Policy will also be posted on website for ready reference of all Employees

ANNEXURE A

INTERNAL Complaints COMMITTEE

a. Ms. Supreet Gupta (Presiding Officer of the Committee & CHRO)
b. Mr. Ambuj Mishra (Head- ESG)
c. Ms. Maulishree Gupta (Senior Manager, Legal)
d. Lady Member to be announced (an NGO worker, a psychologist, or a lawyer)

Attendance Management Policy

ATTENDANCE

Purpose

To streamline and regulate the attendance of all the employees in the Group Company.

Scope

This policy applies to all employees of the SAEL group.

Procedure

Attendance for all categories of staff irrespective of level would be through a formal procedure of the attendance punching (Bio metric) machine, as applicable. All employees are expected to Punch in, on reaching their workplace in the morning while entering the office/plant itself. Similarly, in the evening while leaving the workplace they must punch the attendance.

In the event an employee is required to leave the office for visiting a client or to attend any official duty, he/she must inform his/her HOD and take approval through the HR portal/mail.

Office Timing (Delhi Office)

Morning 9:00 AM To Evening 6:00 PM, Lunch Timing – 30 Min. Only (between 1 pm to 2 pm)

Flexi Hour: Till 09:00 AM – 10:00 AM (In Morning) and till 06PM - 07PM (In Evening)

Weekly off - All Saturdays and Sundays.

Office Timing (Plants/Sites)

Morning 9:00 AM to Evening 5:30 PM, Lunch Timing – 30 Min. Only (between 1 pm to 2 pm)

Flexi Hour: Till 09AM – 09:15 AM (In Morning)

Weekly off - All Sundays (for office staff) & One weekly off for all at Plants.

Late Reporting / Early Going from duty on account of O.D. (Out Duty)

In normal circumstances, direct client visits are to be avoided. One should plan the visits in such a way that one's presence is first marked in office/plant, unless and until it is important.

Any employee going on official duty directly from home shall seek approval from his immediate manager to mention the dates on which he/she will be out and will simultaneously inform the HR dept for attendance purpose. The approval must be in place before/after proceeding with any official work.

As and when the employee comes back to the office, it is his / her responsibility to record the attendance by punching the attendance machine.

It is expected that all kinds of leaves / OD should have prior approval from appropriate authorities.

It is the responsibility of the employee to get his / her leave sanctioned from the authorized person (HOD) on the leave portal (ESS) before the 22nd of every month.

Late Coming

The general shift being maintained for the maximum number of staff is 9 am to 6 pm.

An employee is requested to report on duty by or before 9 am, a failure to which below mentioned rules will become applicable.

a. The company provides One-hour Flexi timing; if an employee comes till 10:00 am then they should complete 9 hours a day which is 07:00 PM if an employee goes early or comes late then it will be considered as a Half Day.

b. If an employee is reaching the office after 10:00 am increases to 3 days in a month

(it will be considered for half-day leave / absent (based on the availability of leave balance).

Employee who is a habitual late comer, strict disciplinary action will be taken.

Note: These leaves will be first adjusted from CL and then from EL/PL based on the balance of leave in each category.

ID Cards & Biometrics

- ID card/Biometric facility will be arranged for all the employees by HR function at the respective location.
- It is mandatory for all the employees to always carry the ID card during working hours.
- The loss of the Card must be intimated to HR function immediately. A new card will be issued on a nominal charge basis.
- The card must be surrendered to the HR Representative in the event of separation from the company.

Responsibility

The Location HR representative has the responsibility to ensure smooth functioning of the Attendance, Leave, Regularization, and Overtime Recording System. All the employees shall be responsible for complying with the procedure and adhering to guidelines given in this procedure.

Compensatory Off (Delhi Office)

Compensatory Off for employees at Delhi office will be applicable for Manager's and below in case they are being required for their presence at Corporate Office on weekly offs / Holidays for work exigencies. The Compensatory Off expires at the end of the Calendar year and can neither be carried forward nor be encashable. The Compensatory Off's have to be approved by the HOD for regularization of their attendance. Employees who are required to work extra hours should get approval from their respective HODs/Reporting authority and mark a copy to the time Office.

This Policy is w.e.f. 01st January 2024.

Employee Leave Policy

Objective

The objective of this policy is to provide leaves for meeting unforeseen emergencies, taking rest during sickness, celebrating National and Religious festivals, and for refreshment and rejuvenation to maintain proper mental and physical condition as part of work life balance. For leaves, the Calendar year will commence from January 01 and will end on December 31 every year.

Scope

This policy applies to all regular employees including Trainees on the company roll except Apprentice & Casuals.

Leave Entitlements

LEAVE TYPE	NO. OF DAYS
Casual Leave	**(07)**
Sick Leave	**(07)**
Privilege / Earned Leave	**(25)**

Casual Leave (CL)

Employees shall be eligible to avail themselves of 07 Casual Leave (CL) in a Calendar year. CL can be availed in the event of an emergency or other unforeseen exigencies which could not be planned and must be approved by the HOD / Division Head either prior going on leave or post leave is taken within 2 days of resuming duties.

If the casual leave remains unutilized at the end of the year, the same shall lapse after December 31st and a fresh accrual will start. More than three continuous casual leave cannot be granted for any purpose. If an employee has to avail more than three leaves, he or she can avail the same out of the earned leaves and that too only after getting a prior sanction from the concerned Head of Department.

No encashment of CL is permissible. Casual leaves cannot be clubbed with any other leaves.

Sick Leave (SL)

Employees shall be eligible to avail themselves of (07) Sick Leave (SL) in a Calendar year. SL can be availed in the event of sickness or illness and must be approved by HOD / Division Head after joining the office. If the sick leave remains unutilized at the end of the year, the same shall lapse after December 31 and a fresh accrual will start for existing employees or on a pro-rata basis from the date of joining for new joiner during the first year of service.

If an employee avail three or more than three continuous sick leave, he or she will have to produce a satisfactory medical certificate otherwise sick leave will not be adjusted against absent days. No encashment of SL is permissible.

Note: The clubbing of Sick leave with Earned Leave may be allowed for long illness provided a satisfactory medical certificate is submitted by the employee.

CL / SL can be suffixed or prefixed with intervening holidays/weekly off. Half day Sick leave is permissible.

Privilege Leave (PL)

- Entitlement of Leaves – All regular employees are eligible for Twenty-Five (25) days of Privilege Leave in a calendar year.
- Privilege leaves will be credited quarterly to the employee's account on 1st April/July/October/January of every year.
- Unavailed PL can be carried forward to next year. Maximum accumulation up to. 40 Days.
- If any employee leaves the organization during the calendar year and he/she has an unavailed PL (Maximum up to 40 days) to his/her credit, then that shall be encashed at the time of Full & Final Settlements, based on current Basic Pay only.

Note- Eligibility of these leaves (PL) will be on a proportionate basis for every completed calendar month, and these leaves can be availed for a minimum period of Half-a-day. For availing of leaves (PL), an employee shall have to submit a leave application at least one week in advance.

Short Leave (2 Hours each)

Employees shall be eligible to avail themselves of Two Short Leave in each Calendar month. Short leave can be availed in the event of an emergency or other unforeseen exigencies which could not be planned. If the short leave remains unutilized the same shall lapse at the end of the month, and a fresh accrual will start. The time period of short leave is not more than two hours each.

Maternity Leave

Female employees who are not covered under the ESI Act will be entitled to Maternity Leave as per the provision of the Maternity Benefit Act, 1961. Maternity Leave is only applicable for first two pregnancies.

Miscarriage leave – A female employee shall be entitled for a paid leave of Six weeks immediately following the day of her miscarriage or medical termination of pregnancy. This leave cannot be availed in the case of termination of the pregnancy, which is not on medical grounds.

Tubectomy Operation leave – A female employee may on production of certificate from a registered medical practitioner, be entitled to avail leave with salary for a period of two weeks immediately following the day of her Tubectomy Operation.

Compensatory Off

Whenever there is exigency of work in Plant, an employee may be required to work extra hours on a working day or required to work on weekly off or on a Public Holiday, In such a case the employee will be entitled to Compensatory off in lieu of extra working and will be governed by the following Policy: -

- This policy will apply to the employees working in the SAEL Group Companies.
- All Shift employees are eligible for this policy (Excluding General Shift); in case of general shift employees cover up to Senior Engineer/Senior Executive Level.
- All HODs to prepare shift roster of their respective departments and get it approved by Plant In charge.
- Compensatory Off can be availed only when the HOD/Reporting Authority authorizes the extra working

or working on Holiday and Weekly Offs. No employee can decide on his/her own to work on holidays, Weekly Off, or extra work and then seek compensatory off.

- HODs require to intimate an employee and make a copy to the Plant in charge and HR, if any employee needs to work extra hours or on holiday or weekly off in advance offering his approval for the same with justification.
- Employees eligible for Compensatory Off require a minimum Half Day or full day working.
- Max of 7 days compensatory off will be allowed including weekly off subject to the approval of the Plant Head.
- HR shall verify employee's presence on said days by checking attendance record/security register.
- Employees who are required to work extra hours should get prior written approval from their respective HODs/Reporting authority and mark a copy to the time Office.
- The Time office is responsible for maintaining a clear record of compensatory off accrued, availed and balance carried forward of each employee which would be auditable.
- Unavailed Compensatory offs will automatically get lapsed after 90 days from the date of its accruing for extra working on weekly Offs/Holidays.
- Compensatory Off cannot be availed in advance in any case.
- No salary / payment will be made in lieu of Compensatory Offs. Compensatory Off cannot be clubbed with CL / PL. Compensatory Offs exhaust at the end of the Calendar year and will not be carried forward.
- In the Corporate Office location – Managers and below are authorized for Compensatory Off in case they are working on Holidays/Weekly Off. This needs to have approval from HOD. Employees above Manager Level in Corporate Office are not authorized for Compensatory Off.

Holiday & Festivals

The list of Annual Holidays for the Calendar Year will be notified by the Corporate HR of the Group every year during the month of December.

Responsibility

The prime responsibility is of the Location/Plant HR representative to ensure strict execution of Leave Rules and Procedure. All the employees shall be responsible for complying with the procedure and adhere to the guidelines given in this policy.

Any deviation of the leave policy will require prior approval from the management.

This Policy is in effect from 1st January 2024 onwards and supersedes any other / past policies.

DRESS CODE POLICY

1. Objective:

This Dress Code Policy is designed to guide all employees of SAEL Limited and its subsidiaries ("SAEL Group" or "Company"), on the standards of appearance and attire suitable for professional setting.

The purpose of this Dress Code Policy ("Policy") is to provide guidance on dress standards during work hours or when representing SAEL. Our goal is to ensure that all employees maintain a professional appearance that reflects our company's values all times.

2. Scope/Coverage:

This policy applies to all employees of SAEL, including those in full-time, part-time, temporary, and contract positions.

3. General Guidelines

- All individuals in the Company are expected to be attired and groomed in a professional manner to reflect the professional image of the Company.
- Clothing should be neat, clean, and appropriate for the work being performed and for the setting in which the work is conducted and must not compromise safety standards.
- Safety is paramount to us; therefore, appropriate Personal Protective Equipment (PPE) must be worn while visiting/or working in operations area (PPE Zone).
- All employees are expected to maintain personal hygiene and grooming standards regardless of attire.

Declaration: SAEL is an equal opportunity employer, and our dress code policy does not discriminate between any individuals in workplace based on age, disability, sex, race, religion or belief, gender reassignment, marriage/civil partnership, pregnancy/maternity, or sexual orientation.

4. Dress Code:

In Corporate Office:

Men	Women
Monday to Thursday: Business Formals - Formal trousers and formal collared shirts. - Business Suits - Blazer, Jackets - Closed Shoes **Friday: Smart Casuals** - Denims - Smart casual pants such as chinos - Casual button-down shirts, and polo shirts - Sneakers	**Monday to Thursday: Business Formals** - Business Suits (Pants or Skirts) - Skirts with Collared Shirts - Formal Trousers and Shirts/Short Kurta - Salwar Kameez - Sarees - Blazers, Jackets, Sweaters - Shoes or Sandals **Friday: Smart Casuals** - Denims - Skirts or dresses with shirts or tops - Sneakers

For Plants/Sites:

Men	Women
Monday to Friday: Business Formals - Formal trousers and formal collared shirts. - Blazer, Jackets - Closed Shoes **Saturday: Smart Casuals** - Denims - Smart casual pants such as chinos - Casual button-down shirts, and polo shirts - Sneakers	**Monday to Friday: Business Formals** - Formal Trousers and Shirts/Short Kurta - Salwar Kameez - Sarees - Blazers, Jackets, Sweaters - Shoes or Sandals **Saturday: Smart Casuals** - Denims - Skirts or dresses with shirts or tops - Sneakers

However, below mentioned casual dressing is not allowed:

- Torn Denims
- Cargo Pants
- Capris
- Shorts
- Printed T-Shirts
- Sandals/Flip-Flops

5. Special Occasions:

Client Meeting or presentation may necessitate a higher level of formality, as communicated by management. Special events or occasions may allow for deviations from the standard dress code, subject to guidelines shared by the HR Team.

For Instance -

During Cultural events, festivals, or special occasions, employee may be encouraged to wear traditional Indian attire such as sarees, kurta-pyjamas, or salwar kameez.
In case of any injury, the dress code can be relaxed to accommodate the injury.

6. Enforcement:

Supervisors and managers are responsible for ensuring compliance with the Dress Code Policy within their respective departments.
Consequences for dress code violations can range from a simple reminder or warning to a more serious disciplinary action, depending on the severity and frequency of the violation. It's essential for employees to familiarize themselves with their company's dress code policy and to adhere to it to maintain a professional work environment.
In case of any violation, employee will receive a warning. After two warnings, in case of any further violation the employee will not be allowed to enter the office premises.

7. Amendment/Update:

SAEL reserves the right to amend or update this Dress Code Policy as needed. Employees will be notified of any changes.

APPENDIX C: Site Screening

SAEL will undertake preliminary land selection screening post-tender bidding process as per the geographic boundaries set by the tender process (if any) or set by SAEL management. This will be a phased approach –

Phase I: High level land screening with mapping of technical, financial, and E&S sensitive receptors. This will assist the land team to narrow down optimal site locations. E&S parameters to be considered during the initial sscreening (Phase I) is as followes –

- Regional Setting of the sites
- Topography and soil profile
- Geography and Geomorphology
- Hydrology, drainage and hydrogeology
- Climate and Meteorology, including Ambient temperature, Relative humidity, Rainfall, Regional wind patterns (wind speed & direction)
- Data on air quality, water quality and soil quality at site level from secondary information
- Historical occurrences of natural disasters – earthquakes, localized flooding incidents, dust storms, drought conditions, landslides, in project area
- Demographic profile, occupational profile, livelihood pattern, land holding pattern, and status of civic infrastructure in study area
- Review of site location with proximity to ecologically sensitive areas, Forest area, National Park, Wildlife Sanctuaries, Important Bird Areas (IBAs), Wetlands, Other Notified areas and/ or international treaties and conventions
- Presence of Schedule V community/Indigenous/Tribal Communities & displaced/affected population falling in schedule V/Tribal/Indigenous community
- Project coming under the influence of Naxalite/Maoist leading to security threat.
- Presence of sensitive cultural heritage issues

Phase II: Detailed E&S Screening (site visit) using the checklist (please refer the E&S screening checklists given below). The findings together with technical and financial considerations will help the SAEL management to make an informed decision on which site to select. Detailed screening will have following E&S consideration –

- Understanding of meteorological factors such as wind pattern, cyclones, rainfall etc.
- Review of socio-political scenarios, which broadly considers the land's performance in dealing with social issues, especially land purchase, and the responsiveness of the administration.
- Review of notifications on eco sensitive and eco-fragile zone.
- Broad understanding of ecological setup of the location to determine if there are any significant impacts on protected areas, endangered wildlife, national heritage sites or eco-sensitive zones.
- Potential risks and impacts on the nearby community, such as impacts on ecosystem services, community exposure to disease and likely emergency situations for the community resulting from operations of Biomass Power plants and Module Assembly Unit.
- Confirmation on compliance of the leased land to national laws and government practices and the applicable international standards, whichever is more stringent.
- Presence of all the necessary legal documents with respect to the land title and that there are no pending legal issues concerning the leased land.
- Avoid and minimize any negative and adverse impact by ensuring the following:
    - Maintain considerable distance from large lakes, rivers and river crossings.
    - Avoid Coastal Regulation Zone (CRZ) areas.
    - Avoid areas of religious, cultural or archaeological significance.

- Avoid sites that requires the relocation of indigenous peoples or scheduled tribes (STs) from lands and natural resources subject to traditional ownership or under customary use or significantly impact their cultural heritage.
- Avoid sites falling within eco-sensitive zones of wildlife sanctuaries, national parks and other protected areas and have the potential to disturb critical habitat.
- Avoid locations that involve diversion of forestland.
- Appropriate buffer zone to be mainted from any ecologicly sensitive zone, CRZ (in case avoidance in not feasible), as per the regulatory requirement

- Ensure that the land leased does not have any encumbrance such as other title/lease holders.
- Ensure that the leasing process is not adversely affecting any dependents on the land such as agricultural labourers, pastoralists or squatter or encroachers.

Phase III: In parallel, ESIA will be conducted for the projects based on the E&S screening and provisional catogrization (refer Chapter 6 of the ESMS - Project Categorization and the Recommended studies based on categorization), but the level of detail depends on the E&S risks and associated technologies.

Phase IV: The land acquisition process continues with the incorporation of environmental screening and ESIA findings. Where applicable, there will be Free Prior Informed Consent when involving indigenous territories. The project's clearing and construction activities can only commence post Site Screening process.

A detailed Screening Checklist has been provided below, ESMS Committee to ensure the following is completed prior to moving ahead with the project development decision .

S. No.	Criteria	Yes	No	Remarks
1.	Is the Project located in ecologically sensitive zones (10 km)?			
2.	Is there any Wildlife sanctuary, Bio- reserve, National Park or notified Eco Sensitive Zone in the area of influence (i.e., within 10 km)?			
3.	Are there any Reserve forests, Protected forest, or reserved land in the area of influence?			
4.	Are there any cultural heritage objects, sites and structures can be found (e.g. sites of archaeological, geological, historical or religious interest)?			
5.	Coastal Areas - Site falling within High Tide line (HTL) as per CRZ notification			
6.	Is the site low lying or prone to localised flood?			
7.	Is the site at a sufficient distance from National Highway/ State Highway and Railway line?			
8.	Is the site located distally from flood plains, river etc.?			
9.	Seismic Zone			
10.	Is site prone to any natural hazard?			
11.	What is the source of water in the area			
12.	Ground water dependence and CGWA rating (notified area/overexploited area/semi critical)			
13.	Is the site home to any endemic fauna/floral population?			
14.	What is the tentatively proposed construction period?			
15.	Is the land being used for economic/livelihood purposes			
16.	Are there any residences in the land that will need to be removed?			
17.	Is the land categorised as tribal land?			
18.	Presence of any physical structures/houses on site? If so, which functions do they serve (dwelling, commercial, health/education etc)			
19.	Describe the nearest communities to project site and the administrative divisions.			
20.	Is there any settlement near the boundary of the land parcel?			
21.	What is the status on the land process? Description of needed land for the project, plans/status for land procurement or lease arrangements, Easements/RoWs,			

22.	Will land acquisition/purchase involve displacement of people and resettlement and is enough land available for the resettlement?
23.	Will the project change the socioeconomic profile of the area?
24.	In case there is no disruption of indigenous community life as a whole, will there be loss of housing, land, crops, trees, and/or other fixed projects owned or controlled by individual indigenous households?
25.	Personal handling the land acquisition process
26.	Does the land involve conversion from agricultural to non-agricultural use?
27.	Is security an issue in the nearby project area? Is there any threat from local outfits/ terror groups?
28.	Can the issues like vandalism and theft be addressed and what would be the possible cost
29.	Details on transmission lines? Length, height and capacity?
30.	Any consultations with local households and/or communities regarding the project? If yes, please describe and document outcome, positive as negative.
31.	Are any of these risks or impacts going to apply for the surrounding community following from planned project activities? (more than one may be selected) ☐ Danger of fire or explosions ☐ Transport / handling of hazardous goods ☐ Traffic with heavy load vehicles ☐ Flooding (e.g. from water reservoirs/ dams) ☐ Influx of migrant / temporary workers ☐ Overland lines (>200 kV) ☐ Armed security forces ☐ Construction Site ☐ Limiting access or changes to basic necessities (e.g. access to water bodies or communal land, changes in water quality or quantity, changes in soil or air quality) ☐ Noise ☐ Smell
32.	Expected no of employees during construction & Operation Phase

33.	Have EPC and O&M contractors been screened/selected? If yes, what is the status on the contract negotiation process?
34.	Are requirements on Occupational Health & Safety, Environment or Community Health & Safety in the legal agreement with the contractor?
35.	Will any of the PS5, 6, 7 or 8 be triggered? Please describe why/why not.
36.	Will the ESIA need to focus on special topics (physical/economic displacement, biodiversity, livelihood restoration, indigenous/other vulnerable groups of people, cultural values?)

E&S Screening Checlist forTransmission Lines

Sr. No.	E&S Aspects	E&S Screening Observation
1.	Name of the Project/ Capacity	
2.	State/s	
3.	Tehsils & Districts covered	
4.	Current Status of the Project	
5.	Project proponent and stakeholders involved	
6.	Detailed description of the transmission line project, including length, capacity, and voltage	
7.	Details of substation connecting by the transmission line	
8.	RoW requirement and type	
9.	Status of obtaining the easement right of transmission line?	
10.	What is the tentatively proposed construction/tower erection and stringing period?	
11.	Total Land requirement for the towers	
12.	Bifurcation of total land requirement for towers basis of category of land (e.g., private land, government land, forest land, and any other category of land)	
13.	Total Land Requirement for the RoW	
14.	Bifurcation of total land requirement for TL's RoW basis of category of land (e.g., private land, government land, forest land, and any other category of land)	
15.	Total Land Requirement for associated facilities such as (but not limited to) workers' accommodation, storage area, and access road	
16.	Bifurcation of total land requirement for associated facilities of category of land (e.g., private land, government land, forest land, and any other category of land)	
17.	Is the TL passing through/crossing ecologically sensitive zones	
18.	Is the TL passing through/crossing Forest Land	
19.	Number of trees enumerated (as applicable)	
20.	National Highway (NH) crossings	
21.	State Highway (SH) crossings	
22.	Railway route crossings	
23.	River crossings	
24.	Number of Power line crossings	

25.	Is the TL crossing any residential area?	
26.	Does the Project require any permanent or temporary acquisition of land or assets?	
27.	Does the Project cause any physical or economic displacement of people or communities	
28.	Are there any residences in the land that will need to be removed?	
29.	Presence of any physical structures/houses on site? If so, which functions do they serve (dwelling, commercial, health/education etc)	
30.	Is the land/RoW categorized as tribal land or belong to SC/ST?	
31.	Will the project affect any indigenous peoples or communities that have a distinct cultural identity, a close attachment to ancestral lands, and a collective decision-making process?	
32.	Will the project affect any tangible or intangible cultural heritage, such as archaeological sites, historical monuments, sacred places, or cultural expressions	
33.	Any consultations with local households and/or communities regarding the project? If yes, please describe and document outcome, positive as negative.	
34.	Total water consumption with source during the construction phase of the project	
35.	Project's community health and safety plan to be implemented during the construction, and operation and maintenance phases	
36.	Traffic management plan to be implemented during the construction, and operation & maintenance phase of the project	
37.	Security management plan to be implemented during the construction, and operation & maintenance phase	
38.	Labors' assessment plan to be implemented during the construction, and operation & maintenance phase	
39.	Labors' management plan to be implemented during the construction, and operation & maintenance phase	
40.	Labors' accommodation plan to be implemented during the construction, and operation & maintenance phase	
41.	Supply chain management and assessment plan to be implemented for sourcing raw materials and any other major material by the project	
42.	Contractors' management plan to be implemented during the construction, and operation & maintenance phase	
43.	Stakeholder engagement plan and grievance redressal mechanism to be implemented by the project during the construction, and operation & maintenance phases	

APPENDIX D: TOR for Detailed Risk Assessment Studies

The following subsections provide a sample Terms of Reference (ToR) for Environment and social Impact Assessment (ESIA), Initial Environment and Social Examination (IESE) or similar studies, as well a sample reporting structure that will be utilized by SAEL by procuring services from third party consultants to carry out an assessment.

It must be noted that, the third-party consultants will need to adhere to the scope of work and reporting format; however, they will need to use and refer to their internal tools for conducting the study and associated gap assessments.

ESIA/IESE

1.1.1 Objective

The objective of the ESIA study will be to:

- To establish the environmental & social baseline in the study area and to identify any significant environmental & social issues;
- To analyze, quantify the impacts, and design project activities keeping in mind environmental and social impacts;
- To prepare an inventory of biodiversity (flora and fauna) affected due to project activity (if any);
- To mitigate adverse impacts by the provision of the requisite avoidance and compensation measures of proposed project activities;
- To develop Environmental and Social Management Plan (ESMP) for implementation and monitoring of the mitigation measures along with suitable Green belt development plan with proposed budget; and
- To integrate the environmental and social issues in the project planning and design stage with proper Corrective Action Plan (CAP) for mitigation measures.

1.1.2 Scope of Work

- All the environmental and social impacts associated with establishment of project should be identified and addressed in detail;
- Verify the compliance with applicable reference framework;
- Identify stakeholder groups and stakeholder engagement activities including mechanisms to address grievances;
- Identify the process for land acquisition / purchase, process of public participation, compensation, resettlement and livelihood restoration planning and implementation as per the applicability;
- Verify compliance with the Indian environmental regulations and other relevant laws as well as applicable common International guideline/ practices;
- Identify and quantify different categories of project affected people (PAPs) who would require assistance, compensation, rehabilitation or relocation;
- Identify all potential significant adverse environmental and social impacts of the project and recommend measures for mitigation;
- Identify problems (non-conformity) and recommend measures to improve the environmental management systems;
- Generate baseline data that will be used to monitor and evaluate the mitigation measures implemented during the project lifecycle (comprising of pre-construction, construction, operation and decommissioning); and
- Report should include coverage of associated facilities such as access road or water pipelines, Occupational Health & Safety, Community Health & Safety and applicable performance indicators for monitoring.

1.1.3 Deliverable

The ESIA study (and the ESIA report) will specifically cover the following

Title	Description
Executive Summary	This section of the report will describe concisely the critical facts, significant findings, and recommended actions of the ESIA.

Defining the Project/Project Description	Providing a Project description with focus on understanding the environmental and social setting and sensitivities for the proposed project, including an overview of the land acquisition and resettlement requirements and its impacts on indigenous peoples, if any. This would also include any related, existing and associated facilities that may be required (e.g., access roads, transmission lines, water supply arrangements, housing, raw material etc.).
Laying down Policy, legal, and administrative framework	Discussing the policy, legal, and administrative framework within which the assessment is carried out, including host country regulations (including permits and licenses), obligations under relevant international social and environmental treaties, agreements, and conventions and IFC PS. Reviewing the Social & Environmental compliance requirement with respect to the above.
Generating Baseline Data	Collection and generation of relevant baseline social and environmental (physical, biological) data (primary & secondary) within the study area. This data should be relevant to decisions about project location, design, construction, operation, or mitigation measures. The baseline data generation should specifically focus issues around a) Air & odour – its quality during different phases of life cycle of the project, b) Water- its quality, availability and adequacy vis-à-vis the requirements during different phases of the project life cycle, c) land, access requirements, land use, and involuntary resettlement, d) Noise – generation of noise during project life cycle, e) ecology and biodiversity, f) sex-disaggregated socio-economic information and profile outlining the results of the social impact assessment, census and socio-economic surveys, with information on vulnerability, gender, indigenous peoples, labor, etc. g) physical or cultural heritage (if any), h) flooding and seismic risk, i) future climate change risk analysis etc. Review of the land take/lease process to assess any legacy or current/existing issues (like informal settlers, livelihood dependence, other usage etc.) on the allotted land). It will also look at current and proposed development activities within the project's area of influence, including those not directly connected to the project.
Information Disclosure, Consultation and Participation	Describe the consultation and participation mechanisms adopted, including the activities undertaken to disseminate project and resettlement information during project design and engaging stakeholders. The results of consultations with affected persons, the host communities, civil society organizations and other stakeholders, and SAEL's response to satisfactorily address the concerns raised will be summarized.
Review of land acquisition	The Consultant, based on documentation provided by SAEL, shall ensure the land has proper title deeds and that there are no pending legal issues concerning the leased land. The Consultant shall also ensure that the leased land is in compliance to national laws and government practices and the applicable international standards, whichever is more stringent and is free of encumbrance. Consultant shall ensure that the leasing process is not adversely affecting any dependents on the land such as agricultural labourers, pastoralists or squatter or encroachers. Consultant should identify and suggest measured to avoid or minimize any negative and adverse impact on the leased land and the local community due to its operations, to the extent practicable and shall mitigate and compensate the impacts that cannot be minimized. Consultant shall assure that the leasing process is not adversely affecting any dependents on the land such as agricultural labourers, pastoralists or squatter or encroachers. Consultant shall assure that the leased land has not resulted in the economic displacement of people. SAEL shall facilitate adequate documentation and disclosure of the land lease process to the relevant stakeholders.
Assessing Social and Environmental Impacts and Mitigation Measures	Assessing the Social and Environmental impacts (both positive and negative) of the projects. Identify mitigation measures and any residual negative impacts that cannot be mitigated. Also evaluate impacts and risks from associated facilities and other third party activities. Description of the entitlements for various categories of impacts, mitigation measures to address livelihood risks etc. will be included in this section. Also includes assessment and mitigation measures for health and safety issues of the workforce and community, as well as Company's compliance with national labour laws and the international labour standards.
Grievance Redress Mechanism	Description of the grievance redress framework/mechanism (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental and social performance.
Analysis of the Alternatives	Comparing reasonable alternatives to the proposed project site, technology, design, and operation in terms of their potential social environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It would also state the basis for selecting the particular site and project design justifying recommended approaches to pollution prevention and abatement.
Management Program	Developing an Environmental and Social management and monitoring plan (ESMMP). This should consists of the set of mitigation and management measures to be taken during implementation of the project to avoid, reduce, mitigate, or compensate for adverse social and environmental impacts, in the order of priority, and their timelines. Where the client identifies measures and actions necessary for the project to comply with applicable laws and regulations and to meet the IFC requirements, the management program will include an Action Plan, which is subject to disclosure to the affected communities and ongoing reporting and updating. An itemized budget and responsible parties for all environmental management, monitoring, resettlement activities, including implementation of the ESMMP shall be presented. The institutional arrangements and schedules for the implementation of the ESMMP and its monitoring shall be detailed.
Conclusion and Recommendation	Providing conclusions drawn from the assessment and providing recommendations

Environment & Social Due Diligence

The following subsections provide a sample Terms of Reference (ToR) for due diligence as well a sample reporting structure that will be utilized by SAEL to carry out an ESDD by procuring services from third party consultants to carry out an assessment.

It must be noted that, the third party consultants will need to adhere to the scope of work and reporting format; however, they will need to use and refer to their internal tools for conducting the study and associated gap assessments.

1.1.4 Objective

The ESDD is conducted to support Lender's or Equity Partner's decision on investment in the project and follow-up approach and strategies by reviewing and verifying the project against the International E&S Safeguards to identify potential environmental and social risks and impacts, compliance gaps, necessary mitigation and follow-up actions, and outlining a managing / monitoring regime.

This review must specifically address anticipated risks and mitigation measures, and should give an overall opinion on the ability of the Project to meet the National & International E&S Safeguards.

1.1.5 Scope of Work and Tasks

The scope of work would entail verification of all relevant environmental and social aspects of the project within the reference framework (including the current operations and the future planned additions/ expansions). This will include, but not be limited to, the following aspects:

- Environmental impact management
- Social impact management
- Health and safety management
- Human resources management (including human rights and labour standards) and
- Community engagement

Specifically, this work will entail:

- Verifying to what extent such aspects of the project are in accordance with SAEL's ESMS and applicable International E&S frameworks ;
- Providing a Categorization of the project assessed along with the justification for the same, based on E&S risks identified;
- Developing an Action Plan, with timelines and responsibilities, to address any gaps or issues that need to be managed through the life of the project

The ESDD review will comprise the following steps:

Step	Description
Information Review	This should include a review of all relevant social, labour, health and safety and environmental related documents and information (i.e., environmental permits / licenses and associated applications, health and safety plan, land acquisition and R & R if relevant, emergency plan, consultation plans and documentation of consultations done till date, concession and construction contracts, any other additional environmental, health and safety studies, etc., and, subsequent to the site reconnaissance, review of any additional information obtained or collected)
Site Reconnaissance	A site investigation of the plant will be performed consisting of visual observation of relevant areas directly and indirectly affected by the project / company, meetings with relevant individuals / entities associated with the project / company to discuss the social, environmental issues, health and safety and labour issues, and obtaining any additional information required
Discussions	These will be held with the Top Management to understand policies and documentation
Report Preparation	Two documents will be required associated with the due diligence: 1) Preliminary Summary of Principal Findings, and 2) detailed Due Diligence Report.

The report will include a clear compliance overview table providing for each IFC Performance Standard and for each applicable EHS Guideline the requirements, at least the following information per key requirement:

- Description of the requirement
- Compliance status, differentiating between minor and major gaps to completion
- Description of the observed situation / compliance gap
- Comments on opportunities for positive impacts, and
- Recommended follow-up.

1.1.6 Schedule

- A draft of the full report is to be made available within 2 week after conclusion of the site visit
- The final Report shall be submitted within 1-2 weeks after receiving comments on the draft report.
- All reports should be written and prepared in English and delivered in electronic and hard copy."

Note: The timeframe of the ESDD can vary depending upon the complexity of the project. Typically, the process will entail the following timeline:

- The site-visits are to be concluded within 1-2 week after the preparatory information/ documentation has been made available to the consultant. (Typically would mean 2-3 days site visit).

Additional Assessment & Studies

This section summarizes the key expectations with respect to additional thematic/specialist assessment for project sites, in case the following or specific aspects are triggered as part of Screening, ESIA or ESDD.

Type of E&S Study	Specific Trigger	Typical Scope and Recommendations
Resettlement Planning Framework	Any project that may result in involuntary resettlement (physical and economic)	RPF is applicable when a project's activities and specific footprint may not have been defined and describes the entitlements and that are proportional to the extent and degree of the impacts. The degree of impacts is determined by: (a) the scope of physical and economic displacement; and (b) the vulnerability of the affected people
Indigenous Peoples Planning Framework	Any project that may affect indigenous peoples based on the specific criteria to self-identify a group through collective attachment, distinct language, integration with the mainstream etc.	If the Project would have impacts on Indigenous Peoples, SAEL will prepare an Indigenous Peoples plan or IPPF. The level of detail and comprehensiveness is proportional to the degree of the impacts. The degree of impacts is determined by evaluating: (a) the magnitude of the impact on Indigenous Peoples' customary rights of use and access to land and natural resources; socioeconomic status; cultural and communal integrity and heritage; health, education, livelihood systems and social security status; and indigenous knowledge; and (b) the vulnerability of the affected Indigenous Peoples. The Indigenous Peoples plan complements the broader coverage of social risks and impacts in the environmental and social assessment and provides specialized guidance to address specific issues associated with the needs of affected Indigenous Peoples. SAEL or any entity controlled or managed by the SAEL, will consider the procurement of land under the ownership or common usage of Indigenous People, only after Free Prior Informed Consent (FPIC) are obtained from the affected communities of Indigenous People and the land is not used for important activities such as religious, cultural, subsistence, and economic livelihood, etc. Further, to avoid the adverse impact on Indigenous People, Projects at the planning phase will undertake social screening to establish there is no presence of ST population in the project area or do not have collective attachment to the project area.
RAP or Livelihood Restoration Plan	Category A and limited Category B projects that entail negotiated settlements and/or government-	The RAP and/or LRP will require the project proponent to assess land-based and/or natural-resource based resettlement and livelihood

	led land acquisition where impacts from involuntary resettlement are unmitigated.	impacts which are current and which pose potential residual risks and/or implications for legacy issues. The RAP and LRP may entail the development of an entitlement matrix to compensation land and projects and/or restore livelihoods over and above the process that may already have been adopted.
Source Vulnerability Assessments for Water	A Source Vulnerability Assessment shall be undertaken for the following projects: • Projects located in a water scarce regions; • Projects with water intensive production processes; • Projects located in an area where the cumulative impacts on the water resources is potentially high;	• The scope of the source vulnerability assessment shall be based on the risks identified; • The SVA should be proportionate to the nature and scale of the risks identified • The scope of the SVA will generally include the following: o Project setting and site description o Project understanding o Understanding of the applicable standards o Water resource requirement in project activities o Source of water for project o A baseline of the micro water shed o Water source quantity and quality assessment o Current and future scenario prediction of the water source o Assessment of potential risks and vulnerabilities associated with source water

APPENDIX E: Pollution Prevention Management

Project construction and operation activities have an inherent potential to generate a range of pollution types that require proper planning from the outset to avoid resulting in impacts to human, ecological or other environmental receptors. These includes accidental emissions to air, water and soil, amongst others. SAEL seeks to proactively manage such potential pollution sources and to this effectively, will undertake the following management program into consideration. The management framework is applicable to all SAEL portfolio operations, staff, contractors and sub-contractors.

These frameworks will be implemented by the contractors during the construction and operation phase, and SAEL to ensure implementation of these frameworks during the processes.

Purpose of the framework

- Outlines actions and measures necessary for the effective prevention of pollution;
- Covers both accidental and intended emissions to air, noise, water and soil;
- Specific control measures to be implemented by SAEL and its contractors (and subcontractors), to achieve this.

Objective

The objective of this pollution prevention framework is to ensure prevention of pollution to land, air or water and compliance with current environmental legislation, and to provide a benchmark for best practice such that all possible preventative measures will be taken to avoid pollution of land or the water environment, air environment, noise environment, etc. during construction works and during the operational phase of the Renewable energy portfolio projects.

Applicable Environmental Standards

Applicable National Standards have been detailed and presents in section 3 of ESMS along with APPENDIX A: applicable national regulatory framework

Responsibility and Requirements

SAEL will be responsible for obtaining all necessary consents, licenses and permissions for its portfolio activities as required by current legislation governing the protection of the environment.

SAEL is required to maintain a detailed Pollution Prevention Plan prior to commencement of works within any area of the site. This plan should be viewed as an evolving document(s), tailored to suit specific activities or work areas, and be continually reviewed at weekly meetings for the duration of the works. The detailed Pollution Prevention Plan will include, as a minimum, specific procedures relating to:

- Raw material and finished goods handling and storage, including the waste storage locations of both periodic and regular secondary storage points and emergency spill response;
- Responsibilities and details for monitoring and training in relation to pollution prevention and mitigation measures;
- Design, management and mitigation measures for noise, air, odor including monitoring at the nearest sensitive receptors; and
- Design, management and mitigation measures for soil, ground and surface water contamination, including monitoring at the nearest sensitive receptors.

The Pollution Prevention Plan along with the mitigation measures will be required to be implemented by the EPC/O&M Contractors. The contractors to ensure documentation of the implementation and reporting to SAEL on regular basis (in the form of monthly/quarterly/half yearly/annual basis).

Management Framework

1.1.7 Air Emission Management Procedures

The following measures but not limited to, will be undertaken at site to prevent, minimize, and control air emissions:

Activity	Mitigation Measures

Biomass, Solar (Rooftop & Ground Mounted) & Module Assembly Units	
Construction phase The likely emissions from construction activities would include the following • Fugitive emissions from site clearing, digging, filling, material handling, transportation, use of construction machinery, etc.; • Fugitive dust emission from unpaved roads; • Dust emissions from batching plant; • Vehicular emission from increased traffic volume from vehicles used for transport of construction material; equipment and accessories; • Emissions from operation of emergency diesel generator.	• Adequate stack height as per CPCB norms shall be provided for DG sets; • Fugitive dust emission arising out of various activities will be mitigated through better handling material handling and provision of enclosure around the facility; • Vehicle and construction machinery movement, preferably during day time only. • Vehicular emission will be controlled through proper maintenance of vehicles and vehicles with proper PUC will be operated at project site; • Fugitive dust emission arising from various activities such as excavation, transportation of material (loading and unloading), vehicular movement (dirt road) will be minimized through sprinkling of water and maintaining vehicular speed to 10-15 km/hr. • Maintain good condition of construction machinery, DG sets; only authorized operators to operate • Erect hoarding around/cover dust generating activities
Operation phase • Flue gas emissions, particulate matter emissions • Emissions from boiler stack • Emissions from Diesel Generator (DG) set stack used during emergencies • Ash blowout during fly ash collection, storage and disposal • Vehicular emissions from vehicles carrying biomass and fly ash within the premises and for transportation or raw material and finished goods from and to the assembly unit • Leakages & shutdowns • Fugitive Emissions while assembly operations from Assembly Unit	• Follow applicable national requirements and internationally recognized standards, and efficient technology for incinerator design and operation machinery; • ESPs / bag filters with efficiency of 99.9% will be installed to collect fly ash from the flue gas of boiler/power plant • D.G. set will meet the standards laid down by CPCB; • Stack of adequate height will be provided; • Install online stack monitoring system with continuous display and alarm for increase in emission levels; • Designing of effective flue gas pollution control system for capture and dosing of particulate matter, acid gases and other air pollutants; • To manage gas generation venting system with flaring arrangement • Regularly check for leakages and damages in the air pollution control system; • Regularly check for the effectiveness of alarm system; • Implement maintenance and other procedures to minimize planned and unplanned shutdowns.

1.1.7.1 General Procedures - Air Emission Management

a) Examples for potential sources of air emissions include:

- Emissions from construction equipment, vehicles;
- Fugitive dust emissions including improper handling and storage of construction material;
- Emissions from onsite operation of diesel generators
- Emissions from process stacks
- Emission from boilers and incinerators
- Emission from air pollution control devices, such as scrubbers etc.

b) Safety Manager shall identify operations and activities which cause air pollution using Environment Risk Assessment Form

c) In case of new construction activities, any requirements for air quality monitoring throughout the construction shall be identified by the Site EHS In charge/Officer in consultation with department heads and incorporate the requirements in the tender so that it can be accounted for at the later stage.

d) All operations that have the potential to create air pollution shall be identified and specific risk assessments shall be completed by Site EHS In charge/Officer. These operations shall be carefully planned and managed to ensure that impacts are kept to a minimum.

e) All equipment and vehicles operational on site shall be chosen and serviced regularly to keep emissions to a minimum.

f) Waste and material storage shall ensure that dust, emissions and odours are restricted to a minimum. Where any monitoring is being carried out, all records shall be retained and reported upon as appropriate.

g) All personnel on site shall be made aware of their responsibilities to ensure that no air pollution incidents occur.

h) In the event that an air pollution incident occurs then the Emergency Control Guidelines listed below of this procedure shall be followed.

1.1.7.2 Procedures for Construction Phase

a) Inventorization of all point and non-point sources of emission shall be undertaken in Air Emissions Inventory Checklist. The inventory of point and non-point sources of emissions shall also list the air pollution control devices (APCD) provided.
b) Company shall strictly comply with the standards/guidelines for the control of emission from stationary Diesel Generator Sets.
c) Adequate dust suppression and control measure shall be provided to control fugitive dust emission from material storage areas, unloading and loading points
d) Company shall take all the possible measures to avoid all kind of fugitive dust emission from transportation of materials. All the trucks shall have a cover mechanism.
e) To control dust, emissions due to construction activities water sprinkling schedule shall be developed by the site supervisor in consultation with Site EHS/Safety Manager.
f) Records for water sprinkling, if undertaken, shall be maintained for review and evaluation.
g) Stockpiles shall be covered with tarpaulin sheets or adequately water sprinkled.
h) Point sources of emissions shall be provided with adequate air pollution control devices (APCDs).
i) The air pollution control devices shall be subjected to adequacy and efficiency evaluations.
j) Where it is suspected that the ambient air quality is below standards notified in National Ambient Air Quality Standards (NAAQS), issued by Central Pollution Control Board (CPCB), Ministry of Environment, Forest and Climate Change, Government of India, EHS/Safety Manager, in consultation with the Management shall assess whether an air quality monitoring shall be carried out to determine the potential harmful contaminant and any remedial action necessary to control those contaminants
k) The monitoring results shall be evaluated and adequate measures shall be undertaken if the monitoring results are observed exceeding the prescribed acceptable limits. The acceptable limits of some pollutants (for reference) are provided in National Ambient Air Quality Standards, Central Pollution Control Board, 2009.
l) Adequacy & Efficiency Checklist of Air Pollution Control Devices shall be utilized to assess the efficacy of installed pollution control devices, if any.

1.1.7.3 Procedures for Operation Phase

a) Company shall strictly comply with the standards/ guidelines for the control of emission from point source of emissions
b) Adequate dust suppression and control measure shall be provided to control fugitive dust emission from material storage areas, unloading and loading points.
c) Company shall take all the possible measures to avoid all kind of emission from transportation. Transportation shall be carried out in covered vehicles.
d) Stockpiles shall be covered with tarpaulin sheets or adequately water sprinkled.
e) Point sources of emissions shall be provided with adequate air pollution control devices.

1.1.7.4 Emergency Control Guidelines (Air Emissions)

a) In a scenario where excessive dust is arising from operations on site, dust damping down techniques shall be used to prevent the production of dust. Where dust is arising from excavations, water shall be applied to the working area. Where dust is arising from stockpiles of materials, water shall be applied to the stockpile or the stockpiles shall be sheeted, whichever is suitable.
b) In case water sprinkling is undertaken, care shall be taken to prevent excessive run-off causing a further pollution incident.
c) Where transport movements are creating excessive dust, road sweeping shall be done periodically to clear all roads where appropriate. If problems persist it may be necessary to install wheel-washing systems.

d) In the event of any excessive odours arising from storage areas including fuel, chemicals and waste, investigations shall be made to find the cause and changes shall be made to storage arrangements.
e) Waste shall be regularly removed from site to prevent odour emissions.
f) Where it is suspected that the ambient air quality is below standards notified in National Ambient Air Quality Standards (NAAQS), issued by Central Pollution Control Board (CPCB), Ministry of Environment, Forest and Climate Change, Government of India, Company's EHS/Safety Manager, in consultation with the Management shall assess whether an air quality monitoring shall be carried out to determine the potential harmful contaminant and any remedial action necessary to control those contaminants.
g) All environmental incidents shall be reported to the EHS/Safety Manager using the Incident/ Near Miss Notification Report

1.1.7.5 Indoor Air Quality (IAQ)

a) Examples of Indoor Environment Contaminants include:

- Physical exposure: Humidity, Inadequate ventilation/ air movement, High temperature, acoustic environment
- Biological exposure: Allergens or microbiological;
- Chemical exposure: Dust, aerosols or vapors; building materials and furnishings including wet or damp carpet, certain pressed wood products; products for household cleaning and maintenance

b) Where it is suspected that the IAQ is poor, essential parameters for IAQ measurement shall be monitored including respirable suspended particulate matter (RSPM – PM10, PM2.5, and PM1.0); volatile organic carbons (VOC) including formaldehyde; Ozone (O3); carbon monoxide (CO).
c) Sampling locations, frequency, number of samples and duration of monitoring shall be assessed by the EHS Manager (Corporate Level) assisted by Site Deputy EHS&S Manager .
d) Sampling and Measuring Procedure/ Instrumentation for IAQ study shall be followed as per the Monitoring Guidelines (Draft) on Indoor Air Quality issued by CPCB.
e) Protocols for the operating set points for Heating, Ventilation and Air Conditioning (HVAC) system and schedules consistent with good IAQ performance and related guidelines issued by Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) shall be developed by EHS Manager (Corporate Level) and Site Deputy EHS&S Manager as per requirement. A third party agency shall be engaged to conduct the related monitoring.

1.1.8 Fly ash Management

Combustion of biomass generates ash and other material remaining after incineration. SAEL will ensure that fly ash will be temporarily collected and stored in the plant premises to be later provided to facilities and factories utilizing fly ash, also the fly ash will also be provided to farmers to be utilized in the farming activities. Also, ensure to quench the ash with treated wastewater to avoid fugitive dust emissions. SAEL will ensure that the disposal of fly ash will be undertaken as per the Fly Ash notification, 2016 and the amendments thereafter; in all the biomass power plants.

Fly ash generation is not anticipated from solar power projects and Module Assembly Unit.

In additions to above, SAEL will ensure to undertake following measures to prevent, minimize, and control measures for incineration:

- Design the incinerators to, as far as possible, physically retain the biomass within the combustion chamber (e.g. narrow grate bar spacing for grates, rotary or static kilns), and use a biomass throughput rate that provides sufficient agitation and residence time of the biomass in the incinerator at sufficiently high temperatures, including any ash burn-out areas, in order to achieve a total organic carbon (TOC) value in the ash residues of below 3 weight percent and typically between 1 and 2 weight percent;
- Manage bottom ash separately from fly ash and other flue gas treatment residues to avoid contamination of the bottom ash for its potential recovery;
- Separate remaining ferrous and non-ferrous metals from bottom ash as far as practicably and economically viable, for their recovery;

- Treat bottom ash on or off-site (e.g., by screening and crushing) to the extent that is required to meet the specifications set for its use or at the receiving treatment or disposal site (e.g., to achieve a leaching level for metals and salts that is in compliance with the local environmental conditions at the place of use);
- Bottom ash and residuals should be managed based on their classification as hazardous or non-hazardous materials. Ash may be considered for recycling in construction materials or sent to facilities using fly ash.

1.1.9 Water Management Procedures

Following measures will be undertaken to prevent, minimize, and control water pollution:

Activity	Mitigation measures
• The liquid effluents generated during the construction phase will include domestic sewage from labour camp operations • Surface runoff, accidental spillage from storage area or improper disposal of wastes; • Runoff into rain water channels	• As part of the site preparation stage, a drainage and sewerage system will be constructed for the camp. The sewerage system will consist of soak pits for the collection of waste water from the camp kitchen and washing areas. Sewage from the toilets will go into lined septic tanks. Sewage disposal trucks will be used to periodically remove the sludge/sewage from the site. • Planning of toilets, soak pits and septic tanks, waste collection areas will be away from natural drainage channels; • Provision for impervious storage area, especially for fuel & lubricant, hazardous waste, etc. will be made onsite; • Adequate arrangements for storm water management during construction period to be made to avoid sediment runoff from the site and to avoid water logging. Storm water flow would be directed to the existing channels (if present) with silt traps to avoid sedimentation of the channels or the receiving water body; • Labourers should be given training towards proactive use of designated areas/bins for waste disposal and encouraged for use of toilets. Open defecation and random disposal of sewage should be strictly restricted; and • Spill/ leakage clearance plan to be adopted for immediate cleaning of spills and leakages.
Operation Phase • Accidental spillage from storage area and improper disposal of waste water • Runoff into rain water channels • Operation phase will involve generation of domestic sewage, wastewater from cooling towers and industrial effluent	• The drainage and sewerage system to be provided for the collection and treatment of wastewater at the SCADA building and substation areas • Drain and soak pit to be cleaned and kept unclogged • SAEL will maintain zero water discharge policy and ensure installation of proper water treatment systems to treat wastewater. • The treated wastewater will be used for ash quenching (for biomass power plant), dust control and gardening purposes. • Water consumption, use in cooling systems, washing and clearing purposes will be strictly regulated to ensure maximum utilization and zero wastage.

1.1.9.1 General Procedures –Water and Waste water management

a) Site Deputy EHS&S Manager shall identify operations and activities which cause water pollution using Environment Risk Assessment. All watercourses on or adjacent to the site shall be identified and recorded and maintained with Site Deputy EHS&S Manager.
b) The need for consents/licenses/permits to discharge waste water into watercourses, surface water drainage or foul drainage must be identified by the Site Deputy EHS&S Manager .
c) Suitable storage areas shall be prepared to ensure that surface and ground water quality is not put at risk from inadequate material and chemical storage.
d) The need for, nature and position of concrete wash out points shall be identified.
e) Any activity taking place in, above or near watercourses / natural or manmade nallah/ peripheral drains, shall be carefully monitored to ensure that no pollution incidents occur.
f) Where any monitoring is being carried out all records shall be retained and reported on as appropriate.

g) All personnel on site shall be made aware of their responsibilities to ensure that no water pollution incidents occur and shall be trained in appropriate methods of containment relevant to their work activity.
h) In the event that a water pollution incident occurs then the Emergency Control Guidelines below shall be followed.

1.1.9.2 Procedures for Construction Phase

a) EHS/Safety Manager shall ensure that the civil contractor's site supervisor develops a water balance for construction phase mentioning water requirement and its sources along with waste water generation and disposal mechanism as per Water and Waste Water Inventory
b) Company shall use water efficiently at construction and operation phase to reduce the amount of wastewater generation.
c) Company shall not discharge any waste water into any other natural stream and surrounding land.
d) Company shall have in place separate systems for collection and conveyance various waste water streams generated including domestic sewage water, storm water and industrial waste water (from shop floor washing etc.) shall be collected separate in their drainage network system and not be mixed.
e) Water shall be recycled and reused to the maximum possible extent to reduce the quantity of wastewater generated and fresh water being used.
f) Water meter shall be provided at the inlet and outlet of various waste water streams. Records of water meter readings shall be maintained.
g) Adequate arrangement for treatment and disposal of waste water shall be carried out. Domestic sewage shall be treated through septic tank and a soak pit arrangement or conveyed to a Sewage Treatment Plant.

1.1.9.3 Procedures for Operation Phase

a) All waste water and storm water streams are isolated, mapped and provided with adequate discharge points.
b) The water balance of the entire system shall be developed along with the associated inventory.
c) All waste water streams shall be provided adequate treatment system.
d) Adequacy and efficiency reports for the water and waste water treatment system shall be developed.
e) The treated water shall be provided a discharge point in consultation with State Pollution Control Board/Committee.
f) Company shall install water meters for the purpose of measuring and recording the quantity of water consumed. These records shall be maintained for verification from time to time.
g) All the conditions mentioned in the Consent to Operate, obtained under Water (Prevention and Control of Pollution) Act, 1974 shall be complied with at all times.
h) Suitable pollution control equipment shall be installed for the pollutants in the wastewater.
i) An inspection and maintenance schedule for pollution control equipment for water.
j) Sampling must be conducted on a quarterly basis and include sampling locations, sampling method.

1.1.9.4 Emergency Control Guidelines (Water usage and Wastewater Management)

a) All spillages, including fuel, oils, chemicals and silty run-off, must be reported.
b) The source of pollution must be identified and the flow should be stopped or diverted using earth, sand or polythene or materials supplied in spill kits and diverted away from drainage and watercourses.
c) Where appropriate any adjacent sources of ignition must be switched off.
d) First Aid must be carried out using absorbent materials, pads or sand.
e) Spillages must not be washed into drainage systems or watercourses and detergents must not be used. It is NOT acceptable to put biodegradable detergents into watercourses.
f) The incident is to be investigated with the Safety Committee.
g) Working practices may need to be changed in accordance with the findings of the investigation.
h) Details of the investigation and any changes to working practices will be reported.
i) In the event that a serious environmental incident occurs a report must be sent to the EHS/Safety Manager using Incident Notification Report.

1.1.10 Noise & Vibration Management Procedures

SAEL will ensure to restrict noise level within the permissible limit, as per the statutory requirements. Day time will be considered from 6.00am to 10.00pm & Night time shall mean from 10.00pm to 6.00am

To confirm this, following measures will be undertaken:

- The noise emitted from the equipment will be limited to a spatially averaged value of 90 dB (A) at 1 m (near field) distance from the machine or enclosure and 63 dB (A) at 122 m (far field) from the machine or enclosure for the base option. Standard options should be available which would reduce these values to either 85 dB (A) (near field) and 63 dB (A) (far field).
- Noise emission generated from DG sets to be used for emergency power supply will be minimized through provision of acoustic enclosures and other noise generating activities will be restricted to day time only.
- Most of the noise generating activities and operation will be restricted to daytime only, if possible.
- Principal sources include exhaust fans and resulting in noise from the outlet of the stack; cooling system (for evaporation cooling and especially for air cooling); and turbine generators. Therefore, efficient and less noise generating machinery will be used for such purposes and regular maintenance and upkeep of the machinery will be done to ensure smooth operations.
- The noise emitted under abnormal or emergency conditions would only occur occasionally and be very infrequent. Noise under these intermittent / emergency condition may reach a level of 115 dB (A) at the point of occurrence but would fall of rapidly to acceptable limits at short distances. Also, it has to be ensured that such vents and valves will be located at a safe distance from normal work area of the plant.
- The areas inside the plant where the noise level is expected to be high would be designated as restricted areas. Permanent warning signs to indicate the mandatory use of ear protectors will be erected at the boundaries of restricted areas.
- In terms of vibration, the steam turbine generator is to be protected by vibration monitoring devices, which will shut down the unit if the vibration reaches the pre-set trip limits. The steam turbine is to be mounted on concrete footings that dampens the vibration.
- All efforts should be taken at the design stage to minimize emission of high sound levels from the equipment as per Occupational Safety and Health Administration (OSHA) standard norms.
- Personal protective equipment for people working in high noise areas.
- Providing silencers for equipment.
- All equipment in the power plant would be designed/operated to have a noise level not exceeding 85 as per the requirement of OSHA standard.

1.1.10.1 General Procedures

a) All buildings and service areas within the premises, which have a potential to be affected by noise and vibration shall be identified using Check List of Noise Survey and an inventory of such areas shall be maintained.
b) Noise emissions shall be regularly monitored and recorded as appropriate.
c) Where necessary, vibration caused due to any machinery, equipment installed within premises shall be monitored to ensure that no damage is being caused to adjacent buildings and services.
d) Where any monitoring is being carried out, all records will be retained and reported as appropriate.
e) All personnel on site will be made aware of their responsibilities to ensure noise is managed correctly.
f) In the event that noise and vibration emissions exceed the requirements then the Emergency Control Guidelines below must be followed.

1.1.10.2 Procedures for Construction Phase

a) Company shall comply with the standards/guidelines for control of noise from stationary Diesel Generator sets. These standards and guidelines are prescribed under notification of Ministry of Environment & Forest, Govt. of India. G.S.R 371 (E).
b) Company shall provide noise control measures such as acoustic hoods, silencers, enclosures etc. on the sources of noise generation.
c) Heavy construction activity shall be done during the day time.

d) Working hour for worker working in high noise area shall be rotated. Hearing protection such as earplugs/muffs will be provided to those working very close to the noise generating machinery.

1.1.10.3 Procedures for Operation Phase

a) Inventory of high noise areas should be maintained by conducting noise survey using Check List of Noise Survey. Survey shall be undertaken by third party or in-house using competent personnel/ experts. In case of in-house survey, noise meters used shall be calibrated.
b) Noise survey shall be exposure based i.e. 8 hour weighted average.
c) Employees or workers engaged through the contractors shall not be exposed to a noise level greater than 85 dB for duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB.
d) The use of hearing protection shall be enforced actively when the equivalent sound level over 8 hours reaches 85 dB, the peak sound levels reach 140 dB, or the average maximum sound level reaches 110 dB. Hearing protective devices such as Earplugs/Muffs provided shall be capable of reducing sound levels at the ear to at least 85 dB
e) Although hearing protection is preferred for any period of noise exposure in excess of 85 dB, an equivalent level of protection can be obtained, but less easily managed, by limiting the duration of noise exposure. For every 3 dB increase in sound levels, the 'allowed' exposure period or duration should be reduced by 50 percent.
f) Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible.
g) Periodic half yearly medical hearing checks i.e. audiometric test shall be conducted by a certified doctor on workers exposed to high noise level.
h) Company shall conduct regular ambient air monitoring with respect to noise and shall ensure that the noise level in the industrial area is regulated within the following specified limits: 75 dB during the day time (06:00-22:00); and 70 dB during night time.
i) Noise limits for different working environments are provided in table below

Table 2 Noise limit for Various Working Environment

(General EHS Guidelines: Occupational Health and Safety, International Finance Corporation)

Noise Limits for Working Environment

General EHS Guidelines: Occupational Health and Safety, International Finance Corporation

Location/Activity	Equivalent Level LAeq, 8h	Maximum, LA max, Fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	-
Individual offices (no disturbing noise)	40-45 dB(A)	-
Classrooms, lecture halls	35-40 dB(A)	-
Hospitals	30-35 dB(A)	40 dB(A)

Ambient Air Quality Standards in respect of Noise

(The Noise Pollution (Regulation and Control) Rules, 2000)

Category of Area/Zone	Limit in dB(A) Leq	
	Day Time	Night Time
Industrial Area	75	70

Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

1.1.10.4 Emergency Control Guidelines (Noise and Vibration Management)

a) In the event of noise and vibration limits exceed, the works shall be stopped.
b) Where appropriate erect noise barriers.
c) Where appropriate, stockpile material is to be positioned to absorb emissions.
d) If these steps are unsuccessful in reducing emissions to an acceptable level then working practices and arrangements shall be changed accordingly.
e) Monitoring shall take place throughout the operation to ensure compliance.
f) In the event that a serious environmental incident occurs a report must be sent to the Safety Head using Incident Notification Report

1.1.11 Waste Management

Solid waste and hazardous waste will be generated due to plant construction and operation activities. The solid waste generated by the project will consist of labour camp waste, garbage waste, metal scrap, and excess construction materials. The main types of waste that will be generated during construction, operation phase are mentioned below.

S. No.	Waste Type	Source	Method of Disposal
Non-hazardous waste			
1	Domestic solid waste	Labour activities	Waste will be segregated onsite and will be disposed of at site as approved by local authority.
2	Construction Debris (excavated earth)	Construction of plant, access road, etc.	Excavated materials to be used for backfilling and levelling and other debris shall be used for road construction.
3	Sludge from Wastewater Septic Tanks	Labour Camp	Collected and disposed off through contractors
4	All non- recyclables	Construction activities and Labour camps	Collected and disposed off by the contractor at designated landfill sites.
E-waste			
5	Discarded or Broken Solar Panels from solar plants and module assembly	Solar Power Plant	Buyback arrangement or SPCB authorized recycler for disposal of broken PV module
Hazardous waste			
6	Used oil/ waste oil	DG set, construction machinery	Collected and disposed off through approved recyclers in accordance to The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
7	Oil contaminated rags	Cleaning activities	

1.1.11.1 General Procedures – Solid Waste Management

a) Identify operations and activities which cause pollution using Environment Risk Assessment Form
b) Inventorization of waste generated from Company's operations

- Site Site Deputy EHS&S Manager shall identify the activities that generate solid waste from all locations within premises. A solid waste inventory form, attached as Solid Waste Inventory shall be maintained onsite;
- The inventory must include types of waste, quantities generated, recycling options and rates.
- The same checklist shall be circulated to the respective contractors to inventories the solid waste generated in weekly basis;
- Record of all Solid Waste and Solid Waste Disposal on construction site shall be maintained.

c) Waste Storage and Handling, Management and Disposal

- No solid waste generated within the premises shall be littered on the street, open spaces drain or water bodies.
- A source-segregated waste storage system is recommended to be adopted inside the Company premises. The biodegradable waste shall not be mixed with any other type of wastes such as domestic hazardous wastes or construction and demolition waste.
- Different streams of solid wastes generated (as mentioned above) shall be collected through housekeeping personnel in a segregated fashion from all the areas.
- The bigger waste skips/ containers shall be color-coded - Green Bin (for storing biodegradable waste), Blue Bin (dry recyclables), Black Bin (institutional hazardous waste) and White skips (Construction and demolition wastes).
- The bins shall have rain protection lids / flaps and shall have 'easy to operate' design for handling, transfer of waste and handling during evacuation of waste should be user friendly and not cumbersome;
- Identify location of the waste skips/ containers within the premises.
- The waste trucks of the hired waste collection agencies shall visit these locations for waste pick up and transportation to the waste processing / disposal facility.
- The frequency of waste collection by these trucks shall be defined by phase of construction and waste quantity generated. Site Deputy EHS&S Manager shall decide the frequency of collection in consultation with corporate E&S team.
- The concept of 3 Rs- Reduce, Recycle and Reuse shall be adopted to manage the non- hazardous solid waste generated within the premises.
- Burning of waste material shall not be allowed.
- Quality housekeeping should be maintained by regular inspection and checking.
- Initiatives must be taken to reuse and recycle of waste materials.
- Training on solid waste management procedures shall be part of the induction training for workers/ employees.
- Waste collection agencies/ recycling agencies, authorized by State pollution control Board shall be hired for their services for collection of Waste in segregated fashion.
- Site Deputy EHS&S Manager shall ensure that solid waste generated is disposed of in compliance with relevant regulations.

1.1.11.2 Construction and Demolition (C&D) Waste Management

a) The construction waste largely comprises of earth, stones, concrete, bricks, lumber, roofing materials, plumbing materials, electrical wires etc. The components of construction waste include – major components - cement concrete, bricks, cement plaster, rubble, steel (from RCC, door/window frames, roofing support, railings of staircase etc.), stone (marble, granite, sand stone); and minor components - conduits (iron, plastic), pipes (GI, iron, plastic), electrical fixtures (copper/ aluminum wiring, Bakelite/ plastic switches, wire insulation), panels (wooden, laminated), others (glazed tiles, glass panes).

b) The civil contractor responsible for the construction activities shall be responsible for sound handling and management of the C&D and municipal waste at the construction site including handling, storage, collection, re-use and clearing of the wasted construction material. The non-utilizable and utilizable C&D waste generated at site will be stored in a segregated manner at the construction site.

c) Dumping of C&D waste in non-designated sites shall be strictly prohibited.

d) All construction/demolition waste will be stored within the site itself. Metal mesh screen or GI screens will be provided so that the waste does not get scattered.

e) C&D waste shall be stored separately and not allowed to get mixed with other waste (e.g., municipal / biomedical / e-waste / hazardous etc.).

f) Scrap metals shall be stored separately and shall be hauled to scrap metal dealers.

- Scrap metal from construction, renovation, or maintenance work shall be deposited separately. Oils shall be purged prior to disposal of metals into this container.
- The scrap metal skip should be covered when not in active use.

g) The civil contractor / contractor shall adopt the concept of 3 Rs – Reduce, Reuse, Recycle. The contractor will formulate and submit a C&D waste management plan as a part of its technical proposal at the bidding stage.

h) C&D waste shall be stored at the construction site in either skips or suitable containers and shall be directly transported to a suitable disposal facility by engaging services of an authorized collection agency.
i) The civil contractors to ensure that appropriate numbers of skip containers or trolleys are provided on construction site, which can be removed with skip lifters as the case may be.
j) The storage bins/ designated area shall be in accordance with the quantum and nature of the C&D waste.
k) Rain protection (shed and at the floor) to be provided for the storage of construction materials.
l) Clearly label the containers, preferably with waterproof signage, detailing which material can be disposed of in each one.
m) Efforts shall be made to reduce the rate of waste generation by adopting efficient construction techniques and limiting waste generating activities. The measures for controlling construction waste may include limiting site clearance activities, planned stocking and gathering of construction materials and equipment, fencing around the construction yard, maintaining existing right of way to carry construction materials, adopting proper sanitation system for employees, banning of waste burning, and quality housekeeping.
n) Stock piles of construction materials shall be covered in order to protect them from wind and weathering action.
o) A designated place shall be identified and well-labelled for waste stocking with appropriate impermeable linings.
p) For controlling runoff from construction yard and liquid waste, appropriate measures such as provision of a garland drain will be made.
q) In case of road construction within the premises, empty containers of paint, prime coat, tack coat (considered as hazardous waste) shall be stored at a designated place / or a skip and sent to an authorized hazardous waste handler. All the records of the sale of items to authorized hazardous waste vendors will be preserved 7 years after completion and final payment of the contract.
r) Site Deputy EHS&S Manager of the site will ensure that solid waste generated is disposed of in compliance with relevant regulations.
s) Company shall pay relevant charges for collection, transportation, processing and disposal of C&D waste generated by them, as notified by the concerned authorities. Payment shall be as per the provisions made under the Construction and Demolition Waste Management Rules, 2016 and is dependent on the quantum of C&D waste generated. [if Company generates more than 20 tons or more in one day or 300 tons in a month, then payment for waste processing and disposal shall also be made along with charges for storage and collection]

1.1.11.3 Biodegradable waste including Horticultural waste (Green Waste)

a) All the biodegradable waste shall be stored separately at their source of generation and not be mixed with any other types of waste such as hazardous waste, C&D waste, dry recyclables.
b) The biodegradable waste shall be collected from all the points of generation by the housekeeping staff and brought to Green colored, high capacity waste containers, located at designated locations within the premises.
c) Identify location of the waste skips/ containers within the premises.
d) The waste trucks of the hired waste collection agencies shall visit these locations for waste pick up and transportation to the waste processing using a biological waste processing technology such as composting, bio methanation etc.
e) The green waste shall be collected daily. Site Deputy EHS&S Manager shall decide the frequency of collection per day, depending upon the quantity of waste generated.
f) Site Deputy EHS&S Manager of the site will ensure that solid waste generated is disposed of in compliance with relevant regulations.

1.1.11.4 Dry Trash (Recyclables) Management

a) All the dry recyclable items such as paper, plastic sheets, plastic cups, plastic cans, PET bottles, metal scrap, cardboard box etc. shall be collected and stored separately and not be mixed with any other types of waste such as biodegradable waste, hazardous waste, C&D waste. Such waste shall be sold to recyclers/ scrap dealers.
b) Glass waste including empty glass bottles, broken glass, window panes shall be stored separately in a container/ skip and sold off.

c) The dry trash items waste shall be collected from all the points of generation, by the housekeeping staff and brought to Blue colored, high capacity waste containers, located at designated locations within the premises.
d) Site Deputy EHS&S Manager in consultation with the project team shall identify location of the waste skips/ containers within the premises.
e) The waste trucks of the hired waste collection agencies shall visit these locations for waste pick up and transportation to recycling facility or resale/ scrap market.
f) Pick up frequency of such wastes by the collection trucks shall be on weekly basis, however, it will be dependent upon the quantity of waste. Site Deputy EHS&S Manager shall decide the frequency of waste collection.

1.1.11.5 Electronic Waste Management

a) Company shall ensure that e-waste generated by them is channelized through collection center or dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to authorized dismantler or recycler.

Broken/Discarded Solar Modules (Storage and disposal)

b) SAEL to ensure usage of appropriate equipment such as for collection of broken PV module
c) Broken solar module will be stored separately at secured storage area.
d) SAEL will ensure that no damage is caused to the environment during storage and transportation
e) SAEL will sign an agreement with the PV module supplier for the buyback arrangement or with the SPCB authorized recycler for disposal of broken PV module.
f) Broken solar panels, will be sent back to the vendor as part of buyback arrangement or will be disposed through SPCB authorized recycler.
g) SAEL will maintain record of collection, sale, transfer and storage of wastes and make these records available for inspection to government agencies

1.1.11.6 Sewage Disposal

a) Appropriate number of toilets, separate for male and female employees and workers shall be provided in office area and shop floor and shall be maintained in hygienic conditions. The toilets shall be connected to sewerage system for its ultimate treatment in Sewage Treatment Plant for suitable capacity

1.1.11.7 Procedure for Hazardous Waste Management

Legal Compliances:

a) Company to identify all the hazardous waste generated during construction and operation phase as per the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 (HMR 2016).
b) Company shall make an application in Form 1 to the State Pollution Control Board (SPCB) and obtain an authorization for managing hazardous and other wastes. SPCB, upon being satisfied, will grant an authorization in **Form 2** which shall be valid for Five Years.
c) Company shall be responsible for safe and environmentally sound management of hazardous and other wastes by sending or selling the waste to authorized actual user or by disposing it in an authorized disposal facility.

Storage of Wastes:

a) As per Rule 8 of the HMR 2016, hazardous wastes cannot be stored on-site for a period exceeding 90 days. In case of storage of hazardous wastes on-site for a period in exceedance of that specified by the SPCB, management is required to intimate the same to the SPCB and obtain written permission to do so.
b) A hazardous waste inventory form, attached as Hazardous Waste Management Inventory shall be maintained onsite by Site Deputy EHS&S Manager ;
c) Company shall ensure that potential hazardous solid and liquid wastes (such as used/ waste oils, etc.) are not disposed off in dumpsters designated for general domestic trash.

d) Company shall ensure provision of secured storage (with adequate secondary containment) for all hazardous wastes generated on site.
e) All containers containing liquid hazardous material (such as used oil, used transformer oil) should be kept in bunded storage or on bund trays.
f) The designated hazardous waste storage area shall have proper enclosures with conspicuous signage, including safety requirements such as fire extinguishers, appropriate PPE and spill management kit (s).
g) In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and groundwater, the facility shall ensure that the storage area is provided with impervious flooring.
h) Oil soaked rags, used filters, used Personal Protective Equipment (PPE) (such as gloves, masks, etc.), empty chemical containers and liners are considered as hazardous and need to be disposed off as hazardous waste to SPCB authorized waste vendors.
i) The hazardous waste containers shall be provided with a label in the prescribed format under the HMR 2016. The labelling shall be done as per Form 8 of HMR 2016.
j) Company shall maintain a record of hazardous and other wastes managed by them in Form 3 and prepare and submit to the SPCB, an annual return containing the details specified in Form 4 on or before the 30th day of June following the financial year to which that return relates.
k) In case of spills / leaks, the facility shall ensure usage of spill management kit for cleaning instead of water. All areas where there is a likelihood of spillages to occur should be provided with a drain outlet that outfalls into a sump. The sump should be constructed of impervious material and its integrity tested periodically. The sump should be cleaned on a regular basis. Contents of the sump are to be treated as hazardous wastes and should be disposed off to SPCB authorized waste vendors only.

Authorized Access

a) The facility shall ensure usage of adequate locks; control the issue of keys; and provision of fencing where appropriate.
b) The hazardous waste storage area should be fenced properly and sign of "Danger" should be placed at the storage site.
c) Signboards showing "Restricted Entry", "Hazardous Waste Storage Area" and the "Category of Wastes stored-", shall be displayed outside the earmarked area for storage of hazardous waste. "No Smoking" signs should also be placed conspicuously wherever any ignitable or reactive waste is stored.

Disposal of Waste

a) The facility shall ensure disposal of the hazardous waste to a SPCB authorized vendor/ facility only.
b) The facility shall ensure issuance of gate pass (challan) for all the hazardous wastes entering/leaving the site
c) The facility shall ensure that the hazardous waste authorization of the vendor is checked and copies of the vendor operating permits and authorizations are maintained.
d) Before transportation of hazardous wastes, the facility shall provide the transporter with relevant information in Form 10 (Waste Manifest) and Form 11 regarding the hazardous nature of the wastes and steps to be taken in case of emergency.
e) Used/ Waste lead acid batteries (for e.g. lead-acid batteries associated with diesel generators) are to be handed over to a SPCB registered recycler as per the Batteries (Management & Handling) Amendment Rules, 2010 or to the supplier on a buy-back basis.

NOTE:

a) An occupier shall not be required obtain an authorization under this rule, from the State Pollution Control Board, in case the consent to establish or consent to operate, is not required from the State Pollution Control Board or Pollution Control Committee under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981) – Notification from MoEFCC dated 1st March 2019.
b) Import and export of hazardous waste is not permitted for dumping and disposal.
c) Import and export of hazardous waste is permitted as raw materials for recycling and reuse, subject to the compliance of procedure prescribed involving the grant permission from MoEFCC for such import and export hazardous waste.

1.1.12 Pesticide Use and Management

SAEL will enter into agreement with an authorized pest control agency. All the pesticides approved in accordance with The Insecticides Act, 1968 and Insecticides Rules, 1971 will be used. SAEL will ensure that chemical pesticides that are low in human toxicity, known to be effective against the target species, and that have minimal effects on non-target species and the environment are used. Products that fall in WHO Recommended Classification of Pesticides by Hazard Class Ia (extremely hazardous); or Ib (highly hazardous) will not be used.

SAEL will ensure that pesticides should not be accessible to personnel without proper training, equipment, and facilities to handle, store, apply, and dispose of these products properly.

Monitoring

- The ESMS Officer will regularly inspect SAEL's contractors work to ensure compliance with the Pollution Prevention Plan;
- Plant level Project Manager will perform regular checks of plant and equipment to identify any exhaust gas leakages/ odour leakages to confirm the condition of the plant;
- Regular checks for visual evidence of pollution, contamination, hygiene and safety will also be made in the plant premises and working areas;
- On site meetings/Inspections will be carried out as necessary to confirm the appropriate use of mitigation measures identified within the SAEL's environmental plans relating to pollution control. These meetings/Inspections will highlight any further issues/measures which may be relevant either prior to commencement or during the works;
- Records will be kept of all inspections / findings for review for discussion during regular meetings; and
- The ESMS Officer will maintain a Pollution Prevention Measures Register (PPMR) in which all mitigation measures put into place will be listed and will be audited monthly to assess the requirement for maintenance.

Records

Following records but not limited to the following shall be maintained by SAEL at its plants:

- Environmental and Social Aspects and Impacts Checklist
- Environmental and Social Risk Assessment

Air Emission Management

- Air Emissions Inventory Checklist
- Adequacy and Efficiency Checklist of Air Pollution Control Devices
- National Ambient Air Quality Standards, Central Pollution Control Board, 2009
- Ambient Air monitoring reports

Water & Waste Water Management

- Water and Waste Water Inventory
- Waste water generated and treated;
- Reports on Pollution control equipment installed;
- Water monitoring reports

Noise & Vibration Management

- Checklist of Noise Survey
- Reports on Pollution control equipment installed;
- Indoor & Ambient Noise monitoring reports
- Soil Monitoring Reports

Waste Management

- Solid Waste Inventory
- Hazardous Waste Management Inventory
- List of Ozone Depleting Substances
- Refrigerant Usage Form
- Fly Ash Management & Quantification
- Ash generation and its disposal;
- Waste register for recording the generation and disposal of various categories of waste produced at sites;
- Hazardous waste manifests copies; and
- Environmental Statements reports.

The records will be kept for all initial, final and routine monitoring / inspections of construction areas, as well as ecological and environmental issues. These records will be stored in an agreed location within the plant and be available for internal and external monitoring as required; and

Record sheets will detail the date, location of inspection, frequency, findings, appropriate person/s notified and identified actions, as required.

Training

- All employees, subcontractors, suppliers and visitors to the site will be notified via induction of the requirements on site for pollution prevention;
- Through tool box talks, site personnel and subcontractors will be educated on those aspects of environmental management as appropriate to the task assigned to them;
- Consultation meetings will include discussion on the works to be undertaken, review of other plans and agreement on required mitigation and pollution prevention measures. Measures agreed at such consultation meetings will be disseminated to the relevant employees, subcontractors, suppliers and other appropriate persons via tool box talks and formal communications (email / memo), particularly where required for record purposes (e.g. variations, auditing and monitoring records);
- SAEL will ultimately be responsible for overseeing and enforcing pollution prevention procedures such that potential adverse impacts to human health or the environment from any activities involving handling of potential pollutants are avoided or mitigated. For the avoidance of doubt, pollution prevention procedures include, but are not necessarily limited to all aspects of traffic, plant and materials management, air emission management, noise level management, surface water and drainage management.

Applicable Standards

Have been detailed in Applicable Standards section of Appendix G: Environmental Monitoring of the ESMS.

APPENDIX F: Resource Efficiency Management Program

Objective

SAEL business operations shall always be cognizant of its resource consumption, resource conservation and their efficient management. This framework has been developed by SAEL with the following objectives-

- To promote sustainable use of resources (water, materials, energy).
- To improve power generation efficiency; and

Responsibility

This guideline is to be used by Plant Head in consultation with the department heads to identify:

- Opportunities for maximizing power generation;
- Measures to reduce emissions and waste derivatives; and
- Set targets for resource consumption (targets can be set in coordination with Head of department and corporate E&S team).

Records

- Each resource used shall be mapped and recorded for its consumption by concerned contractors and all consumption records shall be submitted to Plant Head and ESMS Manager for further analysis on identification of new opportunities, its effectiveness and efficiency as per identified targets;
- All identified resource conservation opportunities shall be documented and a resource conservation plan shall be initiated for the opportunities giving significant reductions;
- Resources consumption analysis result shall be kept as record for continuous improvement in resource efficiency;
- Each plant shall complete the Self-Assessment Checklist *(refer Table 4)* and provide records to Corporate Environment Specialist; and
- SAEL Corporate Project Manager shall periodically track the progress of resource efficiency improvements at project level.

Table 3 below presents the typical causes of high resource consumption/wastage and can be used for analysis and put forward conservation measures.

Table 3 Causes of High Resource Consumption

S. No.	Typical causes of high resource consumption/losses	Examples
1.	Technology	• Continuation of non-efficient technology • Lack of proper process and control equipment; • Lack of availability of trained manpower; and • Lack of information.
2.	Poor process / equipment design	• Mismatched capacity of equipment; • Wrong material selection; • Maintenance prone design; • Adoption of avoidable process steps; and • Lack of information / design capability.
3.	Poor layout	• Unplanned / adhoc expansion; • Poor space utilization plan; and • Improper waste and material movement plan.
4.	Poor raw material quality	• Use of moist biomass; • Lack of quantity specification; • Improper purchase management system; and • Improper storage of biomass • Inadequate or poor quality raw material for module assembly
5.	Operational and maintenance negligence	• Sub optimal loading; • Unchecked water / air consumption;

		• Unnecessary running of equipment; • Lack of preventive maintenance, inadequate maintenance; and • Ash blow out.
6.	Poor housekeeping	• Dropping/ wetting of materials; • Spillages of materials/ash/chemicals/others; • Leaking taps / valves / flanges; and • Worn out equipment/and its accessories.
7.	Inadequately trained personnel	• Increased dependence on casual / contract labour; • Lack of formalized training system and facilities; and • Lack of availability of personnel.

Table 4 below gives the self-assessment checklist that can be used by each project to assess their performance on resource efficiency.

Table 4 Self-Assessment Checklist- Resource Conservation Checklist

S. No.	Question	Yes/ No	Additional Information
General questions			
1.	Are the implications of local/national legislations for the business/ sector reviewed, and clearly communicated to the relevant departments/ personnel?		
2.	Have all the regulatory requirements applicable for purchase of material (includes lime, activated carbon, other chemicals) water/energy/ been identified and reviewed?		
3.	Is the technology used for power generation is efficient in terms of units generated per ton of biomass? Does the technology allows for low emission of flue?		
4.	Have the personnel dealing with biomass purchase trained and equipped to understand the quality and quantity of biomass collected? Has the vendors been informed on the composition and calorific values of biomass desired?		
5.	Have the energy reduction in pollution control explored and deliberated to the staff?		
6.	Are the organizational goals and objectives for improving efficiency/resource conservation (water/energy)/ exploration of carbon credit by project operation, clearly defined by the senior management? For example, • Improvement in power generation efficiency by xx%, • Reduction in water requirement by xx%; • Reduction in processing energy by xx% • Identification of energy conservation opportunities; • Identification of carbon credit to be earned - quantity of GHG emissions saved		
7.	Are the resource conservation programs initiated within the organization?		
8.	Has the staff training need on water and energy conservation been identified and provided?		
Materials			
1.	For new projects - Have you assessed the new projects or major expansions for following: • Quantity and composition of raw material available and required • Type of power generation technology to be used • Need of resources (water, material, energy) • Efficiency of use of resources, during the design phase (including project design and site selection alternatives)		
2.	Records of raw material received and its composition are maintained and kept up to date?		
3.	Are periodic spot checks conducted to verify the quantity and condition of material stored, on the stock records?		
4.	Are storage methods best suited to the characteristics of the storage areas? (For e.g., Lime is stored in dehydrated conditions)		
5.	Are adequate and proper steps taken to care and preserve storage items, so that losses are minimized?		

Water

1. Is the water consumption being monitored on continuous basis, are the water meters installed at site and are they calibrated?
2. Are you frequently monitoring the water systems for any leakages and losses?
3. Is the water recycling system efficient and working properly?
4. Have you conducted the water balance study? Or any comprehensive water audits for the plant operations?

Energy

1. Has any detailed third party comprehensive energy audit for all electricity consuming processes of pollution control equipment/ building been conducted in the past?
2. Have you identified the type of data that will be essential for the energy mapping exercise and to study the energy consumption patterns?
   For example is the following data/information available?
   - Details of energy consumption, energy demand breakdown (process/equipment wise).
   - Is the master list of energy using plant and equipment available?
   - Are the electricity bills and invoices for representative period (one/two years) available?
   - Is the past/historical representative data/information on all energy streams available?
3. Are any walk-through energy audit/similar exercise to identify energy losses conducted in past?
4. Is preliminary energy usage analysis being carried? For example

Energy Type	Total Annual Use	Units	Total annual cost
Fuel consumption --Lubrication Oil/Diesel -Vehicular fuel			
Electricity			
-Electricity (for pollution control equipment running)			

5. Is there an energy management team in place? And do they have relevant experience on energy management? Have they received any formal training in energy management?
6. Is the focus area for energy management clearly identified?
   For example
   - Raw material processing;
   - Plant operation;
   - Pollution control;
   - Motors and Equipment;
   - Lighting;

   Process energy consumption for e.g.- Running of Electrostatic Precipitator (ESP)/ ID (induced draft) fan/ Deaerator/ Effluent Treatment Plant (ETP)
7. Have the significant energy usage points in the process been identified?
8. Is the identification of significant energy users and their consumption as a percentage of total energy consumption available? And is this documented?
9. Is the monitoring & tracking system established for energy?
   For example – deployment of meters at critical locations.
10. Implement a routine lighting maintenance schedule, including cleaning fixtures to reduce degradation of lighting quality

Carbon Saving

1. Is your business currently compiling the information on GHG emissions saved from using the Biomass in power plants instead of biomass burning?
   For example

	• The volume of GHG emissions saved by utilizing biomass to generate electricity been calculated for a representative period of one/two years.
2.	Do you have any team which is responsible for dealing with carbon performance? Do they have an understanding of • GHG emission calculations; and • Quantification methodology.
3.	Has other areas for reducing GHG emissions identified? For example • Reduction in process/direct emissions; and • Reduction in vehicular/indirect type of emissions.

Performance Management

Performance of the Project can be measured by undertaking following:

- Monitoring the resource consumption e.g. energy in case of major utility system such as steam boilers, air compressors etc.;
- Conduct energy audits, water balance study, water audit etc.;
- Monitor greenhouse gases including its quantification as applicable;
- Resources consumption and resource efficiency analysis result shall be kept as record for continuous improvement of resource efficiency management.

Once the gaps are identified while monitoring, corrective action plan of the same shall be developed. This shall also include the department/ personnel responsible for closing the identified gaps along with a timeline of closure. ESMS Manager will undertake regular follow ups to close the gaps within the specified timeframe.

Maintenance and Inspection

Maintenance and inspection program shall be implemented to ensure that equipment and processes operate at their desire energy efficiency and optimum resource utilization. At a minimum, this includes:

- Compliance with inspection and maintenance specified as per electrical safety regulation;
- Compressed air system: annual, perform a leak survey and address any findings;
- Fuel-burning equipment such as boiler and generator: annually, ensure that they are tuned by personnel trained according to the manufacturer's instruction;
- Steam delivery systems: monthly inspect for steam leaks and repair or replace any defective steam traps, valves, flanges, piping or other equipment as necessary;
- Regarding HVAC, process heating and cooling system, implement a defined schedule for Inspection of air filters on air handling units, with replacement as needed and Cooling of heating / cooling coils, etc.;
- Water pipelines: monthly, inspect for water leaks and repair or replace any defective steam traps, valves, flanges, piping or other equipment as necessary, once intimation to respective departmental Heads or responsible personnel at Plant.

APPENDIX G: Environment Monitoring Framework

With regards to sustainable development, SAEL's mandate is to carry out all its business activities in a way which causes minimum or insignificant impacts on environmental and social parameters in the project area or its surroundings. In line with this, the Environmental Monitoring Framework has been formulated to provide guidance to SAEL businesses on periodic measuring and monitoring of such E&S parameters in the projects' area of influence.

The framework is applicable during the entire project cycle and all SAEL businesses, included works contractually assigned to third party agencies (contractors) adhere to this framework.

Environmental Aspects	Applicability (Biomass/Ground mounted solar/rooftop solar)	Phase
Ambient Air Quality	Biomass & Ground mounted solar	Construction Phase – Biomass, grounmounted solar Operation Phase – Biomass
Point Air Emissions Monitoring	Biomass & Ground mounted solar	Construction Phase – Biomass, grounmounted solar Operation Phase – Biomass
Ambient Noise	Biomass, Ground mounted & rooftop solar	Construction Phase – Biomass, grounmounted & rooftop solar Operation Phase – Biomass
Liquid Effluent Discharges	Biomass	Construction Phase – Biomass Operation Phase – Biomass
Surface Water Monitoring	Biomass & Ground mounted solar	Construction Phase – Biomass, grounmounted

		solar (in case water is sourced from surface water body) Operation Phase – Biomass & groundmounted solar (in case water is sourced from surface water body)
Ground Water Monitoring	Biomass & Ground mounted & rooftop solar	Construction Phase – Biomass, grounmounted & rooftop solar (in case water is sourced from ground) Operation Phase – Biomass, grounmounted & rooftop solar (in case water is sourced from ground)
Fly Ash Quality Monitoring	Biomass	Construction Phase – Biomass Operation Phase – Biomass

Environment Monitoring Parameters

The following tables should be completed by the Contractors and Sub Contractors (whosoever is responsible for monitoring and reporting to SAEL) with the necessary monitoring data for the reporting period.

Please provide the name and location of all monitoring points and provide data in the units mentioned in the below sections to allow comparison with the standards. All the applicable standards are mentioned in of this annexure

Project Name and Location:
Name of the Project Manager & Site specific Deputy EHS&S Manager
Information on the Contractors and Sub Contractors
Brief Project Description:

Year of reporting period:	
Project Status	• Design • Construction • Expansion • Operation • Closure • Other *(specify)*
	List any developments which have taken place in relation to the project over the reporting period. For example, has construction been started or completed, has new equipment been installed, or has production capacity increased?

1.1.13 Ambient Air Quality

The Projects are required to engage reputed and authorized laboratories to collect representative samples of ambient air at an agreed number of locations outside the property boundary fence, submit collected samples for analysis and report the results to SAEL. The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by the Site and SAEL as per the IFC/World Bank/WHO guidelines.

Create sufficient sections in the table for each separate location by copying and pasting the sections.

Sample Frequency (e.g. quarterly)	Ambient Air Quality Parameter	WHO Permissible Limits *	India Regulatory Limits and units *	Monitoring results (in comparable units) **
Particulate Matter (PM_{10})				
	Annual arithmetic mean	15 µg/m³	60 µg/m³	µg/m³
	Maximum 24-hour average	45 µg/m³	100 µg/m³	µg/m³
Particulate Matter ($PM_{2.5}$)				
	Annual arithmetic mean	5 µg/m³	40 µg/m³	µg/m³
	Maximum 24-hour average	15 µg/m³	60 µg/m³	µg/m³
Sulphur Dioxide (SO_2)				
	Annual arithmetic mean	µg/m³	50 µg/m³	µg/m³
	Maximum 24 hour average	40 µg/m³	80 µg/m³	µg/m³
Oxides of Nitrogen (NO_2)				
	Annual arithmetic mean	10 µg/m³	50 µg/m³	µg/m³
	Maximum 24 hour average	25 µg/m³	80 µg/m³	µg/m³
Ozone (O_3)				
	8-hour daily maximum	100 µg/m³	100 µg/m³	µg/m³
	8-hour mean, peak season	80 µg/m³		µg/m³

* Current standards as per the latest WHO norms for ambient air pollution 20201

** Monitoring results should be accompanied by reports submitted by laboratory.

1.1.14 Point Air Emissions Monitoring

SAEL portfolio projects are required to engage reputed and authorized laboratories to collect representative samples of point air emissions, submit collected samples for analysis and report the results to SAEL. Individual samples and individual reports are required for all air emission discharge points (e.g. process stacks, power generation stacks, etc.). In some cases, estimates of these

emissions through mass balance calculations will be acceptable. The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by Site Supervisor and SAEL as per the IFC/World Bank/WHO guidelines ..

Create sufficient sections in the table for each separate emission source by copying and pasting the sections.

Sample Frequency (e.g. quarterly)	Air Emission Parameter	WHO Permissible limit	India Regulatory Limits and units	Monitoring results (in comparable units) **
	Particulate matter (PM_{10})	mg/Nm^3	mg/Nm^3	
	Sulphur Dioxide (SO_2)	mg/Nm^3	mg/Nm^3	
	Oxides of Nitrogen (NOx)	mg/Nm^3	mg/Nm^3	
	Carbon Monoxide	mg/Nm^3	mg/Nm^3	
	Particulate matter (PM2.5)	mg/Nm^3	mg/Nm^3	
		mg/Nm^3	mg/Nm^3	

** Monitoring results should be accompanied by reports submitted by laboratory.

1.1.15 Ambient Noise

SAEL portfolio projects are required to monitor ambient noise at an agreed number of representative receptors immediately outside the property boundary and report the results to SAEL. Ambient noise monitoring must take place while the process is in operation. The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by Site Supervisor and SAEL as per the IFC/World Bank/WHO guidelines ..

Sample Frequency (e.g. quarterly)	Ambient Noise Parameters	Permissible WHO limits	Indian Regulatory Limits and Units	Monitoring results (in comparable units)**
	Residential, institutional, educational receptors, Daytime (07:00-22:00 hours)	L_{eq} (hourly), 55 dB(A)		dB(A)
	Residential, institutional, educational receptors, Nighttime (22:00-07:00 hours)	L_{eq} (hourly), 45 dB(A)		dB(A)
	Industrial, commercial receptors Daytime (07:00-22:00 hours)	L_{eq} (hourly), 70 dB(A)		dB(A)
	Industrial, commercial receptors, Nighttime (22:00-07:00 hours)	L_{eq} (hourly), 70 dB(A)		dB(A)

** Monitoring results should be accompanied by reports submitted by laboratory.

1.1.16 Liquid Effluent Discharges

SAEL Portfolio Projects are required to collect representative samples of liquid effluent discharges to surface waters at an agreed frequency, submit these samples for laboratory analysis and report the results. Individual samples and individual reports are required for each surface water discharge point (e.g. sanitary waste, process effluent, and contaminated storm water). The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by Site Supervisor and SAEL as per the IFC/World Bank/WHO guidelines .

Create sufficient sections in the table for each separate emission point by copying and pasting the sections.

- ❑ *Please describe the water course(s) which the effluent is discharged into (e.g. river, municipal system, sea).*
- ❑ *If the effluent is treated prior to discharge from the site please describe the level of treatment provided.*

- *If the effluent is discharged into a municipal system please confirm the level of treatment provided and where the municipal system discharges to.*

Sample Frequency (e.g. quarterly)	Treated Effluent Quality Parameters	WBG/IFC Permissible limits	Indian Regulatory Limits and Units *	Monitoring results in comparable units **
	pH	6-9		
	Biochemical oxygen demand (BOD_5)	50 mg/L		mg/L
	Chemical oxygen demand (COD)	250 mg/L		mg/L
	Oil and grease	10 mg/L		mg/L
	Total suspended solids (TSS)	50 mg/L		mg/L
	Total coliform bacteria, Most Probable Number (MPN) or plate count (PC)	400 /100 ml		/100 mls
	Ambient temperature of receiving waters at edge of zone where mixing with effluent takes place (if not defined, 100 meters from discharge point).	3^0C (maximum increase is 3^0C)		^{0}C
	Heavy Metals, Total	10 mg/L		mg/L
	(list other parameters)*	mg/L		mg/L

** Monitoring results should be accompanied by reports submitted by laboratory.

* List other parameters as well. The parameters listed are not detailed.

1.1.17 Surface Water Monitoring

Portfolio Company is required to collect representative samples of surface waters bodies in the vicinity at an agreed frequency, submit these samples for laboratory analysis and report the results. Individual samples and individual reports are required for each surface water body. The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by Site Supervisor and SAEL as per the IFC/World Bank/WHO guidelines.

Sample Frequency (e.g. quarterly)	Water Quality Parameters to be analysed	Permissible limits (As per IS 2296 Inland Monitoring results surface Water class C)	Units
	Colour	300 Max	Hazen Units
	pH	6.5- 8.5	-
	Turbidity	_	NTU
	TSS	1500	mg/l
	Temperature	_	°C
	Electrical Conductivity	--	µS/cm
	Total Dissolved Solids	500	mg/l
	Salinity	--	mg/l
	Chloride	600	mg/l
	Copper(Cu)	1.5	mg/l
	Fluoride as F	1.5	mg/l
	Iron (Fe)	50	mg/l

	Oil & Grease	0.1	mg/l
	Nitrate	50	mg/l
	Phenolic Compound	0.005	mg/l
	COD	--	mg/l
	BOD (3 Days, 27°C)	3.0 Max	mg/l
	Sulphate	400	mg/l
	Phosphate	--	mg/l
	Total Alkalinity	200	mg/l
	Total Hardness	--	mg/l
	Dissolved Oxygen	4.0 Min	mg/l
	Cadmium (Cd)	0.01	mg/l
	Lead (Pb)	0.01	mg/l
	Mercury (Hg)	--	mg/l
	Arsenic(As)	0.2	mg/l
	Chromium(Cr)	0.05	mg/l
	Total Coliform	--	MPN/100ml
	Fecal Coliform	--	MPN/100ml

1.1.18 Ground Water Monitoring

Portfolio Company is required to collect representative samples of ground water in the vicinity at an agreed frequency, submit these samples for laboratory analysis and report the results. Individual samples and individual reports are required for ground water. The monitoring parameters and frequency for the concerned project will be as per the environmental clearances / consent issued by regulatory authority or will be agreed upon by Site Supervisor and SAEL as per the IFC/World Bank/WHO guidelines.

Sample Frequency (e.g. quarterly)	Ground Water Quality Parameters	WBG/IFC Permissible limits	Indian Regulatory Limits and Units *	Monitoring results in comparable units **
	pH	6-9		
	Biochemical oxygen demand (BOD_5)	50 mg/L		mg/L
	Chemical oxygen demand (COD)	250 mg/L		mg/L
	Oil and grease	10 mg/L		mg/L
	Total suspended solids (TSS)	50 mg/L		mg/L
	Total coliform bacteria, Most Probable Number (MPN) or plate count (PC)	400 /100 ml		/100 mls
	Heavy Metals, Total	10 mg/L		mg/L
	(list other parameters)*	mg/L		mg/L

1.1.19 Fly Ash Quality Monitoring

Fly Ash Quality Monitoring to be undertaken for biomass power plants twice a year to assess the quality of fly ash and to ensure that the fly ash Is not hazardous in nature.

Corrective Actions

If any of the WHO/World Bank Group/IFC or Indian regulatory standards in any of the above tables are exceeded please explain the cause and, if appropriate, describe the planned corrective actions to prevent re-occurrence.

Parameter Exceeded	Cause of Exceedance	Corrective Action and Completion Schedule

Monitoring

- The ESMS Manager will regularly inspect the monitoring reports to ensure compliance with the Pollution Prevention Plan.
- Plant level Site Manager/Supervisor will perform regular checks of plant and equipment to identify any exhaust gas leakages/ odour leakages/any leakages to confirm the condition of the plant;
- Regular checks for visual evidence of pollution, contamination, hygiene and safety will also be made in the plant premises and working areas.
- On site meetings/Inspections will be carried out as necessary to confirm the appropriate use of mitigation measures identified within the SAEL environmental plans relating to pollution control. These meetings/Inspections will highlight any further issues/measures which may be relevant either prior to commencement or during the works.
- Records will be kept of all inspections / findings for review for discussion during regular meetings; and
- The ESMS Manager will maintain a Pollution Prevention Measures Register (PPMR) in which all mitigation measures put into place will be listed and will be audited monthly to assess the requirement for maintenance.

1.1.20 Timelines for Env Monitoring

Monitoring Type	Monitoring Frequency	No of Samples
Ambient Air Quality	Quarterly	Minimum 3
Point Air Emission	Quarterly	all air emission discharge points (e.g. process stacks, power generation stacks, DG sets etc.)
Ambient Noise	Quarterly	Minimum 3
Liquid Effluent Discharge	Quarterly	Minimum 2 (Outlet)
Ground water sample	Quarterly	Can Vary on the number of ground water abstraction structures
Fly Ash Quality	Half Yearly	One sample each for Bottom Ash & Fly Ash

Above environmental monitoring framework is subject to modification/updation as per the actual monitoring plan developed as part of ESIA, in case of category A & B Projects. In this case, environmental monitoring plan developed, as an out come of ESIA/or any other detailed studies will supersede.

Records

Following records but not limited to the following shall be maintained by SAEL at its plants:

- Environmental monitoring reports (air, noise, water and soil) as prescribed by the SPCB in the consents;
- Ash generation and its disposal.
- Wastewater generated and treated;
- Waste register for recording the generation and disposal of various categories of waste produced at sites; and
- Environmental Statements reports.

The records will be kept for all initial, final and routine monitoring / inspections of construction and operation areas. These records will be stored in an agreed location within the plant and be available for internal and external monitoring as required; and

Record sheets will detail the date, location of inspection, frequency, findings, appropriate person/s notified and identified actions, as required.

Training

- All employees, subcontractors, suppliers and visitors to the site will be notified via induction of the requirements on site for pollution prevention.
- Through toolbox talks, site personnel and subcontractors will be educated on those aspects of environmental management as appropriate to the task assigned to them;
- Consultation meetings will include discussion on the works to be undertaken, review of other plans and agreement on required mitigation and pollution prevention measures. Measures agreed at such consultation meetings will be disseminated to the relevant employees, contractors, subcontractors, suppliers and other appropriate persons via tool box talks and formal communications (email / memo), particularly where required for record purposes (e.g. variations, auditing and monitoring records);
- SAEL will ultimately be responsible for overseeing and enforcing pollution prevention procedures such that potential adverse impacts to human health or the environment from any activities involving handling of potential pollutants are avoided or mitigated. For the avoidance of doubt, pollution prevention procedures include, but are not necessarily limited to all aspects of traffic, plant and materials management, air emission management, noise level management, surface water and drainage management.

Applicable Standards

1.1.21 Standard for Incineration as per CPCB

The emission from incinerator technologies from the facility shall meet the following standards

Parameter	Emission standard	
(1)	(2)	(3)
Particulates	50 mg/Nm^3	Standard refers to half hourly average value
HCl	50 mg/Nm^3	Standard refers to half hourly average value
SO2	200 mg/Nm^3	Standard refers to half hourly average value
CO	100 mg/Nm^3	Standard refers to half hourly average value
	50 mg/Nm^3	Standard refers to daily average value
Total Organic Carbon	20 mg/Nm^3	Standard refers to half hourly average value
HF	4 mg/Nm^3	Standard refers to half hourly average value
NOx (NO and NO2 expressed as NO2)	400 mg/Nm^3	Standard refers to half hourly average value
Total dioxins and furans	0.1 ng TEQ/Nm^3	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
Cd + Th + their compounds	0.05 mg/Nm^3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Hg and its compounds	0.05 mg/Nm^3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + their compounds	0.5 mg/Nm^3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Note.- *All values corrected to 11% oxygen on a dry basis.*		

1.1.22 Standards for Boiler using Agricultural Waste as Fuel as per CPCB

[1][97.BOILERS USING AGRICULTURE WASTE AS FUEL

Step Grate Particulate matter	250 mg / Nm^3
Horse Shoe/ Pulsating Particulate matter	500 mg / Nm^3 (12% of CO_2)
Spreader stroker Particulate matter	500 mg / Nm^3 (12% of CO_2);

1.1.23 National Ambient Air Quality Standards, CPCB 2009

Pollutant	Time Weighted Avg.	Concentration in Ambient Air	
		Industrial, Residential, Rural & Other Areas	Ecologically Sensitive Areas (notified by Central Government)
Sulphur dioxide (SO2) µg/m^3	Annual Average*	50	20
	24 Hours**	80	80
Oxides of Nitrogen (NOx) µg/m^3	Annual Average*	40	30
	24 Hours**	80	80
Particulate Matter (PM 10) µg/m^3	Annual Average*	60	60
	24 Hours**	100	100
Particulate Matter (PM 2.5) µg/m3	Annual Average*	40	40
	24 Hours**	60	60
Ozone (O3) µg/m3	8 Hours**	100	100
	1 Hour**	180	180
Lead (Pb) µg/m3	Annual Average*	0.50	0.50
	24 Hours**	1.0	1.0
Carbon monoxide (CO) mg/m3	8 Hours**	02	02
	1 Hour**	04	04
Ammonia (NH3) µg/m3	Annual*	100	100
	24 Hours**	400	400
Benzene (C6H6) µg/m3	Annual*	05	05
Benzo(α)Pyrene-particulate phase ng/m3	Annual*	01	01
Nickel (Ni) ng/m3	Annual*	20	20
Arsenic (As) ng/m3	Annual*	06	06

Note: *Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform interval.

** 24 hourly/8 hourly/1 hourly monitored values, as applicable shall be complied with 98% of the time in a year. 2% of the time, it may exceed but not on two consecutive days of monitoring.

1.1.24 National Ambient Noise Standards

Area Code	Category of Area	Limits in dB(A) Leq	
		Day time*	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone**	50	40

Note: *Daytime is from 6 am to 10 pm, Night time is10.00 pm to 6.00 am;

**Silence zone is an area comprising not less than 100 meters around premises of hospitals, educational institutions, courts, religious places or any other area, which is declared as such by the competent authority. Use of vehicle horns, loud speakers and bursting of crackers are banned in these zones.

Source: Noise Pollution (Regulation and control) Rules, 2000

1.1.25 IS10500:2012 Drinking Water Standards

S.N	Substance/ Characteristics	Requirement (Acceptable limit)	Permissible limit in absence of alternate source
1.	Colour, Hazen units, max	5	15
2.	Odour	Unobjectionable	-
3.	Taste	Agreeable	-
4.	Turbidity, NTU, max	5	5
5.	pH value	6.5 - 8.5	No Relaxation
6.	Total hardness (as CaCO3) mg/l, max	200	600
7.	Iron (as Fe) mg/l, max	0.3	No relaxation
8.	Chlorides (as Cl) mg/l, max	250	1000
9.	Free residual chlorine, mg/l, min	0.2	1
10.	Dissolved solids mg/l, max	500	2000
11.	Calcium (as Ca) mg/l, max	75	200
12.	Magnesium (as Mg) mg/l, max	30	100
13.	Copper (as Cu) mg/l, max	0.05	1.5
14.	Manganese (as Mn) mg/l, max	0.1	0.3
15.	Sulphate (as SO4) mg/l, max	200	400
16.	Nitrate (as NO3) mg/l, max	45	No relaxation
17.	Fluoride (as F) mg/l, max	1.0	1.5
18.	Phenolic compounds (as C6H6OH) mg/l, max	0.001	0.002
19.	Mercury (as Hg) mg/l, max	0.001	No relaxation

20.	Cadmium (as Cd) mg/l, max	0.003	No relaxation
21.	Selenium (as Se) mg/l, max	0.01	No relaxation
22.	Arsenic (as As) mg/l, max	0.01	0.05
23.	Cyanide (as CN) mg/l, max	0.05	No relaxation
24.	Lead (as Pb) mg/l, max	0.01	No relaxation
25.	Zinc (as Zn) mg/l, max	5	15
26.	Anionic detergents (as MBAS) mg/l, max	0.2	1.0
27.	Total Chromium (as Cr) mg/l, max	0.05	No relaxation
28.	Polynuclear aromatic hydrocarbons (as PAH) g/l, max	0.0001	No relaxation
29.	Mineral Oil mg/l, max	0.5	No relaxation
30.	Pesticides mg/l, max	Absent	0.001
31.	Radioactive materials: a) Alpha emitters Bq/l, max b) Beta emitters pci/l, max	 0.1 1.0	 No relaxation No relaxation
32.	Total Alkalinity (as CaCO3), mg/l, max	200	600
33.	Aluminium (as Al) mg/l, max	0.03	0.2
34.	Boron, mg/l, max	0.5	1.0
35.	Ammonia (as total ammonia-N). mg/l, max	0.5	No relaxation
36.	Barium (as Ba), mg/l, max	0.7	No relaxation
37.	Chloramines (as Cl2), mg/l, max	4.0	No relaxation
38.	Silver (as Ag), mg/l, max	0.1	No relaxation
39.	Sulphide (as H2S), mg/l, max	0.05	No relaxation
40.	Molybdenum (as Mo), mg/l, max	0.07	No relaxation
41.	Nickel (as Ni), mg/l, max	0.02	No relaxation
42.	Polychlorinated biphenyls, mg/l, max	0.0005	No relaxation
43.	Trilomethanes: a) Bromoform, mg/l, max b) Dibromochloromethane, mg/l, max c) Bromodichloromethane, mg/l, max d) Chloroform, mg/l, max	0.1 0.1 0.06 0.2	No relaxation No relaxation No relaxation No relaxation
	Bacteriological Quality		
1.	All water intended for drinking: a) E. coli or thermotolerant coliform bacteria	Shall not be detectable in any 100 ml sample	-
2.	Treated water entering the distribution system: a) E. coli or thermotolerant coliform bacteria b) Total coliform bacteria	Shall not be detectable in any 100 ml sample; Shall not be detectable in any 100 ml sample.	-
3.	Treated water in the distribution system: a) E. coli or thermotolerant coliform bacteria b) Total coliform bacteria	Shall not be detectable in any 100 ml sample; Shall not be detectable in any 100 ml sample.	-

Source: Central Pollution Control Board

1.1.26 General Standard for Discharge

S. N	Parameter	Standards		
		Inland surface water	Public sewers	Land for Irrigation
1.	Colour and odour	Refer to Note 1	-	Refer to Note 1
2	Suspended solids mg/l, max.	100	600	200
3	Particle size of suspended solids	Shall 850 micron IS sieve	-	-
4	PH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5	Temperature	Shall not exceed 50 C above the receiving water temperature	-	-
6	Oil and grease, mg/l max,	10	20	10
7	Total residual chlorine, mg/l max	1.0	-	-
8	Ammonical nitrogen (as N), mg/l max.	50	50	-
9	Total Kjeldahl nitrogen (as N); mg/l max	100	-	-
10	Free ammonia (as NH3), mg/l max	5.0	-	-
11	Biochemical oxygen demand (3 days at 270 C), mg/l max	30	350	100
12	Chemical oxygen demand, mg/l max	250	-	-
13	Arsenic (as As) mg/l, max	0.2	0.2	0.2
14	Mercury (As Hg) mg/l max.	0.01	0.01	-
15	Lead (as Pb) mg/l, max	0.1	1.0	-
16	Cadmium (as Cd) mg/l, max	2.0	1.0	-
17	Hexavalent chromium (as Cr +6) mg/1 max	0.1	2.0	-
18	Total chromium (as Cr) mg/1 max	2.0	2.0	-
19	Copper (as Cu) mg/1, max	3.0	3.0	-
20	Zinc (as Zn)	5.0	15	-
21	Selenium (as Se)	0.05	0.05	-
22	Nickel (as Ni) mg/1,max	3.0	3.0	-
23	Cyanide (as CN) mg/1,max	0.2	2.0	0.2
24	Fluoride (as F) mg/1,max	2.0	15	-
25	Dissolved phosphates (as P) mg/1,max	5.0	-	-
26	Sulphide (as S) mg/1,max	2.0	-	-
27	Phenolic compounds (as C6H5OH) mg/1,max	1.0	5.0	-
28	Radioactive materials: (a) Alpha emitters micro curie mg/1,max (b) Beta emitters micro curie mg/1	10-7 10-6	10-7 10-6	10-8 10--7
29	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
30	Manganese	2 mg/1	2 mg/1	-
31	Iron (as Fe)	3mg/1	3mg/1	-
32	Vanadium (as V)	0.2 mg/1	0.2 mg/1	-

33	Nitrate Nitrogen	10 mg/1	-	-

Source: as per G.S.R 422 (E) dated 19.05.1993 and G.S.R 801 (E) dated 31.12.1993 issued under the provisions of E (P) Act 1986.

1.1.27 Emission Limits for New Diesel Engines (up to 800 KW) for Generator Sets

Emission standards for diesel engines (engine rating more than 0.8 MW (800 KW)) for power plant, generator set application and other requirements is as follows:

<table>
<tr><th colspan="2" rowspan="2">Parameter</th><th rowspan="2">Area Category</th><th rowspan="2">Total engine rating of the plant (includes existing as well as new generator sets)</th><th colspan="3">Generator sets commissioning date</th></tr>
<tr><th>Before 1.7.2003</th><th>Between 1.7.2003 and 1.7.2005</th><th>On or after 1. 7. 2005</th></tr>
<tr><td colspan="2" rowspan="4">NOx (as NO_2) (AT 15% O_2) , dry basis, in ppmv</td><td>A</td><td>Upto 75 MW</td><td rowspan="2">1100</td><td>970</td><td>710</td></tr>
<tr><td>B</td><td>Upto 150 MW</td><td rowspan="2">710</td><td rowspan="2">360</td></tr>
<tr><td>A</td><td>More then 75 MW</td><td>1100</td></tr>
<tr><td>B</td><td>More then 150 MW</td><td colspan="2">100</td></tr>
<tr><td colspan="2">NMHC (as C)(at 15% O_2), mg/Nm^3</td><td>Both A and B</td><td></td><td>150</td><td colspan="2">100</td></tr>
<tr><td rowspan="2">PM (at 15% O_2), mg/Nm^3</td><td>Diesel Fuels-HSD & LDO</td><td>Both A and B</td><td></td><td>75</td><td colspan="2">75</td></tr>
<tr><td>Furnace Oils-LSHS & FO</td><td>Both A and B</td><td></td><td>150</td><td colspan="2">100</td></tr>
<tr><td colspan="2">CO (at 15% O_2), mg/Nm^3</td><td>Both A and B</td><td></td><td>150</td><td colspan="2">150</td></tr>
<tr><td colspan="2" rowspan="2">Sulphur Content in fuel</td><td>A</td><td></td><td colspan="3">< 2%</td></tr>
<tr><td>B</td><td></td><td colspan="3">< 4%</td></tr>
<tr><td colspan="2">Fuel specification</td><td>For A only</td><td>Up to 5MW</td><td colspan="3">Only Diesel fuels (HSD, LDO) shall be used.</td></tr>
<tr><td colspan="2">Stack height (for generator sets commissioned after 1.7.2003)</td><td colspan="5">Stack height shall be maximum of the following, in meter:
(i) 14 $Q^{0.3}$, Q= Total SO_2 emission from the plant in kg/hr.
(ii) Minimum 6 m. above the building where generator set is installed.
(iii) 30 m.</td></tr>
</table>

APPENDIX H: Occupational Health & Safety

This Occupational Health and Safety (OHS) Framework has been developed to assist SAEL to identify the OHS risks and hazards associated with its *construction and operation phase* and then effectively manage them, minimize any incidents and accidents. This document presents standard operating procedures (SOPs) for occupational health and safety aspects which will be applicable during construction and operation phase of the project. These SOPs have taken into account OHS requirements specified in national and state level legal legislation.
SAEL' s ESMS SOPs shall be adhered to by the Contractors and the Sub-Contractors engaged during the lifecycle of the project. The following SOPs have been included in this OHS framework document. This document shall be adopted during both *construction* and *operation* phase of the SAEL's Projects.

1. Permit to work.
2. Personal protective equipment
3. Electrical Safety
4. Confined space entry
5. Hot work
6. Work at height
7. Pressure Vessels & Boilers Management
8. Ergonomics Management

Permit to Work

A permit to work system is a written record that authorizes specific work, at a specific work location, for a specific time period. Permits are used for controlling and co-ordinating work to establish and maintain safe working conditions. They ensure that all foreseeable hazards have been considered and that the appropriate precautions are defined and carried out in the correct sequence.

The Permit to Work System provides a systematic disciplined approach to assessing the risks of a job and specifying the precautions to be taken when performing non-routine work especially maintenance work. The permit to work system:

- Specifies the work to be done and the equipment to be used.
- Specifies the precautions to be taken when performing the task.
- Gives permission for work to start.
- Advises regular workers regarding non-routine work or maintenance activities around their work area.
- Provides a check to ensure that all safety considerations have been taken into account, including the validity of permits and certificates and compliance to the policies and procedures.
- Provides a checking mechanism that all work has been completed to the satisfaction.

1.1.28 Work NOT requiring Permit to Work

- Activities involving routine production and process operations including start up, changes in operational modes and shutdowns do not require a Permit to Work.
- In addition, work carried out in designated maintenance (for example, workshops) and construction areas do not require a Permit to Work.

1.1.29 Types of Permit to Work System

The type of permit to work system required is determined by the nature of the work to be performed and the hazards that must be controlled or eliminated. The range of activities and locations makes it impossible for a single type of permit to be suitable for all situations. The key permits to work system are as follows:

1. Work at Height Permit

For work at height where risk of falling more than 3 meters, in such scenarios' s permit to work system is required. Unless the risk of falling is mitigated through adequate and effective edge protection, a permit to work system may not be required, unless the responsible person deemed it should not be exempted. Such work at height includes:

- Working on flat roof with perimeter parapet wall of at least 1 m in height and no opening or open sides where a person can fall; and
- Working on a mezzanine floor with proper staircases and effective barricading around the mezzanine perimeter to prevent fall.

2. Hot Work Permit

Hot work permits are used when heat or sparks are generated by work such as welding, burning, cutting, riveting, grinding, drilling, and where work involves the use of pneumatic hammers and chippers, non-explosion proof electrical equipment (lights, tools, and heaters), and internal combustion engines.

Three types of hazardous situations need to be considered when performing hot work:

- The presence of flammable materials in the equipment;
- The presence of combustible materials that burn or give off flammable vapours when heated; and
- The presence of flammable gas in the atmosphere, or gas entering from an adjacent area, such as sewers that have not been properly protected. (Portable detectors for combustible gases can be placed in the area to warn workers of the entry of these gases.)

3. Cold Work Permit

Cold work permits are used in hazardous maintenance work that does not involve "hot work". Cold work permits are issued when there is no reasonable source of ignition, and when all contact with harmful substances has been eliminated or appropriate precautions taken.

4. Confined Space Entry Permit

Confined space entry permits are used when entering any confined space such as a tank, vessel, tower, pit or sewer.

5. Electrical Work Permit

Electrical work permits are used when working or maintaining on electrical panels or machines where electrical de-energizing is required. In case of electrical isolation of any machinery, electrical work permit could be triggered along with the LOTO system as explained above.

1.1.30 Procedure

- Each type of permit provides a checklist for the person preparing the equipment, informs workers carrying out the work of the hazards present, lists or describes the precautions to be taken, and describes the personal protective equipment to be worn by workers.
- Work permits are usually made out in either duplicate or triplicate. When a duplicate system is used, one copy of the permit is retained by the issuer at the work site and the other is held by the worker/department doing the work. The permit should always be available at the work site. The permit is handed back to the issuer at the end of the shift or when the work is completed.
- In a triplicate permit system, the third copy is used by the safety department to audit the work to see if the requirements of the permit are being met.
- A permit should only be issued by a competent person who is completely familiar with the work or situation covered by the permit and who has control over changes in that work area.
- The permit issuer must be sure that the work situation identified on the permit is as described. Where possible, the permit issuer should review the work or operation with the worker before work begins. If the permit issuer has not reviewed the site, this should be noted on the permit and the work situation should be discussed with the worker.
- Written instructions alone are often insufficient in the effective use of a permit system. Practical training exercises for the people who issue and receive permits should be considered.
- The person receiving the permit must completely understand the work situation, the potential hazards, and the precautions required before accepting the permit.
- Any special precautions not normally associated with the particular work should be identified to the receiver of the permit, who must fully understand the reasons for these precautions. The permit issuer must be sure that the worker understands

the hazards. If not, the permit issuer needs to review the Material Safety Data Sheet or other information with the worker to ensure that they understand the dangers of the product and the precautions to be taken.

- No one should sign a safe work permit unless completely satisfied that the work can be done safely.
- All safe work permits must be signed by both the permit receiver and the permit issuer before work is started and after it is completed.

1.1.31 Record Keeping

Sample Permit to Work to be maintained.

INTEGRATED WORK PERMI

(For General Work, HOT Work, Excavation Work, Height Work, Lifting Work. Electrical & Maintenance Work)

Sl. No…… PERMIT TO WORK FOR INDIVIDUAL WORKING AGENCY Date:……

[TO BE FILLED IN TRIPLICATE BY PARTY – ORIGINAL YELLOW & OTHERS WHITE]; VALID FOR ONE SHIFT AND MAY BE RENEWED TWICE ONLY)

Location **Area :** **SECTION:**

Original permit Valid From	**Date:** AM/PM	**Time:**	**up to**	**Date:** AM/PM	**Time:**
1st Renewal Valid From	**Date:** AM/PM	**Time:**	**up to**	**Date:** AM/PM	**Time:**
2nd Renewal Valid From	**Date:** AM/PM	**Time:**	**up to**	**Date:** AM/PM	**Time:**

SHUT DOWN TAKEN: YES ☐ NO ☐ NA ☐

(IF YES), SHUT DOWN planned from **Date:** **Time:** AM/PM **up to** **Date:** AM/PM **Time:**

Job Description: ……

(1) Area/ Tank/ Vessel/ Equipment/ Pipeline Exact Location:				Equipment:			
(2) Work to be done:		Working Agency:			No. of Workmen:		
		Engineer/Supervisor:			Work Order No. / Service Order No.:		
(3) Safety Precautions							
(a) Breathing Apparatus / Gas sets (as applicable) :							
(b) Protective Equipment to be worn (Ring items which apply)	Helmet, Eye Wear, Face Shield, Self-Contained Breathing Apparatus, supplied air mask, Ear Muffs, Fire Retardant Cloths, Hand Gloves, Shoes, Gumboots, High Visibility Jacket, Any **others**:						
(c) **Other Precautions / Special Instruction**:							
(4) State of Isolation **(Electrical, Solid, Gas, Vapor, Fuel, Solid, Air, Nitrogen)**	No. of lines	Depressurized & Drained	Positive Isolation	Tagged Off	Valve Only	Initials as applicable	Not Isolated
(b) **All Motive Power has been isolated and any logic control interrupted (LOCK/ TAG)**		YES , Lock # Tag #		NO		N/A	

(c) Electrical fuses have been withdrawn & all circuits are dead, Sign ……(Electrician) Date……Time……

(d) Electrical circuits are on line for trouble shooting only: Sign……(Electrician/ Inst..) Date……Time……

(5) (a) CONFINED SPACE ENTRY (Cancel if not required)

O2 % …… System Isolated ……(Y/N/NA) Rescue System ……(Y/N/NA)

CS Attendant ……(Y/N/NA) CS Attendant Name …… Register for entry & exists …… (Y/N/NA)

Any other gas ……ppm and is therefore safe to enter from ……Hrs to …… Hrs on dt……Sign……(Approved Signatory)

(b) HOT WORK / OTHER HAZARDOUS WORK (Working at height, Pneumatic, Hydraulic System):
Inspected the site as per requirement overleaf, Job Specific SWP /SOP/ JSA exists (Doc# ……)

6. I understand the hazard involved and have taken all necessary precaution/controls as mentioned above.

	Permit Original			Permit 1st Renewal			Permit 2nd Renewal		
	Permit Holder	Permit Receiver	Permit Issuer	Permit Holder	Permit Receiver	Permit Issuer	Permit Holder	Permit Receiver	Permit Issuer
Name									
Design. / Dept.									
Signature									
Date & Time									

7. Return of Permit: - After completion of job, removal of all materials / men from site has done by Working Agency. Now Equipment & Area is safe for operation. The above Equipment / Facility can be restored.

	Permit Return by (Permit Receiver)			Return Permit Received by (Permit Issuer)		
	Original	1st Renew	2nd Renew	Original	1st Renew	2nd Renewal
Name						
Design. / Dept.						
Signature						
Date & Time						

NOTE: This PTW shall deemed to be cancelled if there is any change in work condition, climate (rain, storm) & team working.

Checklist to ensure Safety (Multiple categories may apply to any given job): - ***Check items completed prior to start***

1. Permit to be signed by people not less than Site Engineer

1. Hot Work (Welding, Grinding, Cutting, Brazing, Hot Rapping)

Precautions Taken

- ☐ Flammables /Combustibles (charged gas line, cylinder, paper, rags, wood, etc.) protected
- ☐ Fire Watch Established
- ☐ Welding & Cutting equipment integrity checked & positioned properly.
- ☐ Cables / Hoses routed over the ground and do not pose a tripping hazard
- ☐ Area hazards reviewed
- ☐ Electrical connections through ELCB of 30 mA sensitivity
- ☐ Electrical equipment is free from damage and earthed properly
- ☐ Performer/s are competent and equipped with appropriate PPEs i.e. including face shield With adequate shade number /welding goggles/ cotton / Fire Retardant Apron etc.
- ☐ No tampering / manipulation attempted in safety device of the equipment
- ☐ Only industrial type electrical appliances are in use
- ☐ Cables / fuses are of adequate size & capacity fit with the requirement
- ☐ Hoses are free from damage and connected with Jubilee clamp.
- ☐ No cable joint within 1 m from the holder / grinding machine and completely insulated within machine body.
- ☐ Gas cylinders used: Oxygen / Industrial LPG / Dissolved Acetylene
- ☐ Gas cutting torch of reputed make, ISI marked, installed with NRV / 3-way torch and / or Flash back arrestors are in use.
- ☐ Regulator pressure gauges in working condition, visible and not damaged.
- ☐ Welding cable and earthing cable are crimped with proper size lugs.

Fire Protection

Precautions Taken

- ☐ Combustible gas or liquid containers removed
- ☐ Area wet down ☐ Spark / Spatters shields / Ceramic Cloth installed / used.
- ☐ Other (explain) _____

Equipment Provided

- ☐ Fire extinguishers

Type: ☐ CO2 ☐ Dry Chemical Powder ☐ Other _____

Size_____ Quantity _____

2. Excavations Exceeding 1 m (3 ft)

Precautions Taken

- ☐ Contractor has a competent person assigned to inspect & control condition of excavation on site
- ☐ Underground utilities identified ☐ Power equipment grounded
- ☐ Electrical or mechanical overhead clearances checked
- ☐ Protective / Indicative Barricading (beyond 1 m from edge) done; area warning placed
- ☐ Means of egress (ladder or steps) placed ☐ Side walls shored or laid back
- ☐ Area adequately lighted ☐ Material or soil removed from excavation edge
- ❑ Excavator is fit for the job ☐ Banks man provided to guide the operator
- ❑ Method of dewatering is established and ensured the stoppage of water return
- ❑ Excavated pit edges free from heavy over-burden, stack of materials
- ❑ People are prevented from working inside pits if heavy vehicle movement in the vicinity due to which soil collapse may take place.

3. Height Work (More Than 1.8 M High) Contractor procedure in place: Y / N

Precautions Taken

- ☐ Only medically fit personnel engaged in work and list is available.
- ☐ Ladder(s)/ Approach way inspected prior to use ☐ Safe access & egress ensured
- ☐ Ladder properly supported and leveled : ☐ Tied Top ☐ Tied Bottom
- ❑ Distance between the ladder support and the ladder base is at least ¼ the total length of the ladder ☐ Ladder been provided with skid resistant feet
- ☐ Scaffolds/platforms inspected for good repair and proper construction (secured flooring and guardrails) ☐ Floor openings covered/ Guarded
- ☐ Work area roped off and warning signs in place ☐ Proper Housekeeping is done
- ☐ Personnel assigned warned of floor opening& other hazardous exposure/opening covered.
- ☐ Tools and other equipment stored in safe manner
- ☐ Area cleared below prior to starting work ☐ People at height are secured

Equipment Provided ☐ Roof Top : Crawler Board / Securing arrangement checked

- ☐ Full body Safety Harness with double lanyard and anchored to independent rigid object
- ☐ Lifeline with rope grab shock absorber/fall arrestor
- ☐ Safety net is provided but not less than 5 M from the work area / NA.

4. Suspended man basket / Platform

Precautions Taken

- ☐ Use strictly controlled ☐ Certified by competent authority
- ☐ Lifelines and harnesses approved type with separate anchorage
- ☐ Communications established ☐ Basket properly labeled with load capacity
- ☐ Lifting appliance is certified by third party competent authority
- ☐ Guardrails are provided ☐ Workmen are competent and medically fit
- ☐ Proper means of access is provided to the work platform
- ☐ Lifting appliances operator never left the site while man bucket is in use
- ❑ Kept at secured mode while not in use.

5. Crane Lifts & Critical Rigging.

Precautions Taken

- ☐ Safety devices (limit switch, boom angle etc.)of the appliances are inspected before use
- ☐ Operator qualified and medically fit including eye sight examined by authority
- ☐ Lifting appliances are certified by competent authority and labeled properly.
- ☐ Hoist chain or hoist rope free of kinks or twists and not wrapped around the load.
- ☐ Lifting Hook has a Safety Hook Latch that will prevent the rope from slipping out.
- ☐ Lifting gears operator been instructed not to leave the load suspended
- ☐ Electrical power line clearance (12ft) checked ☐ Signal man identified
- ☐ Outriggers supported, Crane leveled ☐ Load chart available in crane
- ☐ Barrier Installed ☐ Riggers are competent
- ☐ Slings are inspected for free from cut marks, pressing, denting, bird caging, twist, kinks or Core protrusion prior to use.
- ☐ Slings mechanically spliced (Hand spliced slings may not be allowed)
- ☐ D / Bow shackles are free from any crack, dent, distortion or weld mark, wear / tear
- ☐ Special lift as per erection / lift plan (Life Plan mandatory for all life >5 tons)
- ☐ Job Hazards is explained to all concern thru tool box talk meeting
- ☐ Guide rope is provided while shifting / lifting. ☐ Maintenance record of crane available.

6. Electrical Work

Precautions Taken

LIVE ELECTRICAL WORK CAN BE PERFORMED BY LICENCED ELECRTRICIAN ONLY

- ☐ Power supply locked and tagged ☐ Circuit checked for zero voltage
- ☐ Portable cords and electric tools inspected ☐ Safety back-up man appointed
- ☐ Physical isolation is ensured If yes, State the method _____
- ☐ In case of lock applied, ensure the safe custody of the key by putting it in group lock.
- ☐ If physical isolation is not possible state the alternative method of precaution/isolation.
- ☐ Stored energy discharged through discharge rod.
- ☐ 3 way power tester is available for testing live system,
- ☐ Electrical shut down to follow LOTO.☐ Recheck to be sure about correct panel for work

Equipment Provided

- ☐ Approved rubber and leather gloves ☐ Insulating mat ☐ Fuse puller
- ☐ Disconnect pole or safety rope ☐ Non-conductive hard hat
- ☐ Earth Leakage Circuit Breaker (ELCB) ☐ Cool Coat/Electrical Flash Suit , suitable power resistant shoes, gloves

7. Scaffolding Erection & Dismantling:

Precautions Taken

- ☐ Presence of competent person assigned to ensure safe erection, maintenance, or modification of scaffolds.
- ☐ Scaffolders inspected for proper access, egress by competent persons. Green Tag visible.
- ☐ All pipes, clamps, H-frames, couplers, boards checked before assembly
- ☐ Standard guardrail (900-1050mm top rail, 500 mm mid-rail, and 90- 150 mm toe board) been used whenever possible.
- ☐ Platforms, walkways on scaffolds are wide of minimum of 600 mm wherever possible
- ☐ Precautions taken to ensure scaffolds are not overloaded
- ☐ Overhead protection provided where there is exposure
- ☐ No opening / Gap in the platform / walkway.
- ☐ All component of the scaffold more than 12' away from any exposed power lines

8. Hydro / Pneumatic Testing

Precautions Taken

Is work to be performed planned: YES NO , If No - STOP

- ☐ Access/egress, Hot work, Other on-going work considered in plan
- ☐ Specific hazards in the work area identified
- ☐ Area cleared from non-test personnel and barricaded
- ☐ Discharge of safety relief valves directed away from personnel area
- ☐ Compressor is certified by the competent authority
- ☐ Safety release valves and NRVs of system are in working condition
- ☐ Pressure gauges are calibrated and identified for the job.
- ☐ Formal discussions with personnel performing work or affected by this work held
- ☐ Workmen instruction for not attempt the tightening / loosening of bolts and hammering while the line is under pressure.

9. Confined Space (CS)

- ☐ The written confined-space entry program is firmly implemented and being enforced.
- ☐ Whether permit issued after verification of LOTO system for all upstream and downstream equipment as applicable with respect to Process Flow Diagram (PFDP.
- ☐ Whether CS numbered, warning displayed, PFD available with required isolation for job
- ☐ Is there a qualified stand-by man deputed?
- ☐ Does he/she maintain a list of personnel entries with sign and date/time of entry?
- ☐ Gas / Oxygen deficiency/ presence of toxic – flammable vapor test done and found ok.
- ☐ Are only 24V hand lamps used inside the vessel?
- ☐ Proper means of exit provided.
- ☐ Proper ventilation and lighting provided

10. Working area has a display board, communication board on Contract Job indicating site In-charge, Safety In-charge, their mobile number, space for displaying permit sheet.

11. Others: _____

12. List of persons engaged in the job may be maintained in separate register.

Personal Protective Equipment

Personal Protective Equipment (PPE) means any device or appliance designed to be worn or held by an individual for protection against one or more health and safety hazards.

- The fundamental principle is that personal protective equipment (PPE) should only be used as a last resort.
- The safety and health of employees must be first safeguarded by measures to eliminate workplace risks at source, through technical or organisational means (e.g. by substituting hazardous chemical) or by providing protection on a collective basis (e.g. providing scaffolding instead of harnesses).
- Collective protective measures covering numbers of employees in a workplace must have priority over protective measures applying to individual employees.
- If these measures are not sufficient, only then should PPE be used to protect against the hazards that are unavoidable.

Employers need to supply PPE to workers where risks cannot be eliminated or adequately controlled. They cannot pass on to employees any financial costs associated with duties relating to safety, health and welfare at work. An employer may not ask for money to be paid to them by an employee for the provision of PPE whether returnable (e.g. a deposit) or otherwise.

1.1.32 Selection of PPEs

- The employer has to make an assessment of the hazards in the workplace in order to identify the correct type of PPE to be provided and to ensure that PPE is appropriate to the risk. Care must be taken in selecting PPE as certain types give reasonably high levels of protection while others that may appear almost the same, give relatively low levels of protection. The level of risk must be assessed so that the performance required of the PPE can be determined.
- Selection of PPE must take account of the proper wearing and fitting of the equipment – an employer should take into account that one type of PPE may not fit all.
- In sourcing PPE, the employer must therefore, select appropriate PPE which is user-friendly and which fits the individual employee correctly, after adjustment if necessary.
- Ensure purchased PPE is 'CE' or ISI marked and complies with the requirements of the Indian Standards or European Communities (Personal Protective Equipment) Regulations which require PPE to have the appropriate ISI or CE mark. The marking signifies that the PPE satisfies certain basic health and safety requirements.

1.1.33 Procedures

General PPE Requirements:

- All PPE must be properly selected, inspected prior to use, cleaned regularly and maintained in usable condition. Any equipment that is damaged must be replaced immediately. Equipment that does not fit properly shall not be worn, but replaced or re-fit. Any PPE provided by the employee for his/her own protection must meet all the requirements of this procedure.
- Employees should participate in the selection of PPE when appropriate. In some cases, PPE must be fitted for the employee (e.g. Respirator). Disposable PPE, such as gloves or body protection will be provided in appropriate sizes to fit all employees.
- Safety Risk Assessment (SRA) or equivalent PPE hazard assessment for PPE requirements shall be developed for each job task at the work place. These assessments will be incorporated into work instructions and/or PPE matrix.
- Appropriate PPE will be available to each affected employee according to the findings of the PPE hazard assessment and/or Safety Risk Assessment (SRA).
- It is standard operating procedure for employees, contractors and visitors to wear head, eye and foot PPE, as outlined in this procedure in all designated areas. Additionally, employees, contractors, subcontractors and visitors must abide by PPE requirements, specifically, wearing the PPE which provides the most protection from the hazards or most stringent. If there are concerns or conflicts regarding PPE requirements, employees should contact their site Deputy EHS&S Manager for clarification.

PPE Distribution:

- PPE will be distributed to each affected employee according to the findings of the PPE hazard assessment and/or SRAs. In addition, PPE will be provided at company expense.
- Visitors will be provided with the appropriate PPE (e.g. Safety Glasses, Ear Plugs) while entering inside the factory. Exceptions shall be approved by an EHS Manger or Site ESH&S Officer. Contractors shall provide PPE for their own employees if it is not stipulated in the contract.
- Adequate quantities and variety of sizes of PPE will be made available to employees and visitors.
- Respirators and respirator cartridges and electrical safety gloves are examples of PPE that must be under controlled distribution because its use requires special training and medical clearance.
- PPE will be distributed to only those employees that are physically capable of and appropriately trained in properly using the equipment.

General Clothing and Attire Requirements:

- Loose fitting clothing must not be worn around rotating/moving machinery. This includes rolled-up cuffs on trousers or sleeves, ties and frilly garments.
- Individuals with long hair must protect their hair from contact with moving parts, particularly rapid spinning machinery (e.g. lathes, boring mills, drill press etc.)
- No jewelry (finger rings, pendant earrings, that exceed ½" below ear lobe, loose bracelets, or other dangling jewelers) may be worn while assembling, material handling, near moving machinery or electrical equipment. Medical alert identification is an exception. Tight fitting necklaces that can tucked into a shirt and will not fall out may be worn.

PPE Enforcement and Verification:

- Employees shall wear the PPE identified for their job task. Supervisors shall enforce PPE use. If employees are not complying with SRAs/Risk Assessments or this procedure, then enforcement actions (verbal or written) shall be documented and forwarded to the Human Resources Department per local disciplinary agreement.
- No employee or worker shall enter into the construction or operation area without minimum mandatory PPEs such as safety shoes, safety helmet, high visibility vest etc.
- All personnel are responsible to ensure the proper PPE is being used for designated job tasks.
- PPE requirements for particular areas must be communicated with signs placed in such areas or by any feasible means of communication as determined by each site for those tasks that require PPE but are off site and/or temporary (e.g. short-term task.) This must be documented as per the Attachment- Site Specific PPE Information. The lack of signage for any reason must not be construed as an excuse for not wearing appropriate PPE.

Eye and Face Protection –Guidance and Limitations:

- Eye protection must be worn in all areas. Safety glasses with side shields or combination of goggles, face shield as required must be worn in all operations.
- All safety glasses, chemical goggles and face shields shall meet ANSI specification Z87.1 requirements or equivalent regulatory standard and shall be imprinted by the manufacturer as such. Safety glasses must have plastic frames and impact resistant lenses. Employees who wear prescription glasses shall wear safety glasses that incorporate their prescription into the lens or shall wear protection over their prescription glasses.
- Eye and face protection will be provided at company expense.
- Welding helmets, hand shields and face shields do not provide adequate eye protection on their own and shall be used over primary eye protection.
- In cases where potential electric hazards exist, metal frame glasses, metal jewelry or other conductive material should not be worn.
- In cases where atmospheric conditions present a fogging hazard to eye and face protection, each Site or Responsible Manager or Site Deputy EHS&S Manager may use their discretion in determining the type of protection to be worn to provide the best protection while avoiding fogging. In all cases, adequate care must be taken to provide full and complete protection, and additionally must conform to ANSI standards.

- The wearing of contact lenses should be avoided in industrial environments. This contact lens guidance is due to the fact that employees will have difficulty irrigating eyes if foreign bodies or chemicals enter their eyes as contact lenses trap particles. Additionally, chemicals may react with the plastics and/or flash burns could cause the lenses to melt onto their eyes.
- In all cases, care should be taken to recognize the possibility of multiple and simultaneous exposure to different eye and face hazards. Adequate protection should be provided against the highest level of hazard. Employees shall wear eye and face protection wherever there is a reasonable probability that such protection can prevent injury, where such protection is required by policy or customer policy, or where adjacent operations or tasks can generate potential hazards impacted the employee.

Body Protection –Guidance and Limitations:

- All women employees working inside factory shall wear aprons to cover loose clothing.
- Protective clothing may be reusable or disposable, depending on the needs of the operation and/or the nature of the hazards involved.
- Protective clothing is available for body protection. Some examples include aprons, coats, coveralls, jackets, overalls, pants, shirts, and sleeves.
- Certain types of clothing are inappropriate for particular uses. Synthetic, polyester materials shall not be worn in area/work requires ESD protection. Polyester or other synthetic materials must not be worn while welding, working on or around live electrical equipment, or performing other 'hot work' due to the risk of clothes melting on skin.
- For protection from cuts, bruises and abrasions, special protectors made of Kevlar, plastic, hard fiber, or metal should be worn. These protectors are available for almost all parts of the body and should be matched for the level of freedom needed (dexterity etc.).
- It is important that the proper body protection be selected and used based on the chemicals and environmental conditions to which the employee will be exposed. Protective clothing may be required to be worn by employees for any job, as determined by HSE, customer requirements or specifications, and SRA/PPE Hazard Assessment. Refer to Attachment for site-specific information.

Foot Protection –Guidance and Limitations:

- Safety shoes provide protection against the following hazards
    - Rolling objects (e.g. barrels, generators, heavy pipe, etc.),
    - Accidental impact/puncture from sharp edges/objects, and
    - Impacts from falling objects.
- ANSI Z41 or equivalent standard safety toe, leather upper-ankle protection safety shoes with rubber soles are required for all employees who have the need to enter those areas defined/designated as "Safety Shoe Areas" by site or customer requirements for any duration. Refer to Attachment for site-specific information. If safety shoes (or equivalent foot protection).
    - For employees who work in the vicinity of electrical equipment, they should select and wear safety shoes that have non-conductive material, which protects the toes and/or metatarsal area.
    - ESD protection shoes shall be worn while working in electronics lab and other designated area.
- Sites should clearly delineate where safety shoes are required using signs or floor markings.
    - Specific details regarding safety shoe purchase for employees are negotiated at the local level. In some cases, an equivalent allowance may be made toward the purchase of an approved safety shoe desired by an employee.
    - Consideration may be given to providing "over the shoe" type protectors, particularly for infrequent wear for anyone (e.g. customers/visitors) walking/working in designated safety shoe areas/walkways.

Hand Protection –Guidance and Limitations:

- Appropriate hand protection shall be worn when an employee's hands are exposed to hazards, such as those from skin absorption of harmful substances, severe cuts, abrasions or lacerations, punctures, chemical, electrical or thermal burns. Further guidance on the major types of hand protection and their function are provided below.
- Electrical gloves may be necessary in situations involving electrical work. Due to the special nature of work involving the potential for electric shock.
- Insulated or heat resistant gloves must be worn when handling steam hose, hot parts, or when performing other duties in which regular work gloves do not afford adequate thermal protection against burning of the hands. Appropriate insulating gloves must also be worn to protect against the handling of cryogenic materials.
- Vibration-absorbing or reducing gloves shall be worn whenever possible to reduce employee exposure to vibrating or repetitive hand tools (e.g. use of a peening gun, continuous use of a hand held grinder, repetitive hammering, etc.)
- Chemical resistant gloves may be made of a variety of materials (neoprene, nitrile, butyl rubber, PVC) glove selection must be made based upon the specific chemical used during the activity. Glove manufacture permeation charts and also any chemical's MSDS must be utilized during the selection process.
- Gloves should be worn when the hands would otherwise be wet from any substance causing a slippery grip (e.g. use of hand tools.).
- Appropriate gloves shall be worn whenever possible, except when wearing them is either impractical or would create a greater hazard (e.g. when working with or around rotating parts.) If gloves cannot be worn for a task due to the increased hazard from wearing the glove, additional protective measures must be addressed in SRA or PPE assessment. The assessment shall look at the risks presented by glove use versus unprotected hands.

Hearing Protection –Guidance and Limitations

- Engineering or administrative controls shall be utilized, where feasible, to reduce noise levels to acceptable levels. Where such controls are not feasible, hearing protection devices shall be provided and shall be required to be worn by employees.
- Employees shall wear approved hearing protection when exposed to noise levels greater than the permissible noise exposures in 85 decibels (dB) as indicated by the governing regulation.
- The type of hearing protection to be used depends on the comfort of the user and noise exposure. Ear protectors fall into two main groups:
    - Ear Plugs (Insert Type) –Available in a variety of materials. Plugs must fit properly and remain correctly seated to provide the rated attenuation. Employees should wash their hands prior to handling or inserting earplugs.
    - Earmuffs –Proper fit is important. Seal must not be compromised by hair or glasses frames.
- Disposable hearing protection is designed for one use only and should be disposed of after use. Re-usable earplugs should be cleaned prior to use.
- Including proper wearing of hearing protection including limitations, i.e. earmuffs with safety glasses will not be effective to their Noise Reduction Rating (NRR) – due to leakage from the temple bars.

Respiratory Protection –Guidance and Limitations:

- As per OSHA 1910.134, or equivalent governing regulation, respiratory protection is required when air monitoring shows workplace air contamination exceeds acceptable levels. Monitoring should be conducted if employees suspect an over exposure or efforts are being made to bring exposures to as low as Reasonably Achievable (ALARA). Respirators should be used only in those cases where engineering controls cannot reduce airborne concentrations to below acceptable levels.
- Employees must use NIOSH approved respirators or equivalent for all designated job tasks requiring respiratory protection. To wear a respirator employees must be qualified by medical certification and training.

Fall Protection –Guidance and Limitations:

- Personnel Fall Protection harnesses shall be used as an alternative fall protection when equipment and walking and working surfaces such as ladders, platforms, scaffolds, runways, roofs and open floors cannot be guarded as required.
- Lifelines and lanyards shall be used in accordance with Fall Protection for employee safeguarding. Any lifelines or lanyards subjected to in-service loading shall be immediately and permanently removed from service as employee safeguarding equipment and disposed of.
- Lifelines shall be secured above the work level to an anchorage point or structural member capable of supporting a minimum dead weight of 5,400 pounds (2450 kg).
- Harness lanyards shall be at least ½ inch (1.25 cm) diameter nylon rope or equivalent, shall have a nominal breaking strength of 5,400 pounds (2450 kg), and shall be of such length and arrangement that when tied off, will restrict a fall to less than 4 feet (1.2m) per best practice.
- It is required that employees and contractors use two lanyards or a two legged "Y" lanyard, to ensure that 100% tie off can be achieved including transitioning to different areas.
- A harness shall be worn and a lanyard attached to the boom or basket when working from an aerial lift.
- Each piece of a personal fall arrest system (harness lanyard, lifelines, etc.) shall be compatible (i.e. different manufacturers do not always have equipment that in inter-company compatible) and certifications and rating are based on other specific components.

Inspection and Maintenance:

- All body harnesses, lifelines, and lanyards shall be inspected before each use.
- All lines, belting, hooks, fastenings, and other parts should be checked for tears, breaks, damage, heavy wear, deformation, and missing parts. If any defects are found, the equipment must be immediately removed from service until the defective parts are appropriately repaired or replaced

1.1.34 Training on Use of PPEs

Employees will receive initial PPE training as dictated in Training Matrix. All employees required to wear PPE will participate in initial PPE training, which will cover the following topics, at minimum:

  - When PPE is necessary,
  - What PPE is necessary,
  - How to properly put on, take off, adjust and wear PPE,
  - The limitations of the PPE, and
  - The proper care, maintenance, useful life and disposal of the PPE.
- Where PPE is provided workers must be informed of the risks against which they are being protected by the PPE.
- Workers must also be provided with suitable information, instruction and training (including training in the use, care or maintenance of PPE) to enable them to make proper and effective use of any PPE provided for their protection.
- PPE users must be trained as regards the wearing, proper use and any limitations of PPE.
- Training, both theoretical and practical, should also cover persons involved in the selection, maintenance, and repair and testing of PPE.
- The level of training provided will vary with the level of risk involved and the complexity and performance of the equipment. For instance, the use of respirator equipment will require a comprehensive degree of training with regular refresher courses, whereas the training for using protective gloves for dealing with hazardous substances may require demonstration only. The frequency of the refresher courses required in the case of PPE for high-risk situations will depend on the nature of the equipment, how frequently it is used and the needs of the employees using it.

1.1.35 Test & Inspection

- PPE must be thoroughly examined regularly by competent staff according to manufacturer's instructions.

- As a general rule, simple maintenance may be carried out by the user, provided that he or she has been adequately instructed and trained (e.g. lens cleaning on goggles or replacing helmet straps).
- The examination, maintenance and repair of PPE used in high-risk situations (e.g. PPE used by firemen) should be carried out by properly trained staff who manufacturer or supplier (or both). Those involved should have the necessary tools and materials to carry out proper repairs.
- Monthly audits shall be conducted and documented to measure and verify compliance with this procedure. This can be conducted in conjunction with routine walkthrough or other established audits. Refer to Attachment for site-specific audit template and example. Non-compliance with the PPE procedure shall be documented using Audit Tracker or equivalent tracking tool, and corrective or disciplinary actions implemented.
- Program updates will incorporate the assessment findings, employee feedback, reassessment on effectiveness, enforcement trends, injury and illness trends, and regulatory requirements.

1.1.36 Record Keeping

Site Specific PPE Information

Name and Location of Site:

Name of Site EHS Manger or Site Deputy EHS&S Manager :

List the person responsible for the distribution of PPE and the storage location:

Controlled PPE

PPE	SYMBOL	RESPONSIBLE PERSON	STORAGE LOCATION
RESPIRATORS AND RESPIRATOR CARTRIDGES			
SAFETY HARNESS			
SAFETY BELT			
OTHERS			

Uncontrolled PPE

PPE	SYMBOL	RESPONSIBLE PERSON	STORAGE LOCATION
HAND PROTECTION (GLOVES)			
BODY PROTECTION (TYVEX SUITS, APRONS)			

FOOT PROTECTION	
EYE/FACE PROTECTION	
HEARING PROTECTION	
HEAT/COLD PROTECTION	
PROTECTIVE FACE SHIELD	
HARD HAT	
WELDING MASK	
HIGH VISIBILITY CLOTHING	

Electrical Safety

This safety procedure provides guidelines for safely working around electrical hazards. It includes provisions for training, lockout requirements, and specific types of work practices and the required precautionary practices when using portable electric equipment. It is the responsibility of each exposed employee's immediate supervisor to ensure that the employee has received the training necessary to safely perform his or her duties.

Employees will be trained in specific hazards associated with their potential exposure. This training will include isolation of energy, hazard identification, premises wiring, connection to supply, generation, transmission, distribution installations, and clearance distances, use of personal protective equipment and insulated tools, and emergency procedures.

General Instructions:

- Qualified or Authorized Person: Those persons who are permitted to work on or near exposed energized parts and are trained in the applicable electrical safe work practices.

- De-energized parts: All electrical parts exceeding 50 volts will be de-energized before an employee works on or near equipment. When any employee is exposed to direct or indirect contact with parts of fixed electrical equipment or circuits that have been de-energized, the electrical energy source will be locked out.
- Energized part: No person should work in energized part.
- Portable ladders will have nonconductive surfaces if they are used where the employee or the ladder could be exposed to electrical shock hazards.
- Employees will be provided with adequate light to work on energized equipment or equipment will be relocated to ensure adequate light is available.
- If circuits are tripped using a protective device such as ground fault circuit interrupter (GFCI), power will not be restored until the reason for the interruption is determined and corrected.
- All electrical equipment and machinery must be grounded effectively so that there is no potential difference between the metal enclosures. Use the voltage detector to find discrepancies and other test equipment to determine the corrective action required.
- Where there is an employee exposure to potential line-to-ground shock hazards, GFCI protection should be provided. This is especially important in work areas where portable electrical equipment is being used in wet or damp areas in contact with earth or grounded conductive surfaces.
- Provide insulation mats and electrical resistant personal protective equipment's (PPEs), to the workers working on electrical circuits or electrical equipment's.
- For combustible/flammable atmospheres, all electric equipment and wiring systems in classified locations must meet the regulatory standard.

1.1.37 Lock-out & Tag-Out

To protect employees who undertake service or maintenance on machines or equipment and who could be injured by an unexpected start-up or release of electrical energy. Service or maintenance includes erecting, installing, constructing, repairing, adjusting, inspecting, unjamming, setting up, trouble-shooting, testing, cleaning, and dismantling machines, equipment or processes. It should be ensured that machinery or equipment is stopped, isolated from all energy sources, and properly locked or tagged out.

Lockout and Tagout devices must meet the following criteria to ensure that they are effective and not removed inadvertently:

- Lockout devices must work under the environmental conditions in which they are used. Tagout device warnings must remain legible even when they are used in wet, damp, or corrosive conditions.
- Lockout and Tagout devices must be designated by color, shape, or size. Tagout devices must have a standardized print and warning format.
- Lockout devices and Tagout devices must be strong enough that they can't be removed inadvertently. Tagout devices must be attached with a single-use, self-locking material such as a nylon cable tie.
- Any employee who sees a lockout or Tagout device must be able to recognize who attached it and its purpose.

General Instruction

Employees must do the following before implementation of LOTO:

- Inform all affected employees of equipment shutdown.
- Shut down equipment.
- Isolate or block electrical energy.
- Remove any potential (stored) energy.
- Lockout or Tagout the energy sources.
- Verify the equipment is isolated from the energy and de-energized.

Employees must do the following before they remove lockout or Tagout devices and re-energize equipment:

- Remove tools and replace machine or equipment components.
- Inform co-workers about energy-control device removal.

- Ensure all workers are clear of the work area.
- Verify machine or equipment power controls are off or in a neutral position.
- Remove the lockout or Tagout device.
- Re-energize equipment.

1.1.38 Hand and Power Tools

All portable electric equipment must be handled in safe manner that will not damage or reduce service life.

General Instructions

- Flexible cords connected to equipment should not be used for raising or lowering equipment and should not be used if damage to the outer insulation is present.
- Visual inspections are required and unauthorized alterations of the grounding protection are not allowed to ensure the safety of employees. Prior to each shift, a visual inspection should be performed for external defects and for possible internal damage.
- Attachment plugs and receptacles should not be connected or altered in a manner that would prevent proper continuity of the equipment grounding conductor. In addition, these devices should not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors.
- Portable electric equipment and flexible cords used in highly conductive work locations or in job locations where employees are likely to contact water or conductive liquids shall be approved by the manufacturer for those locations. The hazardous locations that employees should be aware of include, wet locations and locations where combustible or flammable atmospheres are present.
- For wet locations, employees' hands will not be wet when plugging and unplugging energized equipment. Energized plug and receptacle connections should be handled only with protective equipment if the condition could provide a conductive path to the employee's hand (if, for example, a cord connector is wet from being immersed in water). In addition, ground-fault circuit interrupter (GFCI) protection is required for some equipment/locations and is also recommended for use in all wet or highly conductive locations.
- For combustible/flammable atmospheres, all electric equipment and wiring systems in classified locations must meet the regulatory standard.

1.1.39 Training

Employees who may be exposed to hazardous energy will receive training before assignment to ensure that they have skills to apply, use, and remove energy controls.

- Affected employees will be trained in the purpose and use of electrical energy control procedures.
- Authorized employees will be trained to recognize electrical energy sources, the type and magnitude of energy in the workplace, the methods and means necessary for isolating and controlling energy, and the means to verify that the energy is controlled.
- Employees whose jobs are in areas where energy-control procedures are used will be trained about the procedures and the prohibition against starting machines that are locked or tagged out.
- Employees will be retrained annually to ensure they understand energy-control policy and procedures.
- Authorized and affected employees will be retrained whenever their job assignments change, energy-control procedures change, equipment or work processes present new hazards, or when they don't follow energy-control procedures.

Training records will be maintained for each authorized and affected employee including the employee's name and the training date.

Confined Space

The purpose of this procedure is to reduce or eliminate risk associated with the entry into confined spaces and maintain regulatory compliances

Confined space is an enclosed or partially enclosed space that:

- Is large enough for a person to enter;
- Is not primarily designed or intended for human occupancy;
- Has a restricted entrance or exit by way of location, size or means; and
- Can represent a risk for the health and safety of anyone who enters, due to one or more of the following factors:
  - Its design, construction, location or atmosphere
  - The materials or substances in it
  - Work activities being carried out in it, or the
  - Mechanical, process and safety hazards present

Confined spaces can be below or above ground. Confined spaces can be found in almost any workplace. A confined space, despite its name, is not necessarily small. Examples of confined spaces include silos, vats, hoppers, utility vaults, tanks, sewers, pipes, access shafts, truck or rail tank cars, aircraft wings, boilers, manholes, manure pits and storage bins. Ditches and trenches may also be a confined space when access or egress is limited.

1.1.40 Hazards in Confined Space

- Poor air quality: There may be an insufficient amount of oxygen for the worker to breathe. The atmosphere might contain a poisonous substance that could make the worker ill or even cause the worker to lose consciousness. Natural ventilation alone will often not be sufficient to maintain breathable quality air.
- Chemical exposures due to skin contact or ingestion as well as inhalation of 'bad' air.
- Fire Hazard: There may be an explosive/flammable atmosphere due to flammable liquids and gases and combustible dusts which if ignited would lead to fire or explosion.
- Process-related hazards such as residual chemicals, release of contents of a supply line.
- Safety hazards such as moving parts of equipment, structural hazards, entanglement, slips, and falls.
- Temperature extremes including atmospheric and surface.
- Shifting or collapse of bulk material.
- Barrier failure resulting in a flood or release of free-flowing solid.
- Uncontrolled energy including electrical shock.
- Visibility.

1.1.41 Control Measures

- The engineering control commonly used in confined spaces is mechanical ventilation. The Entry Permit system is an example of an administrative control used in confined spaces. Personal protective equipment (respirators, gloves, ear plugs) is commonly used in confined spaces as well.
- The important thing to remember is that each time a worker plans to enter any work space, the worker should determine if that work space is considered a confined space. Be sure the confined space hazard assessment and control program has been followed.
- Before entering any confined space, a trained and experienced person should identify and evaluate all the existing and potential hazards within the confined space. Evaluate activities both inside and outside the confined space.
- Air quality testing: The air within the confined space should be tested from outside of the confined space before entry into the confined space. Care should be taken to ensure that air is tested throughout the confined space - side-to-side and top to bottom. A trained worker using detection equipment which has remote probes and sampling lines should do the air quality testing. Always ensure the testing equipment is properly calibrated and maintained. The sampling should show that:
  1. The oxygen content is within safe limits - not too little and not too much.
  2. A hazardous atmosphere (toxic gases, flammable atmosphere) is not present.
  3. Ventilation equipment is operating properly.
- The results of the tests for these hazards are to be recorded on the Entry Permit along with the equipment or method(s) that were used in performing the tests. Air testing may need to be ongoing depending on the nature of the potential hazards and the nature of the work.
- Implement permit to work system for confined space entry.

1.1.42 Responsibilities

Health & Safety Personal

- Undertake a confined space survey and inventories all the confined spaces in the facility
- Classify a confined space as permit or non-permit confined space
- Review and approve the Confined Space Hazard Assessment Form
- Maintain Training Records, monitoring equipment calibration records, incident reports and Risk Assessments records
- Review emergency and rescue procedures prepared by EHS Manger or Site Deputy EHS&S Manager
- Notify the nearest fire station, ambulance, police in case of any accident
- Undertake review of permits as issued by H&S representative
- Identify all confined spaces with H&S manager and assist him in Inventorization, and classification of the identified confined spaces
- Complete and submit the Confined Space Hazard Assessment Form to H&S Manager for review
- Identify adequate PPE for the entry to confined space and ensure their availability all the time
- Ensure that proper signages are available on the confined space
- Calibrate all air monitoring and testing equipment prior to entry to a confined space
- Establish Rescue Procedures with approval from Health & Safety Manager
- Perform periodic (once in a year) air monitoring of confined space locations
- Issue permit to work for entry to confined space.

Maintenance Supervisor

- Provision of adequate PPEs and communication device to attendant and entrant/s
- Ensure that both entrant and attendant are adequately trained
- Prohibit any unauthorized entry
- Ensure provision of working alarm systems near the confined spaces
- Procure adequate permits for entry to confined spaces.

Rescue Team

- Remain alert at all times outside and near the entrance
- Remain available or immediately reach the destination at the time of emergency
- Ensure that first aid supplies and emergency response equipment are readily available.

Attendant

- Remain alert and responsive to the alarm signals as identified to the respective confined space at all times outside and near the entrance
- Monitor the safety of the entrant in the confined space
- Provide assistance to the entrant
- Maintain continuous two way communication with the entrant
- Initiate an emergency response when required
- Shall not enter the confined space for rescue under any circumstance
- Adequately trained of the rescue procedures in case of emergency
- Ensure compliance to the safety procedures as identified in the permit to work system.

Entrant

- Remain alert when working in the confined space
- Perform assigned task in a safe manner
- Be aware of the potential hazards in the confined spaces
- Immediately report any concerns to the attendant
- Immediately exit the confined space if alerted by attendant
- Ensure compliance to the safety procedures as identified in the permit to work system.

1.1.43 Procedures

Risk Assessment

- Health & Safety representative shall perform a risk assessment for each confined space which includes the following steps

- Identification of all confined space and their associated risks
- Classification into permit required and non-permit required confined spaces
- Evaluation of the risk associated with each hazard
- Identification of control measures to reduce or eliminate the risk like communication, adequate training, use of personal protection equipment,
- Regular monitoring and review of the space and if necessary reclassify non-permit confined space to permit required confined space in case of any change in the use of the space which may pose a hazard to the entrant.

- A Confined Space Hazard Assessment Form shall be documented by the Site Deputy EHS&S Manager as per the format attached in the attachment and shall be approved by engineering head of respective sites.
- If a hot work is involved in the confined space, then a special hot work permit must be obtained from the respective maintenance supervisor.

Air Monitoring

- Maintenance Supervisor shall perform appropriate tests for harmful substance and oxygen before entry into the confined space. In case the test indicates an unsafe condition, the confined space must be adequately ventilated and cleaned.
- Site Deputy EHS&S Manager shall be responsible for periodically retesting the confined space.

Entry Procedure

- Site Deputy EHS&S Manager shall ensure that worker enter the confined space only under the following conditions:
  - Opening is sufficient to allow safe passage of entrant
  - Mechanical Equipment in the confined space is locked out
  - Pipes and other supply lines are blanked off
  - Confined space is continuously ventilated
  - Adequate barriers are erected to prohibit any unauthorized entry.
- A worker shall not be allowed to enter a confined space without a valid entry permit. Health & Safety Manager shall ensure that the permit is provided only under the following conditions:
  - Confined Space name
  - Purpose and duration of work
  - Date and time of entry and date of expiry of permit
  - Required PPEs like full body harness with a lifeline
  - Required atmospheric testing and latest monitoring results
  - Associated hazards and identified control measures
  - Communication Procedure for attendants and entrants.
- An entrant shall be in continuous communication with the attendant through the communication device to alert in case of any emergency.

1.1.44 Training

- SAEL shall conduct training for all employees involved in confined space work including entrant, attendant, supervisors, rescue team, contractors. The training should include following:
  - Use of PPE
  - Confined space hazard and control measures
  - Communications including adequate signage
  - Rescue and emergency requirements
- The training records shall be maintained by the Site Deputy EHS&S Manager

1.1.45 Record Keeping

- Site Deputy EHS&S Manager shall maintain following during the entire life cycle of the project
  - Incident Reports
  - Confined Space Hazard Assessment records
  - Entry Permits
  - Training record.

Checklist for Entry into Confined Space

1	**SAFETY MEETING**
1.1	Safety Meeting is conducted prior to survey to discuss all aspects of safety measures
1.2	Will someone accompany you into the space
2	**PERMIT**
2.1	Has a confined space entry been issued?
2.2	Is the permit up to date?
3	**TESTING**
3.1	Was the atmosphere in the confined space tested?
3.2	Was oxygen more than 20.8% but not more than 21%?
3.3	Were toxic, flammable vapours present? -Hydrogen Sulphide -Carbon Monoxide -Methane -Carbon dioxide -Others
4	**MONITORING**
4.1	Will the atmosphere in the space be monitored while work is going on?
5	**VENTILATION**
5.1	Has the space been ventilated before entry?
5.2	Will ventilation be continued before entry?
5.3	Is the air intake for ventilation system located in the area that is free of combustible dusts and vapours and toxic substance
5.4	If atmosphere was found unacceptable and then ventilated, was it retested before entry?
6	**ISOLATION**
6.1	Has the space been isolated from other system?
6.2	Has electrical equipment been locked out?
6.3	Has disconnects been used where possible?
6.4	Has mechanical equipment been blocked, choked or disengaged where necessary?
6.5	Have lines under pressure been blanked and bled?
6.6	Have the necessary notice boards been placed in the locations and at confined space entry points?
7	**CLOTHING/EQUIPMENT**
7.1	Is special clothing required (boots, chemical suits, glasses etc.)?
7.2	Is special equipment required? (rescue equipment, communication equipment, heavy duty raft etc.)?
7.3	Are special tools required?(spark proofs, intrinsically safe)
8	**TRAINING**
8.1	Have you been trained in confined space entry and do you know what to look for?
9	**STANDBY/RESCUE**
9.1	Will there be a standby person on the outside in constant visual or auditory communication with the person inside?

9.2 Will the standby person be able to see and hear the person inside all the times?

Hot Work

Hot work is any process that can be a source of ignition when flammable material is present or can be a fire hazard regardless of the presence of flammable material in the workplace. Common hot work processes are welding, soldering, cutting, etc. Hot work may also include electrical work in areas which may contain flammable or explosive atmospheres.

Particulars	Definition
Hot Work	Any work that may create an ignition source e.g. welding, thermal or oxygen cutting or heating, grinding and other related heat or spark producing operations
Hot Work Permit	It is a permit outlining conditions and safety conditions that must be met prior to beginning any hot work. A hot work permit is required for any work that might ignite flammable vapours or combustible materials.
Lower Explosive Limit (LEL)	It is the lowest concentration of gas or vapor(in %) that burns or explodes if an ignition source is present at ambient temperatures
Safe Atmosphere for Hot Work	The atmosphere within 50 feet of where hot work is going to be performed where any flammable vapours detected are 10% of the LEL or less.
Fire Watch	An individual trained in the use of fire extinguishing methods and familiar with methods for sounding an alarm in case of fire.
Qualified Gas Tester	A qualified gas tester is required to conduct gas testing at the job site and is well trained to operate gas testing instruments for taking samples and analyzing them for the presence of atmospheric contaminants.
Health & Safety Manager	An elected employee responsible for representing the Core Work Group on matters related to Occupational Health & safety(OHS)
Supervisor	A person responsible for overlooking all the major activities at the particular workplace.
Contractor	Include any service providers who are not direct employees of SAEL and are providing services in relation to maintenance and repair work. This includes contractor employees, subcontractors and subcontractor employees. Services can be of long or short nature.

1.1.46 Hazards in Hot work

Workers performing hot work are exposed to the risk of fires from ignition of flammable or combustible materials in the space, and from leaks of flammable gas into the space, from hot work equipment.

The potential hazard is getting burned by fires or explosions during hot work.

1.1.47 Responsibilities

Deputy EHS&S Manager

- Ensure that the hot work safety procedure is implemented
- Conducting annual reviews and ensuring all personnel understand their roles and responsibilities under this procedure.
- Ensuring all contractors are familiar with and understand their responsibilities under this procedure.
- Taking prompt disciplinary action for any violation of this procedure

Person in Charge (Supervisor or Contractor)

- Ensuring that the work area is safe and properly cleared up before and after the start of work
- Revisit the work area after suitable period of time(generally 1 hour) to ensure no signs of possible fire
- Ensure employees (hot work personnel)receive training to perform hot work and maintain documentation of such training
- Ensure employees are provided with and use fire protection equipment and fire alarm
- Develop and maintain a listing of all qualified employees (Hot work personnel) under their supervision.

Hot Work Personnel

- Obtain approval from their supervisor before beginning any hot work activity
- Perform hot work activities only where conditions are safe to do so
- Continue to perform hot work as long the conditions are unchanged
- Observe all fire precautions

Fire Watch

- Fire watch Personnel shall have fire extinguishing equipment readily available and be trained in its use
- Fire Watch Personnel shall be familiar with the facilities and procedures for sounding an alarm in the event of fire.
- The personnel shall watch for fires in all the exposed areas

1.1.48 Procedures

The Workplace manager shall ensure that all hazardous area surrounding the hot work area are adequately isolated to prevent the ignition of any materials, contaminants, agents or conditions that may be harmful to a person or property.

Hot Work Hazard Identification and Risk Assessment

- The Workplace Manager shall identify all areas and types of hot work that may be performed in the workplace in consultation with the site safety in charge and employees.
- Hot Work Hazard may be identified as a result of:
    - An incident, injury, near miss being reported in the workplace
    - A new task being introduced, e.g. maintenance work on an existing structure
    - New Plant or equipment being used
    - Existing Work Conditions/Environment has been changed (e.g. flammable items are now stored adjacent to workshop areas)
- The hazards arising from the hot work may include:
- Risk to the building or surroundings due to:
    - Work activities that may generate sparks and heats such as Grinding, Burning etc.
    - Presence of combustible and flammable materials in the surrounding area
- Risk of eye injury including exhaustion and burns
- Asphyxiation by gases and vapours
- All the risk assessment shall be carried out by a competent person who has sufficient knowledge, technical training and practical experience of Hot Work process and their associated hazards.
- Any new task involving hot work is to be risk assessed as outlined in the HIRA form

Risk Control

Safety Manager must follow the hierarchy of controls (from most to least effective) to reduce the risk of harm or injury occurring as a result of hot work. This includes:

- Eliminating hot work in all outside areas;
- Provision of PPE (fire extinguishers and spark/fire retardant clothing)
- Developing and Training employees in performing hot work activities

Training

Workplace Manger shall ensure that all the employees who are required to undertake hot work activities shall be provided with hot work training prior to commencing of the activities.

The training shall be conducted by the EHS Manger or Site Deputy EHS&S Manager

- Legislative requirements
- The work practices to be followed when performing specific hot work
- The process of identifying hot work and the associated hazards
- The measures used to control the risk of harm or injury
- Proper use of required PPEs
- Incident Reporting Procedures to be followed in case of injury
- Training Records shall be maintained by the safety Manager

Signage

Warning Signage shall be located in the work area and barricades erected where necessary

Hot Work

- Prior to hot work activities being conducted by employees, the Person In charge (Contractor/Supervisor) should issue a Permit to Work- Hot Work to the employee who will carry out the hot work.
- The Person In charge shall ensure the requirements are met before beginning a hot work:
    - A Fire Watch must be maintained in: A fire watch will observe conditions in the immediate and adjacent areas to assure that hot work is performed safely.
    - Relocation of all movable combustible fire hazards in the vicinity to a safe location
    - Drains and Vents within 50 feet must be covered with a material suitable for preventing sparks from entering the drain
    - A fire extinguisher in the immediate vicinity.
- Activities requiring a Permit to Work include but not limited to:
    - Work on vessels, including tanks and pipes, that have contained flammable materials or are lined or coated with flammable or combustible materials,
    - Work in areas that contain flammable or combustible materials that cannot be protected by following the Safe Operating Procedure alone,
    - Work in locations that could expose other users of the area to hazards, e.g. work above building entrances or on circulation routes (unless this is a regular activity for which a Standard Operating Procedure is available).
- A work site must be ready for hot work when the requirements have been addressed, all signatures obtained and the Hot Work Permit has been posted on site. Work must be stopped in case of any leakage, spill or accident .The area must be reinspected and confirmed safe before the work may resume. Work also be stopped in case the fire watch leaves the site.
- A fire watch must remain in the area for 30 minutes after hot work has been completed to assure that all metal surfaces are cool and there are no smoldering materials.
- On completion of work, the supervisor in direct control of the employee shall acknowledge in writing that the work has been completed and all the persons employed have left the work area safely.
- The supervisor/contractor shall also conduct a fire check of the work area after the work has been completed to ensure the hot work area is completely safe.

Record Keeping

Site Deputy EHS&S Manager shall maintain following during the entire life cycle of the project

- Hot Work Permits in relation to the hot work after the completion of hot work
- Completed Risk Assessment for 5 years from the date of preparation
- Training Records

1.1.49 Controls for Hot Work

- Special precautions must be taken to ensure proper ventilation and air quality of area when burning or welding as well as ensuring proper personal protective equipment is used including the use of fire blankets to prevent fire or damage to other products as required. Fire blankets must always be kept in good condition.
- Hot work should be avoided whenever possible and inherently safer methods should always be considered.
- Whenever possible, hot work operations should be conducted outdoors, away from critical operations and combustible materials. Identify a designated locations to undertake hot work;
- Implement the permit to work system for non-routine hot work;
- Properly trained personnel should be assigned to undertake and supervise hot work;
- Have a portable fire extinguisher and/or fire hose readily available and is adequately trained in its use.
- Completely familiar with site-specific fire alarm locations and emergency notification procedures.
- Leaves the hot work area in a safe condition after work is completed.
- All employees and contractor workers involved with hot work activities should receive annual training and certification. In addition, hot work management procedures should be formally reviewed annually, at a minimum, to assess the effectiveness of the program and any needed changes and/or improvements properly implemented.

1.1.50 Checklists & Record Keeping

Site Deputy EHS&S Manager shall maintain following during the entire life cycle of the project

- Hot Work Permits in relation to the hot work after the completion of hot work
- Pre-Hot Work Check
- Completed Risk Assessment for 5 years from the date of preparation
- Training Records

Please refer integrated PTW Checklist for Hot WORK Permit

PRE-HOT WORK CHECK

Prerequisite Requirements	Conditions Met(TICK if yes, mark N/A if not applicable)
Is hot work to be performed?	
Is equipment to be used in good Working Order and properly inspected or tested as required?	
Have all personnel be provided with adequate PPEs(gloves, eye protection, shielding, dust mask)	
Is a fully charged, operational and fully rated fire extinguisher available?	
Are all combustible material removed from the site of operations and floors swept clean of combustible materials?	
Are all combustible material remaining in the vicinity is either thoroughly drenched with water or covered with damp sand or covered with non-combustible sheets?	
Are all gaps in walls and floors through which sparks could pass covered with sheets of non-combustible materials?	
Is the number of the nearest ambulance/police station displayed?	
Are adequate precautions taken to avoid accidental operation of automatic fire detection systems (isolation, physical barrier etc.)	

Work at Height

Work at height means work in any place where, if there were no precautions in place, a person could fall a distance liable to cause personal injury. For example:

1. Working on a ladder, flat roof, elevated platform;
2. Could fall through a fragile surface; and
3. Could fall into an opening in the floor or a hole in the ground.

1.1.51 Hazards for Work at Height

Most fatal and serious injuries involving elevated platforms, lifts, etc. are arising from:

- ***Overturning:*** the machine/ ladder may overturn throwing the operator from the basket;
- ***Falling:*** an operator/worker may fall from the basket during work activities;

1.1.52 Control Measures

Conduct the risk assessment prior to undertaking the work at height. Factors to weigh up include the height of the task, the duration and frequency, and the condition of the surface being worked on.

- Avoid work at height where it's reasonably practicable to do so;
- Where work at height cannot be easily avoided, prevent falls using either an existing place of work that is already safe or the right type of equipment;
- Minimize the distance and consequences of a fall, by using the right type of equipment where the risk cannot be eliminated; and
- Implement Permit to Work System for all types of work at height.

Do's and Don'ts of Work at Height

Do's

- Person to work at height must be trained;
- Medical testing for people required to work at height should be conducted and the tests should include conditions such as vertigo or illness that may affect the person or the work;
- As much as possible, work from the ground;
- Ensure workers can get safely to and from where they work at height;
- Ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly;
- Take precautions when working on or near fragile surfaces;
- Provide protection from falling objects; and
- Consider emergency evacuation and rescue procedures.

Don'ts

- Overload ladders – consider the equipment or materials workers are carrying before working at height. Check the pictogram or label on the ladder for information;
- Overreach on ladders or stepladders;
- Rest a ladder against weak upper surfaces, e.g. glazing or plastic gutters;
- Use ladders or stepladders for strenuous or heavy tasks, only use them for light work of short duration (a maximum of 30 minutes at a time); and
- Let anyone who is not competent (who doesn't have the skills, knowledge and experience to do the job) work at height.

1.1.53 Mobile Elevated Working Platforms

Mobile elevating work platforms (MEWPs) is a mobile machine which consists as a minimum of a work platform with controls, an extending structure and chassis; that is intended for work at height.

General Instructions

To prevent the aforementioned hazards it is important to select the right MEWP for the job and the site.

- Have a plan for rescuing someone from a MEWP and practice it – someone on the ground should know what to do in an emergency and how to operate the machine's ground controls.
- MEWPs with shrouded or otherwise protected controls are available.
- Keeping the platform tidy will reduce the risk of the operator tripping or losing balance while in the basket.
- Ground conditions: The platform should be used on firm and level ground. Any temporary covers should be strong enough to withstand the applied pressure. Localized ground features, e.g. trenches, manholes and uncompact backfill, can all lead to overturning.
- Outriggers: Outriggers must be extended and chocked before raising the platform. Spreader plates may be necessary – check the equipment manual.
- Guardrails: Make sure the work platform is fitted with effective guard rails and toe boards.

- Arresting falls: if there is still a risk of people falling from the platform a harness with a short work restraint lanyard must be secured to a suitable manufacturer provided anchorage point within the basket to stop the wearer from getting into a position where they could fall from the carrier.
- Falling objects: barrier off the area around the platform so that falling tools or objects do not strike people below.
- Weather: high winds can tilt platforms and make them unstable. Set a maximum safe wind speed for operation. Storms and snowfalls can also damage platforms. Inspect the platform before use after severe weather.
- Handling materials: if used to install materials check the weight and dimensions of materials and consider any manual handling and load distribution issues. You may need additional lifting equipment to transport materials to the work position.
- Nearby hazards: do not operate a MEWP close to overhead cables or other dangerous machinery or allow any part of the arm to protrude into a traffic route.

1.1.54 Scaffolds and Ladders

1. Scaffold is a temporary structure used to support a people and materials to aid in the construction, maintenance and repair of structures. Scaffolding is also used in adapted forms for formwork and shoring, concert stages, access/ viewing towers.
2. Ladder: A ladder is a vertical or inclined set of rungs or steps. There are various types of ladders but basic categorization is portable and fixed ladders.

General Instructions

- Read and follow all labels/markings on the ladder/ scaffolds.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect prior to using it. If it is damaged, it must be removed from service and tagged until repaired or discarded.
- Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the structures when climbing. Keep your body near the middle of the step and always face the ladder while climbing.
- Ladders must be free of any slippery material on the rungs, steps or feet.
- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Use a ladder only on a stable and level surface unless it has been secured (top or bottom) to prevent displacement.
- Do not place ladder/scaffolds on boxes, barrels or other unstable bases to obtain additional height.
- Do not move or shift ladder/scaffolds while a person or equipment is on the ladder.
- An extension or straight ladder used to access an elevated surface must extend at least 3 feet above the point of support. Do not stand on the three top rungs of a straight, single or extension ladder.
- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface.
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.
- Be sure that all locks on an extension ladder are properly engaged.
- Do not exceed the maximum load rating of a ladder. Be aware of the ladder's load rating and of the weight it is supporting, including the weight of any tools or equipment.
- Employees shall not work on scaffolds/ladders during storms or high winds.
- The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
- Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended load.
- Nails or bolts used in the construction of scaffolds shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold. Nails shall not be subjected to a straight pull and shall be driven full length.
- Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard Wire one-half-inch mesh or the equivalent, where persons are required to work or pass under the scaffolds.

1.1.55 Lifts and Hoists Safety

Lifts and hoists are used for raising or lowering persons and goods from one floor to another within a building. They are driven by electric motor either directly (electric lifts) or indirectly through the movement of a liquid under pressure generated by a pump driven by electric motor (hydraulic lifts).

General Instructions

- Passenger and goods lifts should comply with safety requirements with view to safeguarding people and the objects against the risk of accidents associated with their operations. Possible accidents with such equipment include shearing; crushing; falling; impacts; trapping; fire; electrocution; damage to material etc. The persons to be safeguarded are the users; maintenance and inspection personnel and the persons outside the lift well and in the machine room. The objects to be safeguarded are the material in the cage/car; the component of the lift installed and the building.
- All components of the lift should be properly designed and should be of sound mechanical and electrical construction having adequate strength and quality.
- Shearing is prevented by providing adequate clearances between moving components and between moving and fixed parts.
- Crushing is prevented by safeguarding /providing sufficient headroom at the top of the cage/car in its highest position and the upper structure and a clear space in the pit for persons to remain safely when the cage/car is in its lowest position.
- Protection against falling down the well is obtained by properly closed doors without any opening and by preventing the movement of the machine through cutting off the power to the control circuit until the doors are fully closed and safely locked.
- Impact is limited by restraining the kinetic energy of closing power operated doors, trapping of persons in the cage/car, by providing unlocking device on the doors and a means of lifting the brakes and moving the machine by hand.
- Overloading of the cage/car is prevented by a strict ratio between the rated load and net floor area of the cage/car.
- Prior to putting a lift into service and also when some modification /alteration major repair work is done, it should be examined and tested by an organization approved by the public authorities to establish its conformity with the applicable up-to-date standards.

1.1.56 Training and competence

Formal training for the type of MEWP/ lifts/ hoist or other elevated platforms, operators should have familiarization training on the controls and operation of the specific make and model of equipment's they are using.

1.1.57 Inspection, maintenance and examination

- A programmed of daily visual checks, regular inspections and servicing schedules should be established in accordance with the manufacturer's instructions and the risks associated with each Mobile Elevated Work Platforms (MEWP), scaffold, ladders, lifts and hoists.
- Operators should be encouraged to report defects or problems. Reported problems should be put right quickly and the equipment's taken out of service if the item is safety critical.
- These equipment must be thoroughly examined at least every six months or before by a competent person or in accordance with an examination scheme drawn up by such a competent person.

Checkpoints to be considered for work at height (=>2 m)

S No	Checkpoints	YES/NO/NA	S No	Checkpoints	YES/NO/NA
1	Is the surrounding area checked and employees have been cautioned and shifted to safer place?		8	Are the required Personal Protective Equipment (Hand gloves, apron, helmet, safety glasses, Shoes, Safety belt, hearing protection, respirator etc.) provided?	
2	Is the surrounding area barricaded and caution board displayed?		9	Is the location of nearest phone, safety shower /eyewash and fire extinguisher reviewed before start of work?	

3	Is the proper scaffold/ladder provided and tied at top?	10	Is the LOCKOUT and TAGOUT system used to isolate all type of energy sources before attending the work?
4	Is the walking platform provided and supported with structure?	11	Have the workers attending the work been informed about the emergency procedure?
5	Is the safety belt used and lifeline anchored?	12	Does the electrical cable and equipment have earthing and three-pin?
6	Are the additional fall protection measures like safety net, crawling boards, fall arrester provided?	13	After the work are the hand tools removed? (after completion of work)
7	Is the standby/supervisor person deputed to watch and warn personnel?	14	Is the dirt/waste and material removed from the site after the work? (after completion of work)

1.1.58 Records & Documentation

Permit for working at height to be maintained

Please refer integrated PTW Checklist for Working at Height Permit

Pressure Vessels & Boiler Management

This procedure describes proper use and maintenance of pressure vessels, as the pressure vessels represent a risk for explosion and physical injury if not properly maintained.

This SOP describes safety requirements and practices for pre-fabricated / custom built pressure vessels that are installed and operated. Pressure vessels, as defined by this SOP include:

0. Boilers;
1. Air tanks;
2. Vacuum systems and lines; and
3. Refrigeration and air conditioning components (i.e., compressors)

DEFINITIONS

Term	Definition
Boiler	A fired vessel in which gas or vapor may be generated or a gas vapor or liquid may be put under pressure by heating and includes any pipe, fitting or other equipment attached to or used in connection with the vessel
Contractor	Include any service providers who are not direct employees of SAEL and are providing services in relation to maintenance and repair work. This includes contractor employees, subcontractors and subcontractor employees. Services can be of long or short nature.
Hazard	It is a situation that has a potential to harm a person, the environment or damage property.
Health & Safety Representative	An elected employee responsible for representing the Core Work Group on matters related to Occupational Health & Safety (OHS)
H&S Manager	The Manger who will be well versed with the area and tasks and shall be responsible for overlooking all the major activities at the particular workplace.
Job Safety Analysis	It is a process that offers step by step approach to recognize, assess and control hazards and monitor the ongoing effectiveness of the controls.
Routine Activities	Activity which is performed regularly. All maintenance activities fall under routine activities.
Non-Routine Activities	Activities which are performed on process/equipment break down etc.
psi	pounds per square inch, a standard unit to measure pressure
Pressure	Force applied to or distributed over a surface, measured above the prevailing atmospheric pressure, e.g. kilopascals or pounds per square inch (psi)
Pressure Vessel	An unfired vessel that may be used for containing, storing, distributing, transferring, distilling, or processing any gas, vapor or liquid under pressure, and includes any pipe, fitting and other equipment attached to or used in connection with the vessel. Vessels containing a volume more than 120 gallons of water under pressure, having internal or external pressure in excess of 15 psi, and an inside diameter of more than 6 inches.
Qualified Person	A person who, in respect of a specified duty, is qualified by knowledge, training and experienced to perform the duty safely and properly.
Risk	The likelihood or probability that a hazardous event (with a given outcome or consequence) will occur.
Risk Assessment	It is defined as the process of assessing the risk associated with each of the hazards identified so that appropriate measures can be implemented based on the probability.

1.1.59 Responsibilities

Site Deputy EHS&S Manager

- Ensure pressure vessel installations meet standards, are properly permitted and leverage existing building infrastructure (e.g., building compressed air, central compressed gas distribution systems);
- Operate systems in accordance with the criteria in procedure section of this SOP;
- Inspect safety and pressure relief systems at least monthly while the pressure vessels are in service;
- Where they exist, ensure that condensate lines are drained at least weekly;
- Routinely inspect the system for signs of wear, and have the system repaired by a licensed contractor if repairs are required;
- Develop standard operating procedures for the pressure vessel, including warning signs and emergency shutdown;

- Assist the safety representative in communicating safe practices to those working in the vicinity of the pressure vessel.
- Ensure individuals who are performing work on/in pressure vessels designated as confined spaces have received appropriate training and spaces are accurately registered for the presence of pressure vessels.
- Work with the Deputy EHS&S Manager with walkthroughs of spaces with pressure vessels for insurance and/or state licensing purposes and also coordinate the decommissioning of pressure vessels;
- Ensure pressure vessel plaques and licenses are appropriately displayed;
- Maintain a master list of licensed pressure vessels on campus and ensure applications for inspection are submitted on the required 2-year cycle;
- Work with safety representatives to ensure that licenses for decommissioned pressure vessels are turned in and the pressure vessel removed from H&S Manager Space Registration;
- Review pressure vessel design information with the operator, coordinate with the organization on EHS issues related to installation of pressure vessels (e.g., toxic gas monitoring, fire protection need, etc.) along with any supplemental EHS training that may be required (e.g., hydrofluoric acid safety, confined space entry);
- Ensure emergency response procedures for major/high hazard pressure vessel installations have been developed and disseminated to emergency response personnel and affected DLCs; and
- Accompany insurance and state agency inspectors on walkthroughs of campus spaces where pressure vessels are operated.
- Ensure boiler installations have been installed per code and are operated by a licensed professional; and
- Provide guidance on the availability of building air systems.
- Include safety procedures for pressure vessels as part of annual laboratory specific chemical hygiene training or hazard communication training; and
- Work with the pressure vessel operator to ensure licenses, where they are required, are obtained for pressure vessels. This includes making arrangements to be present for bi-annual pressure vessel licensing inspections.

Employees

- All employees are required to perform their work in a safe manner
- Report workplace hazards immediately to the safety manager.

1.1.60 Procedures

General Requirements for Pressure Vessels and Boilers

- All the boilers shall be registered
- No structural alteration, addition or SAEL shall be made in or to any boiler registered under The Indian Boiler Act, 1923 (V Of 1923) unless such alteration, addition or SAEL has been sanctioned in writing by the Chief inspector;
- SAEL shall employ certified Boiler Operation Engineer.
- No person shall operate or use, or permit to be operated or used, boiler or regulated pressure vessel unless it has been inspected by a qualified inspector and a certificate of inspection has been issued, and the operator has been trained and qualified.
- Boilers and heating systems shall be inspected on a routine basis.
- Review of design plans with the Safety Program by Environment, Health and Safety (EHS) Office prior to building pressure vessels for a research project.
- Persons operating boiler or other pressure vessels shall be trained in safe operating procedures, through Lab Specific Chemical Hygiene training or similar methods.

- No person shall operate boiler or pressure vessel at a pressure higher than its maximum allowable working pressure (MAWP).
- Every boiler and pressure vessel shall have at least one safety or other equivalent fitting to relieve pressure at or below the vessel's maximum allowable working pressure. No pressure vessel shall be operated without an appropriate and properly functioning pressure gauge and safety relief.
- The design function of any safety relief valve shall not be restricted by tie downs, paint, block, cap, removal, or any other means.
- Safety relief valves shall be tested monthly while pressure vessels are in service. Where they exist, condensate valves shall be drained regularly, daily if necessary.
- Boilers, and pressure vessels shall be maintained and repaired by qualified persons.
- Where, in the course of such maintenance and repairs, an employee is required to enter a boiler or pressure vessel, the employee shall have received, and comply with, Confined Space training.
- Pressure vessels shall be kept mounted level at all times with vibration protection in place. Do not mount the vessel rigidly without vibration buffer supports under tank legs.
- All components should be secured to a firm foundation; hose and tubing should be firmly supported, with the end secured to prevent whipping in the event a connection fails. Adequate machine screws or bolts should be used to secure all components.
- All welded repairs shall be made only by companies holding authorization.
- The decommissioning of boilers and pressure vessels shall also be reported to the EHS Office.
- PPE, Accident incident reporting, Emergency response and fire protection SOPs' are to be practiced in case of vessel/ boiler explosions and fire breakouts.

Specific Safety Requirements of Pressure Vessels

- Pressure vessel inspections for licensing purposes are to be inspected by certified professionals. SAEL to maintain a list of agencies who may be commissioned to perform boiler and pressure vessel inspections and employ individuals who have been certified.
- All pressure vessels shall be inspected for insurance and safety purposes after installation, at prescribed frequencies, and after any welding, alterations, repair or relocation
- The owner of a new or existing pressure vessel is responsible for maintaining the pressure vessel in accordance with the manufacturer's instructions
- Pressure vessels shall be rated to no less than 4 times the maximum allowable working pressure MAWP.
- Pressure sources shall be limited to the MAWP of the lowest rated system component by a regulator and relief device (valve or disk) downstream of the regulator.
- Gauges shall be graduated to the MAWP (but preferable 20% - 30% above MAWP). Materials shall be compatible with the fluid.
- Rupture disks, where used, shall be approved.
- Pressure control or any other switches which control pressure shall not be bypassed.
- Nonflexible metal pipe, tubing, fittings, and valves appropriate for the system fluid and rated at or above the system MAWP shall be used. Special flexible metal hose shall be used where flexing is required.
- Certificates must be turned in for pressure vessels that are no longer operational.

Specific Safety Requirements of Boilers

- Proper registration: Contractors and inspectors should be registered with the appropriate regulatory agency (often at the state level) prior to installing or making any repairs or modifications to boilers.
- Review previous inspection reports and documents: SAEL should make available all previous inspection reports and other documentation to the inspector for review prior to the date of inspection.

- Ensure proper construction and installation: High-pressure boilers should be constructed, stamped, and installed in accordance with the requirements outlined by Inspectorate of Boilers (IoB), GoA.
- Assess safety controls: Boilers installed require appropriate safety controls, safety limit switches, and burners, as well as electrical requirements, based on the applicable national or international standard.
- Assess remote shutdown: High-pressure boilers must have a manually operated remote shutdown switch, marked clearly for easy identification and positioned outside the boiler room door.
- Assess instruments, fittings, and controls: A variety of requirements related to gages, gage glass, operating pressure, shutoff valves, pressure-temperature ratings, water columns, connections, and other controls. Assess the boiler's instruments, fittings, and controls to ensure compliance with IoB.

Pre-inspection Action Steps

- Notification: Inspectors must notify owners or users at least seven days prior to the date of a planned inspection.
- Lock out fuel supply and ignition systems: Owners should tag out and/or lock out the boiler's fuel supply and ignition system in accordance with the manufacturer's documentation.
- Drain water: Water should be drained from the boiler, and then thoroughly wash the waterside periodically as per the boiler manual provided by the supplier.
- Remote plates and plugs: Remove all manhole and hand-hole plates, washout plugs, and boiler inspection plugs in water column connections, as required by the inspector.
- Cool and clean boiler: The boiler should be cooled completely and cleaned thoroughly prior to inspection.
- Address leaks: Prevent any leaks of steam or hot water into the boiler by disconnecting pipes or valves at the most convenient point, or by using another method approved by the inspector.
- Close, lock or tag out valves: Steam or water system stop valves, including bypass valves, should be closed, locked out and/or tagged out following procedures outlined in the owner's manual. Open the drain valves or cocks between the two closed valves. This must be done before manholes are opened and prior to entering any part of a boiler connected to a common header with other boilers.
- Close, lock or tag out Blow-off valves: After the boiler is drained, close, lock out and/or tag out blow-off valves by following the procedures outlined in the owner's manual or operating manual. In some cases, an alternative method may be used, which includes blanking lines or removing sections of pipe.
- Disconnect blow-off lines: Where possible and practical, disconnect blow-off lines between pressure parts and valves. Leave drains and vent lines open.

Inspection Certificates – Process and Requirements

- Inspection certificates issued by the GoI/GoA shall be posted in a conspicuous place near the boiler, or pressure vessel.
- With information from the Site Deputy EHS&S Manager , the HSE Office shall complete the Inspection Application – Pressure Vessel Data. The inspection for new installations shall be an internal and external exam of the system.
- Re-inspections may be conducted by a licensed inspector.
- Re-inspections shall be conducted every 2 years.
- It is to be addressed among all that the Inspector has checked the pressure vessel and has issued a certificate.
- If the pressure vessel is portable, it is recommended to chain the plaque to the equipment.
- If the pressure vessel is stationary, use the mounting squares to attach the plaque to a nearby wall. It is recommended using wall screws if oil mist or steam is present.
- Safety Program should be triggered in the event the equipment is moved to another place. Space registration for the PI's lab space shall be revised accordingly.
- Safety Program be engaged when the equipment will be disposed and certified.

Air Tanks

- Connecting to the building compressed air system is generally preferable to a new air tank installation. SAEL shall take advice from approved HVAC engineers regarding connecting to the building's compressed air system instead of buying a new air tank.
- If connecting to the building air system is not possible and a new installation is required, then SAEL shall verify that the air tank/ pressure vessel is built to standards as per GoI.
- Locate the air tank so the condensate can be drained once a week or install an automatic drain valve.
- Locate the safety valve so it can be easily tested once a month.
- Inspect the tank at least weekly for air leaks. If an air leak is found, determine its source (i.e. line, fitting or crack).
- Do not make welded repair on air tanks.
- Do not use plastic pipe for any air discharge line.
- When designing a compressed air system for a building/ large area, a second air receiver for each system is needed to allow for uninterruptible service during maintenance and inspections. The system valve arrangement shall be in a manner that allows switching between air receivers.

PPE Enforcement and Verification

A detailed SOP on PPE is to be referred in complying every requirement of PPE for labour working at pressure vessel and boilers.

1.1.61 Audit

Pressure Vessel and Boiler Audit

Biannual audits shall be conducted and documented to measure and verify compliance with this procedure. This can be conducted in conjunction with routine walkthrough or other established audits. Non-compliance with the PPE procedure shall be documented using Audit Tracker or equivalent tracking tool, and corrective or disciplinary actions implemented. Program updates will incorporate the assessment findings, employee feedback, reassessment on effectiveness, enforcement trends, injury and illness trends, and regulatory requirements.

- Assess remote shutdown: High-pressure boilers must have a manually operated remote shutdown switch, marked clearly for easy identification and positioned outside the boiler room door.
- Assess instruments, fittings, and controls: A variety of requirements related to gages, gage glass, operating pressure, shutoff valves, pressure-temperature ratings, water columns, connections, and other controls. Assess the boiler's instruments, fittings, and controls to ensure compliance with IoB.

Ergonomics Management

The procedure is developed to reduce or eliminate risk associated with the ergonomics hazard (accidents occurring in the course of the work or as a result of the operation of the contractor's facilities)

The procedure is applicable to all the floors of the company and is applicable during both construction and operation phase.

1.1.62 Definitions

Particulars	Definition
Ergonomics	It is the science of designing and matching physical and psychological demands of workplace to the capabilities and limitations of the worker.
Muscoskeletal Disorders (MSDs)	Injuries resulting from repeated exertions or small traumas that eventually cause chronic discomfort, pain and disability. These injuries affect the muscles, tendons, ligaments, joints, bones, cartilages, discs and nerves. Some common injuries are lower back pain, carpal tunnel syndrome, and tendonitis.

Contractor	Include any service providers who are not direct employees of SAEL and are providing services in relation to maintenance and repair work. This includes contractor employees, subcontractors and subcontractor employees. Services can be of long or short nature.
Health & Safety Representative	An elected employee responsible for representing the Core Work Group on matters related to Occupational Health & safety (OHS)
Workplace Manager	The Manger responsible for overlooking all the major activities at the particular workplace.

1.1.63 Responsibilities

Site Manager

- Ensuring Ergonomics Procedures are implemented and followed
- Review and approve the Risk Assessment Form
- Maintain Training Records, Incident Reports, Medical records and Risk Assessments records

Site Deputy EHS&S Manager

- Perform biannual assessments to monitor compliance with the requirements of this procedure.

Medical Officer

- Identify ergonomic hazards associated with the tasks
- Perform periodic (once in six months) Risk Assessment to identify ergonomic hazards and determine the effectiveness of the controls used
- Receive reports of signs and symptoms from the employees
- Review the health records of all the employees related to any history of MSDs

1.1.64 Provide training to all employees, contractors and supervisors.

Workplace Manager/Contractor

- Coordinate with the Site Manager/Site Safety Engineer and medical officer in the identification of job activities posing hazards
- Provision of safe and healthy work environment of the workplace
- Report of any work related injuries and control measures from the Medical officer.

Employees

- Adjust and use their workstation and equipment as outlined in the training provided by the Site Deputy EHS&S Manager
- Follow Safe Work Practices
- Make effective use of recovery periods
- Report Work related injuries to the Workplace Manager/Contractor.

1.1.65 Procedures

Ergonomic Hazard Identification and Risk Assessment

The core functional team consisting of ESMS representative, Medical Officer, and Workplace Manager Contractor during construction and operation phase and Maintenance Engineer shall perform a risk assessment for each task, which includes:

- Workplace Evaluation to identify jobs and work practices that may result in Muscular Disorders MSDs
- Work related risk factors to be considered in the evaluation process:
    - Physical risks including force, postures, static loading and sustained exertion, contact stress, extreme temperature
    - Psychological risk factors including job rotation, excessive overtime, stress from deadlines
    - Environmental risk factors including noise, lighting, glare, temperature

- Combination of risk factors

- Identification of control measures to reduce or eliminate the risk like work area design, job rotation
- Some typical MSDs identified in a workplace are as below:

Risk factors	Examples
Awkward and static postures	Keyboard in a twisted position, holding the phone handset with your head and neck bent, filing above or below your waist, typing on a keyboard with writs bend up and down, left or rights
Contact Stress	Resting wrists and forearms on sharp desktop while keyboarding, stapling by using the underside of the wrist
Extreme Temperatures	Temperatures too hot or cold which cause the body to react abnormally
Fatigue	Any exertion done without adequate rest breaks between the tasks
Force	Hole punching or stapling large stacks of paper, typing too hard on a keyboard
Heavy Lifting	Carrying large boxes
Repetition	Keyboarding, calculating
Vibrations	Print shop equipment causing excessive vibrations to hands and arms
Work Stress	Job satisfaction, control over work organization

- A Risk Assessment Form shall be documented by the Site Safety representative as per the attachment and shall be approved by Site Manager

Job Hazard Analysis and Control

- Site Deputy EHS&S Manager shall assess the areas where risk factors were identified and the degree of exposure was determined

Implementation of Ergonomic Control Strategies

- Once ergonomic hazards are identified, a Hazards Control Recommendation Plan shall be developed by the core functional team detailing the specific jobs, hazards associated with the job task, approaches to control the hazard and descriptions highlighting the effectiveness of each control. This shall be communicated to the other areas of the workplace (e.g. Procurement, Human Resource, maintenance and engineering) whose assistance shall be used to successfully control the MSD Hazard.
- A mechanism shall be developed for both early reporting of muscoskeletal disorders their signs and symptoms and their hazards and employee involvement process that includes periodic communications about ergonomics and review of employee suggestions related to ergonomic issues. This may include filing Incident Report within 24 hours of the employee's first report of signs or symptoms of MSDs, prompt access to medical officers for effective evaluation, treatment and follow up.

Site Deputy EHS&S Manager shall implement control measures to address ergonomic hazards in the following order of hierarchy:

Eliminating the Risk

Best way of controlling the hazard is to eliminate any task which may pose some risk.

Administrative Controls to reduce exposure to MSDs

- Administrative controls include procedures and methods that significantly reduce the daily exposure to MSD hazards by altering the way in which work is performed. These methods will be developed by the Site Deputy EHS&S Manager .
- Choices may include changing the nature of the task to remove repetition, employee rotation, promoting the importance of workplace exercise to relieve physical stress, rest breaks.

Safe Work Procedure

Some of the recommended safe working procedures include:

- Chair
  - Adjust your chair height so that your elbows are about the same height

- As the top of the work surface and your thighs are horizontal
- Adjust the backrest so that it supports the hollow of your lower back
- Adjust the height of your arm rest so that shoulders are relaxed and elbows are at 90 degrees

- Monitor
  - Position the screen away from windows or at a 90 degrees angle
  - Tilt the monitor down if glare is noted on the screen
- Keyboard and Mouse
  - Position the keyboard directly in front of you and mouse beside the keyboard at the same height
  - Use the keyboard and mouse wrist support for micro breaks
- Desk
  - Desk height should be about the same height as your elbows
  - Work space should be large enough to hold work materials
  - Place frequently used items closed to you to avoid over reaching and twisting
- Document Holder
  - Position the document holder at the same height and distance as the monitor
- Telephone
  - Place the telephone close to you within easy reach
- Lighting
  - Lighting should be evenly distributed and should not create a glare
  - Adjust window blinds to control glare

Typical MSDs associated risk factors and the recommended control measures are as provided in the table below:

Body Part Fatigued	Contributing Risk Factor	Control Measures
Back of neck	Looking down at documents or keyboard	Use a document holder, improve keyboard skills, check monitor height
Side of Neck	Looking at one side	Locate documents and screen directly in front of you
Shoulders	Keyboard too high or arms unsupported	Raise chair, use footrest, rest palms on front of desk, reduce desk height
Lower Back	Inadequate lumber support	Adjust back rest height and angle to give firm support, remove arms from chair , remove obstructions under drawers (e.g., desks)
Upper back	Twisted Posture	Sit straight, locate documents, screen and keyboard in front of you
Right arm or shoulder	Arm outstretched unsupported	Move mouse closer, use single surface desk
Left arm, shoulder or neck	Reaching for telephone	Bring phone closer, use headset
Leg discomfort	Underside of thighs compressed against chair seat	Use footrest or reduce desk and chair height
Headaches	Posture, visual problem, noise, stress, glare, high workload	Rearrange work area, redirect traffic, screen filter, close blinds, reduce time on computer

Engineering Controls

- Engineering Controls act on the source of the hazard and control employee exposure to the hazard without relying on the employee to take self-protective action or intervention.
- Examples of engineering controls for MSDs include changing, modifying or redesigning the following:
  - Workstations
  - Tools
  - Equipment
  - Materials
  - Process

Training

All employees who are involved in tasks posing ergonomic hazard shall be trained on the following issues which may include:

- Common MSDs and their signs and symptoms
- Importance of early reporting of signs and symptoms of MSDs and the consequence of failing to do so
- Procedure of reporting MSDs
- Kind of jobs and their associated risks
- Methods, tools or equipment used to mitigate risk factors

The training records shall be maintained by the Site Deputy EHS&S Manager .

Monitoring and Review

After implementation of permanent controls to avoid recurrences of MSDs, a six monthly monitoring shall be undertaken to ensure management, administration and compliance with the requirements

Record Keeping

Site Deputy EHS&S Manager shall maintain following during the entire life cycle of the project

- Incident Reports (recording past incidents of ergonomic hazards)
- Training records
- Medical Records

1.1.66 Ergonomic Checklist

ERGONOMIC WORKSTATION ANALYSIS CHECKLIST

Workplace				
Items	**Yes/No/NA**	**Identified Task**	**Hazards/Problems**	**Observations/ Recommendations**
Workstation lack adjustability for multiple operators?				
Dim lighting causing eyestrain				
Excessive background or task noise sources present				
Inadequate clearances for head, arms, legs and feet				
Workplace storage, aisles, neighboring workstations encroach on each other?				
Administration				

Health records, claim data indicate loss trends?
Workers complain target ergonomic problems?
Evidence of employee modification at workplace?
Are wrist belts or back belts used? Why?
Supervisors educated on ergonomic issues?
Incident investigations report target employee's carelessness as the cause
Work rotation/job enlargement systems needed to reduce repetitive exposure?

Slips, Trips & Falls

This section is concerned with managing workplace slips, trips and falls, which are the main causes of work-related accidents.

1.1.67 Terms and Definitions

Particulars	Definition
Slip	means too little friction or traction between feet (foot ware) & walking/working surface, resulting in loss of balance
Trip	results when foot or lower leg hits object & upper body continues moving, resulting in loss of balance or while stepping down to lower surface & losing balance
Fall	a) occurs when too far off center of balance. Fall can two types – b) Fall at same level - Fall to same walking or working surface, or fall into or against objects above same surface; Fall to lower level- Fall to level below walking or working surface

1.1.68 Responsibility

- Safety Manager, assisted by shall be responsible for implementation of this procedure within office area and shop floor.
- Site Deputy EHS&S Manager shall ensure that the procedure is extended to all the workers including Contractor's workers (through Contractor Supervisor).

1.1.69 Procedures

General Procedures

- The Site Deputy EHS&S Manager shall identify hazards associated with slips, falls, trips using the Checklist for Recognizing Slip, Trip and Fall Hazards.
- Keep passageways and stairways free of debris, boxes, and other moveable items (i.e., carts, delivery/mail items, recycling containers, etc.). Maintain sufficiently wide aisles where mechanical handling equipment (e.g., forklift) is used.
- Avoid placement of newspapers, flyers, etc. in traffic ways.
- Maintain floors in a clean and dry condition. Avoid wet mopping during high traffic times. Use wet floor signs to warn others of hazardous conditions. Use walk-off mats at entrances to minimize slick floors. During inclement weather, use "Caution -
- "Wet Floor" signs at building entrances as appropriate.
- Equip areas where wet processes are used (i.e., dishwashing rooms in kitchens) with a means of drainage and gratings, mats, or raised platforms.
- Clean spills of water, oil, and other liquids immediately. Use "Caution – Wet Floor" sign until dry.

- Repair leaking machinery and equipment to prevent slick areas on floors.
- Keep floors and passageways free of protruding nails, splinters, holes, loose boards, broken tiles, loose carpeting or curled mats, and other similar trip hazards. Report these conditions to the Building Maintenance Reporter.
- Avoid placement of cords in travel paths. Use a cord runner when such placement cannot be avoided.
- Do not leave cupboards, doors, drawers, file cabinets, etc. ajar.
- Avoid slippery floor surfacing materials.
- Report burnt out lighting or inadequate lighting to the Building Maintenance Reporter.
- Report outdoor slippery or uneven areas to Landscape Services (e.g. buckled sidewalks, etc.)
- However, in case of any injury, Injury Report Form shall be filled up by the Site Deputy EHS&S Manager in consultation with the affected employee/ other worker.

Handrails, Ladders, Covers, and Guardrails

- Use handrails in stairways.
- Use ladders that are in good condition and properly rated. Use them only in the manner intended. Do not use make-shift ladders (i.e., chairs, stools, stacked boxes, etc.).
- Use covers and/or guardrails to protect employees from the hazards of open pits, tanks, vats, ditches, etc.
- Floor holes, into which employees can accidentally walk, must be guarded by either a standard railing with toe-board (4 inches high) or a floor hole cover of standard strength and construction. When the cover or the guardrail is not in place, the floor hole must be constantly attended by someone.
- Open-sided floors or platforms that are four (4) feet or more above the adjacent floor must be guarded by a standard railing on all open sides, except where there is an entrance to a ramp, stairway, or fixed ladder.
- Regardless of height, open-sided floors, walkways, platforms or runways above or adjacent to dangerous equipment must be guarded with a standard railing and toe board.

Safe Personal Practices

- Wear shoes that are sturdy and not prone to slipping.
- Walk at a reasonable pace and be aware of your surroundings.
- Do not lean or tilt back in chairs.
- Avoid poorly lit travel paths.
- Be especially cautious when in unfamiliar territory.
- Avoid areas where holes and uneven surfaces are obscured or hidden (i.e., areas of tall grass).
- Do not try to carry loads that are too heavy or that obstruct your view.
- Use handrails when on stairs. Take stairs at a safe pace and only one at a time
- First Aid shall be provided as necessary.

1.1.70 Record Keeping/ Outcome

- Checklist for Recognizing Slip, Trip and Fall Hazards
- Accident or Incident Investigation Form

Erection, Stringing & Maintenance of Transmission Lines

1.1.71 Terms & Definitions

- EHV Transmission Line: An Extra High Voltage AC transmission line operating above 220 kV;
- Power Evacuation: Power evacuation is a function that allows power generated from a power plant to be immediately evacuated from the plant to the grid for distribution

1.1.72 Requirements

This section provides HSE procedures that will need to be followed by the Contractor during the construction and operations

1.1.73 Right of Way

- Construction related activities will be avoided during the breeding season (spring and summer) and during early mornings and late evenings.;
- Removal of invasive plant species during routine vegetation maintenance will be undertaken;
- Selective removal of tall-growing tree species and encouragement of low-growing grasses and shrubs will be undertaken in transmission line rights-of-way;
- Use of herbicides is the preferred approach to control fast-growing vegetation within transmission and distribution rights-of-way;

1.1.74 Bird and Bat Collision and Electrocution

- Maintain 1.5 meter (60-inch) spacing between energized components and grounded hardware or, where spacing is not feasible, covering energized parts and hardware;
- Install visibility enhancement objects such as marker balls, bird deterrents, or diverters;

1.1.75 Electric and Magnetic Fields

- Evaluate potential exposure to the public and minimize said exposure by siting the transmission towers away from residential areas;
- In case exposure cannot be avoided, some of the following activities may be undertaken:
    - Shielding with specific metal alloys;
    - Increasing height of transmission towers; and
    - Modifications to size, spacing, and configuration of conductors

1.1.76 Occupational Health and Safety

- Only allow trained and certified workers to install, maintain, or repair electrical equipment;
- Deactivate and properly ground live power distribution lines before work is performed on, or in close proximity, to the lines;
- Qualified or trained employees working on transmission or distribution systems should be able to achieve the following:
    - Distinguish live parts from other parts of the electrical system;
    - Determine the voltage of live parts;
    - Understand the minimum approach distances outlined for specific live line voltages;
    - Ensure proper use of special safety equipment and procedures when working near or on exposed energized parts of an electrical system;
- Workers will not approach an exposed energized or conductive part even if properly trained unless:
    - The worker is properly insulated from the energized part with gloves or other approved insulation; or
    - The energized part is properly insulated from the worker and any other conductive object; or
    - The worker is properly isolated and insulated from any other conductive object (live-line work).
- Testing of structures for integrity will be done prior to undertaking work at height;
- Establish criteria for use of 100 percent fall protection (when working over 2 meters above the working surface, but sometimes extended to 7 meters, depending on the activity). The fall protection system will be appropriate for the tower structure and necessary movements, including ascent, descent, and moving from point to point;
- A working at height permit will be obtained by the workers before undertaking any activity;
- Install fixtures on tower components to facilitate the use of fall protection systems;
- Provide adequate work-positioning device system for workers. Connectors on positioning systems will be compatible with the tower components to which they are attached;
- Safety belts will be of not less than 16 millimetres (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts will be replaced before signs of aging or fraying of fibres become evident;
- When operating power tools at height, workers will use a second (backup) safety strap;
- Signs and other obstructions will be removed from poles or structures prior to undertaking work;
- An approved tool bag will be used for raising or lowering tools or materials to workers on structures;
- Train workers in the identification of occupational EMF levels and hazards;

- Establish and identify safety zones to differentiate between work areas with expected elevated EMF levels compared to those acceptable for public exposure, limiting access to properly trained workers;

1.1.77 Community Health and Safety

- Use signs, barriers (e.g. locks on doors, use of gates, use of steel posts surrounding transmission towers), and undertake public outreach to prevent public contact with potentially dangerous equipment;
- Grounding conductor objects (e.g. fences or other metallic structures) will be installed near power lines to prevent shock;
- Extensive public consultation during the planning of power line and power line right-of-way locations will be undertaken;
- Site power lines, and design the pooling substation with due consideration to landscape views and important environmental and community features;
- Locate high-voltage transmission and distribution lines in less populated areas;
- Use of noise barriers or noise cancelling acoustic devices will be considered as necessary, especially during the construction stage.

1.1.78 Associated documents to be prepared

This plan requires SAEL to maintain the following documents and records:

- Work at Height Permit;
- Accident/Incident Register;
- Training and attendance record;

APPENDIX I: Hazard Identification and Risk Assessment

Hazard Identification and Risk Assessment (HIRA) is a risk assessment tool that can be used to assess which hazards pose the greatest risk in terms of how likely they are to occur and how great their potential impact will be. It is not intended to be used as a prediction tool to determine which hazard will cause the next emergency. Hazard Identification and Risk Assessment of the operations shall be carried out along with assessment of probable environmental damage (through aspect –impact matrices developed as Facility level) associated with such activities, products & processes.

This procedure outlines the requirement for hazard identification, risk assessment and control to effectively manage ESMS hazards that may occur within the workplaces of SAEL. The procedure is applicable to all the activities undertaken by SAEL employees/ workers contractors and Subcontractors during the lifecycle of the Project.

Definitions

Term	Definition
Hazard	It is a situation that has a potential to harm a person, the environment or damage property.
Risk	The likelihood or probability that a hazardous event (with a given outcome or consequence) will occur.
Risk Assessment	It is defined as the process of assessing the risk associated with each of the hazards identified so that appropriate measures can be implemented based on the probability.
Routine Activities	Activity which is performed regularly. All maintenance activities fall under routine activities.
Non-Routine Activities	Activities which are performed not as routine activities- construction work involving activities such as such as Piling, shuttering, deshuttering, using equipment that are not the part of process etc.
Contractor	Include any service providers who are not direct employees of SAEL and are providing services in relation to maintenance and repair work. This includes contractor employees, subcontractors and subcontractor employees. Services can be of long or short nature.

Responsibilities

EHS&S Deputy Manager

- Training all employees (SAEL and Contractors) on safe work practices and safe use of facilities and equipment
- Implementation of necessary risk control measures
- Conducting six monthly workplace inspections to identify any new risk.
- Develop a cross functional team to perform Hazard Identification and Risk Assessment (HIRA)
- Review and approve the **Job Safety Assessment Form**
- Maintain Training Records, Incident reports and Risk Assessments records
- Review emergency and rescue procedures prepared by Deputy EHS&S Manager
- Notify the nearest fire station, ambulance, police in case of any accident
- Undertake review of permits as issued by Deputy EHS&S Manager
- Lead in Safety performance review meeting undertaken by management.

Cross Functional Core Team

- Completion of **Risk Assessment Form**
- Conducting six monthly workplace inspections to identify any new risk
- Conducting regular monitoring and evaluation.

Contractor Representative/ Workplace Manager

- Identifying all the task which may pose Environmental, Health and Safety risk

- Training all employees on safe work practices and safe use of facilities and equipment
- Implementation of necessary risk control measures in consultation with the Site Deputy EHS&S Manager .

Employees

- All employees are required to perform their work in a safe manner
- Report workplace hazards immediately to the safety manager.

Procedures

A HIRA is a risk assessment tool which is used to assess which hazard pose the greatest risk in terms of how likely they are to occur and their potential impact. SAEL shall be responsible for overlooking the occupational health, safety and welfare of all the workers while they are at work in the Plant. Contractors will be responsible for implementing and assessment of the identified Hazards and their risk controls.
The five (5) stages of Hazard Identification and Risk Assessment (HIRA) are described below:

Stage 1 Planning for Hazard Identification

A cross functional team shall be developed for designing and implementation of HIRA.

Stage 2 Identification of Hazards

- Layout Plan/Onsite Contractor Activities/Process Flow Charts/Inventory on hazardous materials, wastes, products, legal register and information on best industry practices shall be used to identify activity with Environmental, Health, Safety, Social and Legal risks.
- Responsibility will be assigned for identifying all the activities (This will include both routine and non-routine activities and activities of all persons having access to the workplace including contractors and visitors).
- Hazard Identification shall be done by dedicated Site Deputy EHS&S Manager by breaking it down into more steps/process activities to evaluate the nature of the hazard.
- Once identified, the activities with their associated Occupational, Environmental, Health Safety & Social impacts are to be recorded.

Stage 3 Assessing the Risk

Risk assessment includes further analysis of the hazard by breaking it down into more steps/process activities to evaluate the nature of the hazard. The type of hazards associated with various activities includes the following:

- Construction activities including but not limited to cutting, welding etc.
- Physical hazards covering machinery, dust, thermal, electrical, fire & explosion
- Chemical hazards covering general chemicals
- Ergonomic hazards
- Other hazards such as Occupational, Confined Spaces.

Risk within each job task shall be evaluated by determining its:

- Probability or likelihood
- Exposure Level of employee
- Consequence of the exposure.

The base risk is calculated as per the following formula:

Risk Score = Severity * Exposure Frequency

Once assessed, the risk shall be rated and recorded in the Risk Assessment format using severity rating matrix and the risk matrix given below. The risk will be categorized as low, medium and high as per the rating score:

Severity

Safety & Health of public and employee	First aid only, not affecting work performance	Minor injury requiring medical treatment, not affecting work performance or restricting work activities.	Moderate injury requiring medical treatment, temporary affecting work performance or restricting work activities or moderate, reversible health effect (Occupational illness).	Major bodily injury or health effects. Affecting work performance in the longer term, irreversible health damage, potential permanent disability	Fatality or multiple life threatening injuries.
Environmental	Limited effect to minimal area of low significance.	Minor, reversible effects on biological or physical environment. Minor short-medium term damage to small area of limited significance. No report to authorities.	Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short-medium term widespread impacts (e.g. significant spills). Report to authorities.	Major environmental effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts. Company required to take extensive measures to restore environment.	Very serious environmental effects with impairment of ecosystem function. Long term widespread effects on significant environment over large area.
Legal & Company Compliance	Minor non-conformity to Legal requirement which will not result in any notice of violation or fine.	Non conformity result in receiving notice of violation.	Non conformity with fine less than INR 500,000.	Major non-compliance with fine more than INR 500,000.	Serious non-compliance with legal requirements. Court case, jail term or fine more than INR 2500,000.
Severity	1	2	3	4	5
	Insignificant	Minor	Moderate	Major	Catastrophic

Risk Matrix:

Exposure Frequency		Severity				
		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Weekly	5	5	10	15	20	25
Monthly	4	4	8	12	16	20
Yearly	3	3	6	9	12	15
Once in 10 years	2	2	4	6	8	10
Remotely	1	1	2	3	4	5

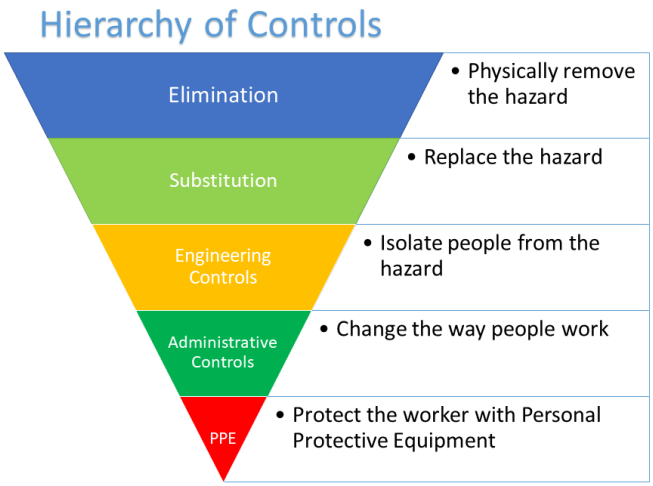
Risk Rating	Risk Category
0-5	Low
5 to 12	Medium
12 to 20	High
20 to 25	Extremely high

Low	Is still important but can be dealt with through scheduled maintenance or similar type programming. However, if solution is quick and easy then fix it today. Review and/or manage by routine procedures.
Medium	Is very important, must be fixed this week, consider short term and/or long term actions.
High	Situation is critical, stops work immediately or considers cessation of work process. Must be fixed today, consider short term and/or long term actions such as incident investigation and regular internal review.
Extremely High	Situation is critical, stops work immediately and require immediate action.

Stage 4 Record Significant Findings Implement Risk Controls

When determining controls for the identified risk, SAEL shall consider reducing the risk in the order of following hierarchy of controls.

Figure1 Hierarchy of Controls



- *Eliminate the Hazard*: Removing the hazard, mainly any equipment, Falling objects, Excavation areas to name a few.
- *Substitute the Hazard*: Replacing the hazardous substance with less hazardous one.
- *Use Engineering Solutions*: It mainly involves redesigning the process or equipment to make it less hazardous or machine guarding.
- *Signage/Warnings or Administrative Controls*: Adopting Safe Operating Procedures (SOP) or providing appropriate training/instruction/information.
- Provision and Use of Personal Protection Equipment and training on its use.

Stage 5 Monitoring and Review

Monitoring shall be done to regularly review the effectiveness of the hazard assessment undertaken and control measures taken. Review shall be undertaken under following cases:

- Any change in infrastructure, equipment, materials, process, installations, machinery, operating procedures.
- Changes in the employee which are likely to affect the operations of the department.
- The process of regular monitoring and review is also important in order to identify any new risks and implement appropriate new control measures. The risk assessment shall be reviewed and approved by SAEL's ESMS Head.

Reporting Formats

- Risk Assessment Form (To be used Prior to construction and operation phase)
- Job Safety Assessment Form

RISK ASSESSMENT FORM

HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA)											Doc No: SAEL/HSES/PTW/F-01
Activity						**Site Address**					
Date						**HIRA Conducted By**					
Hazard Identification			**Risk Assessment**								
			Inherent Risk				**Residual Risk**				
S No.	**Hazard Description**	**Potential Consequence**	**I**	**L**	**Risk (IXL)**	**Current Controls**	**I**	**L**	**Risk (IXL)**	**Additional Mitigation measures, if any**	**Person Responsible for implementation of current controls and mitigation measures**
1											
2											
3											
4											
5											
6											
7											
8											
9											

HIRA Approved By		
	15-25	**High Risk** - Further risk reduction is urgently required. Job must be stopped.
	8-12	**Medium Risk** -Moderately controlled risk when current controls are implemented but further risk mitigation is required.
	4-6	**Low Risk** - Risk adequately controlled when current controls are implemented, but must be monitored for change.
	1-3	**Insignificant Risk** - Risk adequately controlled when current controls are implemented, but must be monitored for change.

Hierarchy of controls:
1. **Elimination** - remove the hazard;
2. **Substitution** - replace a process or a substance with a less hazardous one;
3. **Isolation** - using a guard or barrier;
4. **Engineering** - redesigning equipment or a process;
5. **Administration** - training, instructions, safe working practices;
6. **Personal Protective Equipment** -Helmet, Safety Shoes, etc

Job Safety Assessment Form

Location:	Date of Assessment:
Work Type:	Work Site Location:
Department:	Activity Description:
Prepared by	Approved by

1.	First Aid Kit
2.	Hard Hat
3.	High Visibility Safety Vest
4.	Safety Shoes
5.	Protective Gloves
6.	Safety Glasses
7.	Safety Harness
8.	Ear muffs
9.	Ear plugs
10.	Face Mask
11.	Safety Cones/ Barricades
12.	Protective Gloves – Nitrile
13.	Others (please specify)

No.	Job Steps	Potential Hazard(s)	Action(s) To Be Taken

Name of Professional carrying out the activity	Position/Title

APPENDIX J: Emergency Response and Fire Protection

This procedure is designed to facilitate understanding of the Emergency Response and Fire Protection Plan requirements for site employees, contractors, and other agencies engaged at the facility.

Scope

This procedure shall be applicable for all employees, contractors, and other agencies for the management of emergency incident involving Personnel, Projects, Environment, and Reputation under the influence of Company. Each site will have a tailored Emergency Response and Fire Protection plan with details of personnel, and tasks.

Definitions

Emergency: An emergency means a situation arising out of or as a result of any type of hazards like fire, explosion, uncontrolled gas release, or chemical spill which is likely to adversely affect the persons or population working on or near the site or residing in the adjacent or nearby areas around the work site.

Hazard: Source or situation with a potential for harms in terms of injury or ill health, damage to property, damage to the workplace environment, or a combination of these.

Incident: The event that gave rise to an accident or had the potential to lead to an accident.

NOTE: An incident where no ill health, injury, damage, or other loss referred to as a "near miss". The term "incident" includes "near-misses".

Risk: Combination of the likelihood and consequences of a specified hazardous event occurring.

Sub Agency/ Contractors/ Material Supplier: A company directly employed by SAEL to undertake activities on behalf of the Company.

Levels Of Emergencies

Level 0: An incident that can be resolved by site personnel or officer without outside agency involvement. May require an Incident/Accident report as documentation.

Level 1: Any incident, potential or actual, which will not seriously affect the overall functional capacity of the site. Can require an outside agency to respond, short-term evacuation and may involve injuries.

Level 2: Any incident, potential or actual, which affects an entire building or buildings, and which will disrupt the overall operation of the project site. Outside emergency services will probably be required.

Level 3: Any incident or occurrence that has taken place and has seriously impaired or halted the operations of the site. Level 3 situations will be where mass casualties and severe property damage may be sustained. A coordinated effort of all resources is required to effectively control the situation. Outside emergency services will be essential. Major policy considerations and decisions will usually be required from top management during times of crisis.

Potential Emergencies

- The collapse of the structure, building, cranes.
- Gas leakage
- Spillage of Hazardous fuels/ chemicals like diesel, concrete admixture etc.
- Fall from height with a severe consequence while erection.
- Personnel electrocuted/ electrical Hazards.
- Men being trapped under soil/in the Confined Space
- Fire or Explosion involving storage of material flammable materials of a gas cylinder, Oil/Diesel storage, Chemical, etc.
- The collision between moving vehicles/toppling Person falls in deep tanks.
- Food poisoning
- Floods

- Bomb Threat
- Earthquake
- Heavy Rains

Plant Emergency Facilities

- The List of emergency facilities available at the plant is as follows:
- Tie up with the nearest hospital.
- Emergency rescue Vehicle/Ambulance.
- Emergency alarm system and audio announcement system
- Trained first Aid personnel from the working group & supervisor: (Names and contact details of the First aider attached).
- Fire Extinguisher and Fire Buckets placed at different locations (both ABC & CO_2 type).
- Other firefighting arrangements shall be as per the norms.
- Emergency Assembly Points at various places for easy access

Responsibilities of Emergency Response Team

Emergency Control Coordinator

- Overall in-charge to control emergency, recovery & operation continuity.
- Authorize resources.
- Coordinate Emergency Control through on-site emergency teams.
- Communicate with the interested parties including Head office, Local Authorities, mutual aids, etc.
- Authorize for raise request for resources and its use at the site.
- Coordinate with Medical Team, Rescue Team, Fire Fighting Team, etc. to facilitate control, rescue & treatment of victims.
- Communicate with the Emergency Control Coordinator and apprise him of the emergency the situation at the site.
- Responsible to assess and inform the end of an emergency at the site.
- Responsible to call the end of the emergency.

Technical Support Team

- Act in the capacity of the advisor to the Emergency Control Coordinator.
- Coordinate with Administration & Legal support team to handle the labour unrest, local authority, treatment options, HR issues, PR issues, etc.
- Investigate the causes of the Emergency & recommend corrective action.
- Log the sequence of events so that the report of the emergency operation can be prepared to identify the deficiencies in the Emergency preparedness system and recommend improvement.
- Evaluate the technical aspects of the control/ mitigation of the emergency operation continuity.
- Review the technical documents and recommend feasibility.
- Evaluate the need for emergency, understand the recovery measures, arrange for the resources, and supervise the recover till initiation of operation.
- Arranging for cranes, equipment, and electrical assistance and coordinating with the emergency team.
- Ensure the damage is controlled, removed from the site and the site is reinstated for the operation to start smoothly.

Administration & Legal Support Team

- Coordinate with the Hospitals for the treatment of the injured.
- Coordinate with the Local Authorities including the Police etc.
- Communicate with the sub Agencies and ensure no Labor Unrest takes place.
- Ensure communication to the relatives in case of a fatality.
- Manage the Media with assistance from the Emergency Control Coordinator.
- Arrange for the food/ welfare facilities etc. if the rescue, recovery & operation continuity activity extends beyond the regular working hours.

Medical Team

- Coordinate with the Plant Emergency Controller.
- Communicate & coordinate with the first aider to provide first aid to the injured.
- Coordinate with the ambulance & rescue vehicle & other mutual Aid Ambulance to remove the victim to the nearest Hospital.
- Assist the First Aider to organize personnel for assistance.
- Record the victims' details and communicate with the Project Site Emergency controller

Emergency/Fire Fighting Team

- Coordinate with the Plant Emergency Controller.
- Communicate & coordinate with the first fighters to control the fire in the initial stages.
- Coordinate with the fire brigade in the event of a big fire and extend necessary assistance especially in case of chemical fire provide MSDS & quantity etc.
- Ensure the fire is controlled and does not pose any threat to the people or property.
- Responsible to declare the fire is controlled to the Project Site Emergency Controller.

Rescue Team

- Coordinate with the Plant Emergency Controller.
- Organize the search and rescue operation.
- Coordinate Head Count operation, obtain the Missing details & initiate a rescue operation.

Actions In Case of Emergency

In the event of an Emergency is declared:

- Do not panic.
- Stop all the jobs and report to the Safe Assembly Point.
- Stop all the Hot Jobs in the area including Welding, Gas Cutting, Grinding, etc. ensure no sparks are left.
- Stop all the machinery and park in a secure place, ensure it does not obstruct any movement of the fire engine etc.
- Communicate not to have any further entry to the site.
- Do not stop to collect personal belongings
- Turn Off generators, Compressors and other powered equipment, unless these provide power for emergency services.
- Attack fire with the equipment provided, if it is safe to do so and you know to operate the equipment.
- Obey the instruction manual and handbook of the H & S.
- Assist the Fire Fighting Team, Medical Team, Rescue Team, and technical team to control the emergency.

1.1.79 Safe Assembly Points

Three Assembly points have been identified for emergencies.

Assembly Point 1:

Assembly Point 2:

Assembly Point 3:

1.1.80 Evacuation procedures

General

- In declared emergency on-site, all personnel are to leave their area and proceed towards safe assembly points.
- Every person on-site shall know a minimum of two assembly points.

- DO NOT return to an evacuated building/areas unless told to do so by an authorized personnel.
- After any evacuation, report to your designated area assembly point. Stay there until an accurate headcount is taken.

Fire or explosion

- Know the location of the nearest fire extinguisher, exit in your area and how to use them training and information can be provided by the HSE Department.
- If a minor fire appears controllable, IMMEDIATELY contact the area safety steward or area engineer.
- Then upon selection of the appropriate fire extinguisher promptly direct the charge of the fire extinguisher towards the base of the flame source.
- If a suspected fire-related emergency exists, alert others by intermittent shouting as "fire".
- Report to Site Deputy EHS&S Manager .
- Proceed towards assembly points and alert others to do the same.
- In case of declared emergencies and alarm raised to leave the site, proceed towards safe clear area, which is at least 500 m away from the affected area or towards the side exit.

Collapse of structure, buildings, cranes

- In case of potential emergency of collapse is felt, proceed towards designated assembly points. Alert others to the same. CALL for Help.
- Wait for headcount.
- In case of declared emergencies and alarm raised to leave the site, proceed towards safe clear area, which is at least 500m away from the affected area or towards the side exit.
- Immediately after a collapse, the debris of the building is very unstable and prone to additional movement. Do not attempt to remove debris without any standing instruction which may lead to further damage of debris or trapped personnel.
- Site Deputy EHS&S Manager is the command person in this scenario.
- The preliminary effort in this scenario will be to concentrate on areas where people were last seen or known to be. Provide HSE department with this information.
- Administration department to provide with a list of the people in the damaged area. Additional information can be gathered from the people who survived the collapse.
- Barricade the area to restrict entry.
- Call firefighting crew, ambulance for rescue.
- Notify legal authorities in this regard.

Chemical/oil spillage

- Leave the spill area; alert others in the area and direct/assist them in leaving.
- Without endangering yourself: remove victims to fresh air, remove contaminated clothing and flush contaminated skin and eyes with water for 15 minutes
- Report to area safety officer or area engineer.
- Barricade the spill area to restrict further entry
- Shut off electrical equipment and power supply in the spill area.
- Do not attempt to go back into an area where a chemical spill has occurred.
- If the spill has occurred in confined space or closed room, isolate the area.
- Close the doors and barricade by means of tapes or posting warning signs.
- Establish exhaust ventilation if possible.
- Vent fumes only to the outside of the building.
- Open windows, if possible without exposing yourself to fumes
- Wait for spill control team for clean up

Trapped under soil/in the Confined Space

An emergency in a confined space or under soil could vary widely in degree or type, and include:

a) Employees are uninjured and evacuate themselves,

b) Employees are injured, but still capable of evacuating themselves,
c) Employees are assisted to evacuate by persons remaining outside the space,
d) Entry is required in order to evacuate employees,
e) Entry is required to provide medical treatment.

For situations a, b, c

- Inform the area officer or site engineer
- Rescue personnel

For Situation d & e

- Inform the area officer or site engineer
- Check for the presence of hazardous gases with the help of explosive meter or oximeter
- Provide appropriate PPE
- Rescue personnel.

Emergency Drills, Records & Reviews

The Emergency drill shall be carried out at least once in six months and the findings shall be recorded. Mock drills shall be carried out for all the levels covering identified emergencies. This procedure shall be reviewed in the event of major modification recommended by the Technical Team following an emergency/ emergency drill and or in the event of the major Re-shuffle of the team. The records of the drills and the recommendations/findings shall be maintained until the completion of the Project.

The person who is responsible for recordkeeping shall keep the following records:

- Emergency Response Plan
- Evacuation Drills
- Equipment Inspection/Testing:
- Employee Training

Record Keeping/ Outcome

The table below provides the formats for the various lists and records that need to be maintained by the plant team to ensure the emergency response is provided in an efficient and timely manner. The lists need to be prepared as per the personnel and systems in place at plant and must be unique to each plant.

S.NO	Formats	NAME
1	Format I	List of key persons during emergency
2	Format II	List of key contacts: Internal Corporate
3	Format III	List of authorities: External
4	Format IV	Emergency line of communication
5	Format V	List of chemicals / material safety data sheets
6	Format VI	Spill kit's locations
7.	Format VII	List of firefighting equipment's
8.	Format VIIII	List of first-aid boxes
9.	Format IX	List of assembly points
10.	Format X	List of first aid trained personnel's
11.	Format XI	Emergency drill form
12.	Format XII	Training records

1.1.80.1 Format I: Emergency Contact List

This list is to be made available at plant, to be displayed at various locations and must be updated regularly.

Personnel	Contact Details	External contact details
Project Manager		
Site Supervisor		
Safety Manager		
Control Room		
Fire Station (nearest location)		
Fire Station (location)		
Fire Station (location)		
Fire Station (location)		
Police Station (nearest location)		
Ambulance		
Hospital (nearest location)		
Hospital (nearest location)		
Disaster Helpline		
Blood Bank		
Traffic Police Control Room		
First-aid trained professionals		

1.1.80.2 Format V: List of Chemicals/Material Safety Data Sheets

S. No	Name of Chemical	Name of manufacturer	Manufacturer contact number	MSDS Sheet

1.1.80.3 Format VI: Spill Kits location

This list is to be made available at plant site must be updated regularly. The list to be communicated to the employees, contractors and other staff during the trainings.

S. No	Spill Kit Number	Location of Spill Kit	Person in-charge	Last inspection date

1.1.80.4 Format VII: List of firefighting equipment

S. No	Location	Type	Capacity	Last inspection date

1.1.80.5 Format VIII: List of First-Aid boxes

This list is to be maintained at plant site must be updated regularly. The list to be communicated to the employees, contractors and other staff during the trainings.

S. No	Location of First Aid box	Name of Person in-charge	Contact details of person in-charge	Inspection date

1.1.80.6 Format IX: List of assembly points

S. No	Assembly point number	Location of assembly point

1.1.80.7 Format XII: Mock Drill Format

This format is to maintain in the records to ensure that records for mock drills are maintained and that the mock drills are conducted regularly during the project operation.

1.	Date and Time of Mock Drill			
2.	Location			
3.	Details of Emergency Scenario			
4.	Details of initiation/activation of emergency			
5.	Description of the Mock drill (the narrative of the situation, all actions) including response of emergency team and mitigation actions:			
6.	Communication and Response of Emergency teams			
Events		Expected Response time	Actual Response time	Remarks, if any

a)	Siren activation after initiation	Immediately		
b)	Reporting of CIC	30 Minutes		
c)	Reporting of SIC	15 Minutes		
d)	Fire team	5 Minutes		
e)	Medical team	5 Minutes		
f)	Security Team	5 Minutes		
g)	others			
7.	Head Count			
a)	Total persons present in the installation before the drill	Employees: Contractual: Others:		
b)	Total persons available at Assembly point(s)			
c)	Difference of head count after drill			
d)	Action taken to search the shortfall of head counts, if any			
8.	Time of 'All Clear'			
9.	Duration of Mock Drill (in Minutes)			
10.	Observations (including highlight the positives of the drill)			
	• .			
11.	Recommendations			
	•			
12.	Emergency Exercise Observers			

Name of the observer	Area of Observation

1.1.80.8 Format XIII: Training Records

This list is to be maintained in the records to ensure that trainings are conducted regularly during the project operation.

Topic(s):

Instructor(s)

Name of the Plant /Site

Location:

Date: Start Time: End Time:

	Name	Company Name	Employee ID	Designation	Signature
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					

1.1.80.9 Format XV: Records of past accidents/ occupational diseases/ dangerous occurrence/ emergency

	Accident Details								Detected Occupational Diseases						Incident /Dangerous Occurrence/ Emergency								
																		Person Affected					
Sr. No.	Date	Time	Place	Type of Accident	Nature of Injury	No of Person Injured	No. of Death	Days Lost	Name of Disease	Chemical Involved	Date of Detection	No. of Persons involved	Type of effect	Remedial Measures	Date	Time	Place	Chemical Involved/ Type of Incident /N.O	Inside		Out side		Duration of Emergency	Other Details
																			Injured	Died	Injured	Died		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1.																								
2.																								
3.																								
4.																								

APPENDIX K: Medical & First Aid

The purpose of this procedure is to identify first aid requirements and specify minimum requirements and responsibilities for the provision of medical services for immediate and adequate treatment of injury and illness.

Scope

This procedure applies to the provision of first aid within the facility during construction and operation phase.

Definitions

Term	Definition
First Aid	The immediate treatment or care given to a person suffering an injury or illness until more advanced care is provided or the person recovers.
First Aider	A person who has successfully completed a nationally accredited training course that has given them the competencies.
Hazardous Risk Workplace	A workplace where workers are exposed to hazards that could result in serious injury or illness and would require first aid.
Low Risk workplace	A workplace where workers are not exposed to hazards that could result in serious injury or illness such as offices, shops or libraries. Potential work-related injuries and illnesses requiring first aid would be minor in nature.
Defibrillation	An electric shock delivered to the heart to correct certain life threatening rhythms.

Responsibilities

First aider

- Respond promptly to an emergency service for injury/illness as required
- Record all treatment on first aid injury report
- Maintain first aid facilities including first aid equipment, checking and restocking of first aid kits as necessary

First Aid Coordinator

- Act as focal point of communication between First Aider and Site Deputy EHS&S Manager
- Ensure first aid kits, supplies and equipment are maintained

Medical Officer

- Periodic surveillance of Occupational health of workers and record maintenance as per the Factories Act, 1948 ;
- Providing first-aid care including emergency medical treatment;
- Notification of occupational diseases to the concerned authorities in accordance with these rules;
- Providing immunization services;
- Upkeep and maintenance of medical records of all workers(construction and operation)
- Providing health education including advisory services on family planning, personal hygiene, environmental sanitation and safety.

Site Deputy EHS&S Manager

Implementation of the Procedure

Procedures

Notification and Reporting Injuries and Illness

First aid officers shall be responsible for keeping a log of all the treatment provided and the first aid equipment dispensed. Information that should be recorded includes:

- The name and contact number of the causality

- Details about the nature of the injury
- Details of the date and time of accident
- Details of treatment given
- Reporting Procedure
- Causality is treated by first aider for injury/illness
- First aid injury report is completed by first aider (electronically) which will then automatically be sent to the Site Deputy EHS&S Manager
- In case the injury/illness is related to the work, causality is encouraged to complete a Hazard & Incident Report form (Refer Job Safety Analysis Procedure)

Assessment of first aid requirements

The site Management should ensure that medical facilities be provided free of cost to the workers. The Workplace Manager shall assess the first aid requirements of the Company's workplace by completing a First Aid Risk Assessment in consultation with the Health & safety Representative and First Aider. The assessment approach involves the following four steps:

- Identifying hazards that could result in work-related injury or illness
- Assessing the type, severity and likelihood of injuries and illness
- Providing the appropriate first aid equipment, facilities and training
- Reviewing their first aid requirements on a regular basis or as circumstances change.
- The assessment must consider
- The nature of the work being carried out at the workplace
- The nature of the hazards at the workplace
- The size, location and nature of workplace
- The number and composition of the workers at the workplace

Nature of the workplace and workplace Hazards

Identifying the workplace hazards can be done by personal interviews, reviewing records of injuries, illness and near miss incidents will be useful in making appropriate decisions about first aid.

Injuries associated with common Workplace Hazards that may require First Aid

Hazards	Potential Harm
Manual Tasks	Overexertion can cause muscular strain.
Working at Height	Slips, trips and falls can cause fractures, bruises, lacerations, dislocations, concussion.
Electricity	Potential ignition source could cause injuries from fire. Exposure to live electrical wires can cause shock, burns and cardiac arrest.
Machinery and Equipment	Being hit by moving vehicles or being caught by moving parts of machinery can cause fractures, amputation, bruises, lacerations, dislocations.
Hazardous chemicals	Toxic or corrosive chemicals may be inhaled, contact skin or eyes causing poisoning, chemical burns, irritation. Flammable chemicals could result in injuries from fire or explosion.
Extensive Temperatures	Hot surfaces and materials can cause burns. Exposure to heat can cause heat stress and fatigue. Exposure to extreme cold can cause hypothermia and frost bite.
Radiation	Welding arc flashes, ionizing radiation and lasers can cause burns.
Violence	Behaviors including intimidation and physical assault can cause nausea, shock and physical injuries.
Biological	Infection, allergic reactions.
Animals	Bites, stings, kicks, scratches.

Size and location of Workplace:

- First aid equipment and facilities should be located at convenient points/more than one location if:
- The workplace has more than one floor
- Access to a part of the workplace is difficult

- Work is being carried out at multiple locations in the facility
- Distance of the workplace from the ambulance services/hospital will also determine the first aid requirements

The number and composition of workers:

- Following should be considered while deciding the requirements for first aid.
- The maximum number of workers present at any time in the facility
- The particular needs of any worker (with disability or a known health concern)

First Aiders

Qualification of a First Aider

First aider will be considered appropriately qualified provided they:

- Complete a first aid certificate
- SAEL their first aid certificate every three years
- Attend a cardiopulmonary resuscitation (CPR) training session at least once in a year

Requirements of First Aider

- Staffs who wishes to be a first aider must
- Have keen interest in first aid
- Be readily available when required
- Be committed to undertake regular training and information sessions

Procedure for contacting First Aider:

Procedures should be developed so that First aiders can be promptly contacted in case of an emergency.

- Display Signs showing first aid station where first aider is present
- Display of contact details of first aiders on information boards, first aid kits, first aid equipment

First Aid Kits

- First Aid kits should be kept in a prominent accessible location and able to be retrieved promptly.
- A risk assessment will be helpful in determining the contents of a first aid kit.

Number of First Aid Kits:

- One first aid box for 150 labors shall be maintained in the first aid station

First Aid Kit must be:

- Accessible at all times
- Sturdy, dust proof, and moisture proof and must be coated with an impervious finish
- Located at a first aid station. Each first aid station should be clearly signposted.

Contents:

The first aid kit should provide basic equipment for administering first aid for injuries including:

- cuts, scratches, punctures, grazes and splinters
- muscular sprains and strains
- minor burns
- amputations and/or major bleeding wounds
- broken bones
- eye injuries
- Shock.

Maintenance of First Aid and Kits:

A person in the workplace should be nominated to maintain the first aid kit (usually a first aider) who shall be responsible for the following:

- monitor access to the first aid kit and ensure any items used are replaced soon after use

- undertake regular checks (after each use or, if the kit is not used, at least once every 12 months) to ensure the kit contains a complete set of the required items (an inventory list in the kit should be signed and dated after each check)
- Ensure that items are in good working order, contents are within their expiry dates and that sterile products are sealed and have not been tampered with.
- First aid signs
- First aid signs shall be displayed for assisting in easy locating of first aid equipment and facilities.
- First aid signs should comply with AS 1319: 1994 - Safety Signs for the Occupational Environment.

Other first aid equipment

- In addition to first aid kits, following first aid equipment shall be maintained at the workplace
- Automatic defibrillators
- Defibrillators shall be used to reduce the risk of fatality from cardiac arrest and is a useful addition for workplaces where there is a risk of electrocution or where there are large numbers of members of the public.
- Automatic defibrillators shall be handled by a trained personnel
- They should be located in an area that is clearly visible, accessible and not exposed to extreme temperatures.
- Eye wash and shower equipment
- Eyewash equipment (portable or fixed) should be provided where there is a risk of hazardous chemicals or infectious substances causing eye injuries.
- Shower facilities can consist of:
- an appropriate deluge facility
- a portable plastic or rubber shower hose that is designed to be easily attached to a tap spout.

First aid facilities

- A risk assessment will help determine the type of first aid facilities needed.
- Access to a telephone for contacting emergency services should be provided as part of all first aid facilities.

First aid stations

- A first aid room should be established at the workplace if a risk assessment indicates that it would be difficult to administer appropriate first aid unless a first aid room is provided.
- A first aid room is recommended for:
- Low risk workplaces with 200 workers or more
- High risk workplaces with 100 workers or more
- The location and size of the room should allow easy access and movement of injured people who may need to be supported or moved by stretcher or wheelchair.
- The contents of a first aid room should suit the hazards that are specific to the workplace. The following items should be provided in the room:
- a first aid kit appropriate for the workplace
- hygienic hand cleanser and disposable paper towels
- an examination couch with waterproof surface and disposable sheets
- an examination lamp with magnifier
- a cupboard for storage
- a container with disposable lining for soiled waste
- a container for the safe disposal of sharps
- a bowl or bucket (minimum two liters capacity)

- electric power points
- a chair and a table or desk
- a telephone and/or emergency call system
- The names and contact details of first aiders and emergency organizations.
- A first aid room should:
- be located within easy access to a sink with hot and cold water (where this is not provided in the room) and toilet facilities
- offer privacy via screening or a door
- be easily accessible to emergency services (minimum door width of 1 metres for stretcher access)
- be well lit and ventilated
- have an appropriate floor area
- Have an entrance that is clearly marked with first aid signage.
- Maintaining a first aid room should be allocated to a trained occupational first aider, except where this room is part of a health center or hospital.

Health centers

- Health centers staffed by a registered health practitioner (a doctor or nurse) or paramedic can provide emergency medical treatment and cater to the types of hazards in high risk workplaces.
- A health center may be established in the workplace (e.g. at a large mine site) or, if readily available, external emergency services may be used.
- If a health center is located at the workplace, the facility should meet the following requirements:
- Be self-contained
- Be located at ground level where possible in a quiet, clean area that is a safe distance from hazardous operations and clear of any general thoroughfare
- Be convenient and accessible to workers at the times that they work and have an entrance clearly marked with health center signage
- Have walls, floors and ceilings that are made of impervious materials and are easy to clean
- Have enough space to accommodate first aid equipment.

Ambulance

- Company shall ensure that an ambulance room with effective communication system is available at the facility (as applicable) and such ambulance room should be in the charge of a qualified first aider and the service of such ambulance room should be made available to the worker employed at the site during construction and operation phase.

First aider Training

- Accredited training will be provided to the all the workers who are required to administer first aid. Training records of the worker will be maintained by the Site Deputy EHS&S Manager .

Reviewing First Aid Requirements

- Regular review of first aid arrangements shall be made in consultation with the workers to evaluate the effectiveness of the first aid provided. This include
- Organizing a mock first aid emergency to check that first aid is effective.
- First aid assessments must be reviewed whenever
- The size or layout of the area is changed
- The number and distribution of workers change
- There are changes in working hours, shifts
- At least 3 years

Records

- Injury Report Form
- First aid Assessment
- Contents of a First Aid Kit

APPENDIX L: Traffic Management Framework

This traffic management framework is intended to serve as a guideline for preparing traffic management plan at the respective Plants. Each Plant should customize the traffic management plan with relevant details as per site specifications. SAEL currently utilizes third party contractors for transportation of raw materials.

Scope

SAEL is responsible for managing sound traffic inside the premises and neighboring property that might get impacted due to its activities. This plan applies to all vehicles carrying out tasks and services within SAEL's premises.

Traffic Management Plan will include information on the following:

- Traffic Management inside the Plant
- Traffic Management for the transportation of raw material and movement of staff
- Traffic Management for pedestrian
- Any effect on existing neighboring property traffic or access.

Regulatory Requirement

- Ensure that all vehicles used at plant premises comply with the requirements of the motor vehicles Act. 1988 (59 of 1988) and the rules frame there under.
- Ensure that a driver of a vehicle of any class or description operation at the plant premises holds a valid driving license under the Motor Vehicle Act, 1988 (58 of 1988).

Vehicle Access Plan

- The vehicles entry will be via identified gates/routes and will make use of dedicated route to the loading/unloading area/ parking area. Sufficient number of loading/ unloading bays will be provided. A dedicated area for the turning of such vehicles will (if feasible) be formed and a banksmen (helper) will oversee these movements whilst vehicles are maneuvering.

Deliveries and Traffic Management

- Loading/ unloading area will be located within the plant premises. Entry/ exit of all the vehicles will be made via the entry area designated by SAEL. Vehicular movements within the premises will be managed by trained traffic management operatives. All vehicles will enter and exit the site premise in forward facing direction. It will be ensured that vehicle driver is aware of the plant layout and safe working procedures within the plant premises.

Vehicle Co-ordination

- Different time slots will be allotted to different suppliers. The same will be conveyed to all to prevent any inconvenience to others.

Parking Space

- Sufficient parking area will be provide within the Plant or sufficient parking space will be provided outside the premises. Parking outside the Plant will be managed by SAEL and will be ensure that transportation vehicles do not cause inconvenience to the surrounding community.

Staff / Visitors Traffic

- SAEL shall dedicate a separate area for staff who will require daily access parking area within the Plant. Dedicated parking area for visitors shall be provided.

Protection to Pedestrians

- Dedicated pedestrian route will be provided and vehicles will not be allowed to use pedestrian space. In case pedestrian have to use vehicle route safe crossing will be provided.

Signs and road markings

Clear road markings like reflective paint and signs should be used to alert pedestrians and vehicle operators to traffic hazards in the plant.

Signs may indicate:

- Entry point
- Exclusion and safety zones
- Parking and no parking zones
- Speed limits
- Vehicle crossings

Signs and road markings should be regularly checked and maintained so they can be easily seen and read and re-painted when they fade.

Lighting

SAEL shall ensure adequate lighting is provided within the plant premises.

Inspection

SAEL shall ensure that vehicle entering the premises has valid PUC and drivers hold valid driving license.

APPENDIX M: Security Personnel Management

Purpose

The purpose of a security personnel management is to support a safe work environment through implementation of security measures, minimize unauthorized access to the Project site and protect the manpower, equipment and components of the Project from possible security threats.

Scope

The provisions of this Plan are mandatory for all Sites/ Projects of SAEL (during both construction and operation phase). All visitors to the Project site must abide by the requirements of this Plan.

Management measures

SAEL shall ensure the measures discussed in subsequent sections are diligently followed during the Project lifecycle at all its Projects.

Security Risks of the Project

SAEL shall engage third party security service providing agency and deploy adequate security personnel based on their assessment of potential security risks which can be (but not limited to) the following:

- Robbery
- Vandalism
- Labour Dispute
- Community Protest
- Armed Protest
- Trespassing / Petty Theft
- Road block, etc.

Selection Criteria of Security Agency

Selection criteria of security agency will include but not limited to:

- Agency should be in possession of necessary license from government authorities;
- Agency should have a reputed client list;
- Track records/ reputation of the agency;
- Guards attrition rate;
- Security guards should have their backgrounds verified from the local police station, at the instance of the contractor and a copy of such verification reports should be submitted before commencement of the contract;
- Basic safety and behavioral training to the security guards;
- Timely payment of wages and compliance to minimum wages, P.F., gratuity, insurance, medical and other dues of the security guards as other applicable labour laws

Security Arrangement

- SAEL shall perform proper due diligence of the shortlisted security agency. The due diligence shall cover (but not limited to) screening for reputational risk, hiring procedures, any record of criminal behavior or human right allegations against its staff;
- SAEL shall ensure that background verification of the security deployed at site has been made by the security agency and all details of the background verification of security personnel shall be documented ;
- SAEL shall prefer deployment of security personnel having an understanding and familiarity of the local area, language/dialect and nearby communities;

- All the security personnel to be deployed at project site shall have to submit health and fitness test certificate with SAEL management;
- A contact list of all on-roll staff and contractual workers engaged during construction phase will be maintained with the security personnel;
- Tasks of Security personnel will include
    - verify each person's (employees, contractors, visitors, suppliers, transporters etc.) identification card and site access permit before allowing them to enter into the site and collect the site access permit before they leave the site;
    - Remain vigilant during night time operations at project site, for potential entry of miscreants, unauthorized entry of personnel;
    - Thoroughly check all employees, contractor workers, visitors before allowing them to enter into the site, to ensure that they are not carrying any objectionable items;
    - Ensure that all vehicles carrying equipment coming to site has necessary permits and licenses;
    - Maintain a record of all incoming and outgoing vehicle and personnel in a register;
    - Control the vehicle movement into the site premises help in parking vehicles to their respective places/parking area;
    - Manning and guarding material projects on site will get familiarized with storage area layout, types of different raw materials stored; and
    - No person under the influence of alcohol or drugs will be allowed to enter the site premise

Armed Security

- If SAEL wishes to hire armed security personnel based on their assessment of potential security risks in the region, it shall ensure that the security agency has all the relevant documents required to carry a firearm;
- Any use of firearm by security personnel shall be authorized by the site designated person and will only be used for following risk scenarios:
    - Armed protest;
    - Riots;
    - Hostage Situation;
    - Personal or communal attacks causing fatalities.
- SAEL shall provide a dedicated storage area of security firearms which can be easily accessed in the times of emergency scenarios;
- SAEL shall maintain a record of firearms, ammunition and the person who has been issued those weapons;
- In the scenario of use of firearms in the wake major security threats to its projects and employees, SAEL shall immediately inform the local police station.

Training & Competence

SAEL shall engage the deputed security personnel in training programs through its in-house team or through the security agency. Following shall be covered in training:

- Gate Management
- Emergency Preparedness and Response Plan
- Fire Safety
- Grievance Redressal
- Appropriate use of Force

- Human Rights Principles
- First Aid
- Behavioral Aspects
- Mock Security Drills
- Procedure for dealing with threats of violence and the corresponding restraint to be displayed
- Protocols for reporting incidences to the local police station and seeking government assistance

Apart from the above components that are covered as part of the training, verbal instructions on the following security-related aspects shall be imparted by the SAEL to the security guards deployed at the SAEL Project Site on regular basis:

- Duties;
- Discipline and etiquettes; and
- Conduct in public.

Allegations of Misconduct

- SAEL shall duly investigate all allegations of unlawful or abusive acts of security personnel and take necessary action;
- Any complaint regarding security shall be channeled to the site security officer and any other personnel responsible for community relations.

Documentation and Reporting

SAEL shall maintain a database of the various security-related incidents occurring and the security-related grievances raised by external and internal stakeholders, including:

- Training records;
- Details of security guards; and
- Details of security related grievances.

APPENDIX N: Labour Accommodation

SAEL will be responsible for management of workers/ labour accommodation. The purpose of the worker accommodation management system is to define the actions to manage the workers' accommodation (onsite or offsite) during the construction activities, to comply with Indian legislation and IFC and EBRD[1] requirements. The worker accommodation shall be a healthy, safe, secure and comfortable accommodation. SAEL shall develop a worker accommodation plan to establish practical procedures for avoiding any negative impact to communities surrounding SAEL's project sites, and by mitigating the potential significant negative impacts related to a construction/ operations workforce accommodation.

Requirements for Workers Accommodation

An effective management system requires a robust monitoring mechanism to regularly check for its efficiency. Thus, a periodic monitoring of the workers accommodation should be undertaken to assess the performance against some pre-defined standards. A worker accommodation assessment checklist is provided in subsequent section and the minimum requirement of local accommodation are as follows:

- All non-local workers shall be provided accommodation, transportation and basic services including water, sanitation and medical care in keeping with the and the Worker's Accommodation Standards by IFC.
- Location of Worker Camp
    - The worker camp should be located in a suitable place within the site or off-site. It should be located in such a place to avoid flooding and other natural hazards. If possible, living camp will be located within a reasonable distance from the worksite.
- Rooms for Workers
    - All the living rooms in the worker camp area should be solidly constructed and all the walls and roofs will be of suitable heat resisting materials and also will be water proof. The height of such rooms will be not less than 360 cm from the floor to the lowest part of the roof.
    - Such rooms will be adequately furnished and equipped and for more than 5 workers residing in a room, two storied cot will be provided. But no three story cot is allowed. There should be provisions of places or arrangements where workers can put their cloths or other necessary belongings.
    - No living room in the camp area will be overcrowded to an extent injurious to health of the workers employed therein. To avoid such overcrowding, 5-8 people/room will be maintained.
    - In every room of worker camp area, sufficient and suitable lighting, both natural and artificial will be provided.
    - Sufficient ventilation will be ensured in those rooms by providing windows.
- Waste and Hygiene
    - The worker camp should have appropriate waste removal processes in place to curtail the spread of bad odour or germs. Metallic objects, wastes with terrible odour, chemical wastes and medical wastes should be removed in separate boxes every day.
    - In the worker camp area, sufficient number of waste disposal bins will be provided at convenient places based on the number of resident workers.
    - No person will throw any dirt or waste within the premises of the camp area except the bins provided. A notice board containing this provision and the penalty for its violation will be prominently displayed at suitable places in the camp area.
    - Each working room should be washed on a daily basis with appropriate chemicals/solutions and wet cloths.
    - All internal walls, partitions, rooftops, staircases and passages shall be painted or burnished.
    - Flies, mosquitoes and other insects will be properly controlled. Required measures like spraying of insecticides or aerosols will be there for vector control.
    - A register shall be maintained of the cleaning activities undertaken
- Drinking Water
    - Drinking water shall be made available in a hygienic, accessible and suitable place for all workers. The drinking water shall be located at least 6 meter off from the wash room or toilets.

[1] The Workers' Accommodation: Processes and Standards is a guidance note developed jointly by the IFC and the EBRD (European Bank for Reconstruction and Development). It looks at the provision of housing or accommodation for workers by employers and the issues that arise from the planning, construction and management of such facilities. https://www.ifc.org/wps/wcm/connect/60593977-91c6-4140-84d3-737d0e203475/workers_accomodation.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-60593977-91c6-4140-84d3-737d0e203475-jqetNlh

- Point where water is supplied, will be properly marked as 'Water Supply System' in Local, Hindi and English language.
- The water supply system should be not more than maximum travel distance of 50m.
- The water storage tank capacity should be large enough to hold 48 hours reserve capacity.

- Toilets and Urinals
  - Sufficient toilets and urinals of prescribed types will be provided at conveniently accessible location.
  - Such toilets and urinals will be adequately lighted and ventilated.
  - All the toilets will be maintained in a clean and sanitary condition at all times with suitable disinfectants and washing soaps.
  - Separate toilets for female workforce will be provided.
- Cooking Places
  - For every 50 person, at least two separate cooking places should be provided. All the cooking places must be located 6m away from the living rooms.
- Health and Safety
  - Adequate no. of first aid kits will be provided in accessible place. First aid kit to be equipped with medicines and basic facilities.
  - To avoid fire hazards, enough fire extinguishers will be provided in the camp.
  - An emergency alarm system and emergency contact person number will be provided in suitable locations within the camp.
  - To avoid electrical hazards occurred from wires, the wires will be placed in safe and suitable locations.
  - Smoking within the worker camp area will be restricted by providing some smoking corners to avoid fire hazards occurred from cigarettes. The smoking corners will be confined by placing signboards or indicators.
  - Proper fencing will be provided throughout the entire camp area to ensure security of the workers.
  - Emergency Contact numbers should be displayed in suitable places.
  - Emergency Exit should be displayed also.
  - Proper lighting in the corridor should be available.
- Recreational activities
  - In case workers are accompanied by children, appropriate designated area for their outdoor activities will be provided.
- Camp Supervisor
  - A dedicated worker camp supervisor will be appointed from the workers. The supervisor will be properly trained by the Site Deputy EHS&S Manager regarding safety, fire hazards and other HSE requirements. If required, the supervisor will train the workers about safety. He will maintain a record book stating any sort of incidents or other threats to safety.

Inspection and Verification Activities

The following monitoring activities will be undertaken and reported by the SAEL's EHS Team. The table below provides activities linked to the workers' accommodation in the construction phase:

S. No.	Monitoring Activity	Frequency	Responsibility
1	Workers' accommodation condition	Monthly	EHS Team
2	Quality of Food	Monthly	EHS Team
3	Grievance Mechanism	Monthly	Grievance Officer

In addition to routine monitoring, the SAEL's EHS Team will also undertake internal inspections and audits to identify any non-conformances. Based on the internal audit results and monitoring, corrective and /or enhancing actions will be implemented.

1.1.81 Grievance Mechanism

A Grievance Redressal Mechanism (GRM) has been put in place for workers as well as for the community. The workers will be made aware of the GRM and know that any concern or complaint regarding accommodation may be submitted through the Grievance Mechanism.

It is likely that the workers' accommodation may have an ongoing impact on the local community, during the construction phase. For this, the site level grievance officer will be in charge of implementing the GRM for the community and managing community relations through frequent and regular engagement.

Labour camp assessment checklist

S. No.	Aspect	Standards for Workers Accommodation	Responsible Parties	Satisfaction Levels	Remarks	Closure Date	Corrective actions/ plans	Evidence reviewed/ pictures
1.	Worker Camp- General Requirements	Is the location of the worker camp designed to avoid flooding or other natural hazards?						
2.	Worker Camp- General Requirements	Is the worker camp at a significant distance from the nearby residential locality and construction activities?						
3.	Worker Camp- General Requirements	Is the accommodation site adequately drained?						
4.	Worker Camp- General Requirements	Is the worker camp designed as per the approved plan?						
5.	Worker Camp- General Requirements	Is the building material used for construction is safe and non-hazardous?						
6.	Worker Camp- General Requirements	Does the worker camp have a proper access road?						
7.	Worker Camp- General Requirements	Does the worker camp display the GRM and associated roles and contact numbers?						
8.	Sanitation Facilities	Does the worker camp have adequate sanitation and toilet facilities? If yes, are the numbers of toilets sufficient to suffice the number of workers?						
9.	Sanitation Facilities	Are separate toilets for female workers provided?						
10.	Sanitation Facilities	Is the toilet facility provided with adequate water supply?						
11.	Sanitation Facilities	Is the overall cleanliness and hygiene satisfactory?						

S. No.	Aspect	Standards for Workers Accommodation	Responsible Parties	Satisfaction Levels	Remarks	Closure Date	Corrective actions/ plans	Evidence reviewed/ pictures
12.	Water, Wastewater and Waste Requirements	Are potable drinking water facilities available and provided to the worker camp?						
13.	Water, Wastewater and Waste Requirements	Is the drinking water storage covered to prevent water stored therein from becoming polluted or contaminated?						
14.	Water, Wastewater and Waste Requirements	Is adequate storage capacity available to store water for domestic purposes (storage of 48 hours reserve supply is adequate)?						
15.	Water, Wastewater and Waste Requirements	Are there separate arrangements for sanitation and bathing facilities for men and women (if applicable)?						
16.	Water, Wastewater and Waste Requirements	Are the sanitation facilities maintained in a good condition?						
17.	Water, Wastewater and Waste Requirements	Does the worker camp site have a proper drainage system?						
18.	Water, Wastewater and Waste Requirements	Are all streams of wastewater generated from the camps leading to treatment and disposal facility (septic tanks and soak pits)?						
19.	Water, Wastewater and Waste Requirements	Does the worker camp have adequate number of dustbins for waste collection and disposal?						
20.	Water, Wastewater and Waste Requirements	Are wastewater, sewage, food and any other waste material adequately discharged and disposed in compliance with local standards and without causing any significant impacts on camp residents, the environment or surrounding communities?						

S. No.	Aspect	Standards for Workers Accommodation	Responsible Parties	Satisfaction Levels	Remarks	Closure Date	Corrective actions/ plans	Evidence reviewed/ pictures
21.	Living Conditions	Do the worker camps have adequate spacing inside to accommodate allotted number of individuals?						
22.	Living Conditions	Are the Worker Camps properly illuminated?						
23.	Living Conditions	Is the worker camp designed considering safety from rain? Does it protect from flooding/ leakages?						
24.	Living Conditions	Are the worker conditions equipped to provide thermal comfort (as required) during the winter?						
25.	Living Conditions	Are the Worker Camps provided with proper facility to keep valuables?						
26.	Living Conditions	Are the Worker Camps properly ventilated?						
27.	Living Conditions	Has a separate area for cooking been constructed/ allocated for workers and are proper hygienic conditions being maintained?						
28.	Living Conditions	Have the workers been provided or allocated with proper sleeping arrangement like cots, mattresses, blankets etc.?						
29.	Health and Safety	Is the cooking facility separate from the living quarters to avoid any fire hazards and is the LPG cylinder stored in a well ventilated area?						
30.	Health and Safety	Are fire extinguishers in sufficient no. been provided at the camp (s)?						

S. No.	Aspect	Standards for Workers Accommodation	Responsible Parties	Satisfaction Levels	Remarks	Closure Date	Corrective actions/ plans	Evidence reviewed/ pictures
31.	Health and Safety	Are there adequate first aid facilities present at the camp and is it readily accessible at all times?						
32.	Health and Safety	Are emergency contact numbers displayed prominently at the worker camp? The emergency contacts should include at least one number of the principal employer						
33.	Health and Safety	Is a housekeeping register being maintained for the camps?						
34.	Health and Safety	Are the workers sensitized on communicable diseases?						
35.	Health and Safety	General Housekeeping Staff						
36.	Health and Safety	Vector Born Disease Control						
37.	Health and Safety	Are the workers provided with adequate PPE?						
38.	Community Related	Is the nearby community getting affected by the Worker Camps and its activities in anyway?						
39.	Community Related	What are the type of such activities?						
40.	Community Related	Are there any sources through which there is a possibility of disease spreading to the nearby community because of the unhygienic conditions at the Worker Camps?						

APPENDIX O: Community Health & Safety

The receptors for impacts on community health and safety will include settlements located in proximity to the project site, access roads, transmission route and underground pipeline route.

The construction phase activities such as levelling of land, use of heavy machinery, setting up of the power plant and sorting station, development of ancillary facilities (such as batching plant, labour camp) will lead to noise and dust emission that may have potential risks such as respiratory and hearing problems to the nearby community especially to pregnant women, infants and senior citizens. Furthermore, transportation of construction material through state highway and access road may result in injuries to people or livestock due to accidents. In case of fire hazards at the project site, settlements located in close vicinity (within 500 m) of the project are envisaged to be negatively impacted. Installation of transmission towers may also pose accidental and electrocution risks to community.

The community health and safety concerns as mentioned above would be consistent across the Project life cycle and therefore the impacts would be similar in nature. During operation phase, community will be exposed to biomass particles which may disperse in air while sourcing and transporting biomass from farmers to sorting stations and from sorting station to the project site which may cause respiratory problems. Furthermore, there may be potential risk of accidents during transportation of biomass through common access roads used by community.

Suggested Control Measures

- Labour management plan (comprising of measures for maintaining relations with labour and community) will be developed and implemented
- As part of the stakeholder engagement, the community will be provided with an understanding of the activities to be undertaken during construction phase and the precautions taken for safety.
- The project will also propagate emergency scenarios and health awareness amongst the community including pregnant women, infants and senior citizens.
- Measures to avoid respiratory and hearing problem among community residing in proximity to the proposed project will be adopted
- The traffic movement for the project in the area will be regulated to ensure road and pedestrian (including livestock) safety.
- Dedicated route for deployment of heavy-duty vehicles should be defined.
- Put in place a grievance mechanism to allow for the workers and community members to report any concern or grievance related to project activities.
- Dedicated safety sign boards in local language should be provided around the project site and under construction transmission tower location and other associated facilities of Renewable Energy Project Portfolio.
- Vehicles sourcing construction materials, biomass and raw materials for assembly (during operation phase) should be covered to avoid dust emission.
- The consequences of emergency events are likely to extend beyond the project boundary and it can also affect community health and safety due to labour influx. Emergency Response Plan developed for the Project should be communicated to the nearby community.
- Ensure pollution norms compliant vehicles are used for transportation.
- Any road diversions and closures will be informed in advance to the local community. Usage of horns by project vehicles will be restricted near sensitive receptors such as schools, settlements etc.
- Adequate training on traffic and road safety operations will be imparted to the drivers of project vehicles. Road safety awareness programs will be organized in coordination with local authorities to sensitize target groups viz. school children, commuters on traffic safety rules and signage.

APPENDIX P: Incident Investigation and Reporting

The accident/incident reporting and investigation procedure at the SAEL project (operation and construction phase) will cover, at minimum, the following:

Definitions

- ***Accident***: An unplanned event which results in loss or damage to the person, the property or on or off site environmental harm.
- ***Incident***: An unplanned event which results in loss or damage to the property or environment. It includes incidences of fire, natural disasters. Incident is referred as unusual occurrences on the site.
- ***Near Miss***: Incidences that cause no actual harm but could cause harm if repeated.
- ***Lost Time Injury***: Where injured person is unable to attend work for one or more days because of accident or illness. This does not include absence on the day or shift of the accident.
- ***Reportable Lost Time Injury***: Lost time injury which prevent employee from working for a period of 48 hours or more following the day of accident, under Factory Act 1948.
- ***Dangerous Occurrences***: Events such as explosions, collapse, fire, bursting out etc.
- ***Investigation***: Systematic & scientific evaluation of the event to identify root causes, probable solutions & actions planning to implement the optimum solution to avoid reoccurrence.

Responsibilities

Following people at SAEL projects will be made responsible for incident investigation and reporting

- ***Project Manager:*** Responsible for resource allocation, ensure compliance and approvals
- ***Site Specific Deputy EHS&S Manager:*** Responsible for ensuring incident investigation and implementation of corrective actions.
- ***Service Engineer*** would be responsible for investigation related to maintenance activities during operation phase.
- ***Project Management representative*** would be responsible in investigations related to module cleaning activities.

Procedure at the time of an accident/ incident

This procedure shall cover the steps but not limited to the following:

- In case of accidents involving personal injuries of a serious nature like fracture, severe burns, fatality etc., supervisor on duty will inform Project Manager/ Service Engineer/ Project Management representative and Site Specific Deputy EHS&S Manager immediately;
- The Site Specific Deputy EHS&S Manager immediately will arrange first aid and arrange suitable transport or an ambulance and move the injured person to the nearest hospital accompanied by a responsible person who will remain there till the injured person gets the necessary medical attention;
- Project Manager (construction phase)/ Service Engineer / Project Management representative (operation phase) with the help of other departments will be responsible for collecting the facts and other relevant information regarding the accident / incident. This information should be collected on the same day and made available for subsequent investigation

Procedure for reporting accidents/incidents

- All accidents/incidents including first aid cases must be reported to ensure prompt medical treatment to injured person, timely investigation with root cause analysis to avoid reoccurrence;
- Project Manager/ Service Engineer/ Project Management representative at site should fill up the appropriate information of accident/ incident report & send it to ESMS Manager within 24hrs of the accident/ incident;
- Site Specific Deputy EHS&S Manager should initiate the investigation by involving Project Manager / Service Engineer/ Project Management representative within 24 hours of the accident/incident;

- Investigation should be completed within 7 days of the event, in case of complex situation interim report must be submitted within 7 days;
- Involve affected employees, employee group & subject matter expert during the investigation;
- Select the cause of the accident identify the unsafe practices & unsafe conditions;
- Identify corrective measures to be implemented.

Procedure for Investigation of Accidents/Incidents

- All accidents / incidents must be investigated. The scale of investigation will depend on the actual or potential seriousness of the event;
- Key personnel undertaking the investigation must be adequately trained;
- Involve employees, subject matter experts, Site Deputy EHS&S Manager, ESMS Manager at corporate level during the investigation;
- Carry out EHS risk assessment for the probable solutions before implementation;
- If the root cause elimination is a long term action plan, interim corrective measures should be implemented e.g. use of PPE, additional control, supervision etc.;
- Investigations must focus on identifying systemic root cause rather than targeting affected employee or employee groups.

Accident/incident investigation and reporting guidelines covering:

- Notifications about injury/incident;
- Accident/incident site visit;
- Meeting/ discussion with injured/witness/ who provided assistance;
- Recording the facts;
- Investigation covering the following (though not limited to):
    - Determining the underlying cause/factor that may have caused/ contributed to occurrence of accident/incident;
    - Analyzing the cause to be immediate/ basic /root cause;
    - Identifying need for corrective action;
    - Identifying the opportunities for preventive action;
    - Identifying the opportunities for continual improvement.

Preventive/Corrective action in the following order:

- Elimination of the hazard completely or prevention;
- Reduction or combating at source;
- Control by engineering methods;
- Protection to whole workforce;
- Personal Protective equipment usage; and
- Provision of information, instruction, training and supervision

Communicating the result of such investigation and action taken to all relevant stakeholders

The Report format for the Incident and Accident Investigation is presented below and can be used for all onsite/ off-site incidents/accidents:

INCIDENT AND ACCIDENT REPORTING FORM

Incident Title:			
Category			
☐ Fire & Explosion		☐ Material Damage	
☐ Human Injury		☐ Near Miss	
☐ Road Accident		☐ Journey Violations	
☐ Security Incident			
☐ Environmental Incident			
Impact			
Nature of Injury		**Material Damage**	
☐ Fracture	☐ Electric Shock	☐ Loss beyond premises	
☐ Head Injury	☐ Thermal Burn	☐ Above 10 Lacs	
☐ Cuts/Wounds	☐ Electric Burn	☐ INR 5 to 10 Lacs	
☐ Internal Injury		☐ Up to INR 5 Lacks	
		☐ No significant loss	
Description			
Date of Incident		**Time of Incident**	
Incident location			
Course of events			

Personal Injury			
Details of Injured Person Name : Designation : Company :		**Injured Party** ☐ SAEL Employee ☐ Visitor ☐ Contractor Employee ☐ Other	
Injured body parts:	☐ Skull ☐ Back ☐ Arm ☐ Eye ☐ Leg ☐ Hand ☐ Teeth ☐ Foot ☐ Pelvis ☐ Skin ☐ Thorax ☐ Others		
Lost working days:			
Response			
Immediate Measures taken:			
Parties informed:			
Estimated Loss (INR)			
Physical damage:			
Product loss:			
Environmental clean-up:			
Other claims:			
Incident Causes			

Corrective Action & Recommendation			
SN	Action Point	Responsible Person	Target Date

Incident Closure			
Date		Time	

Document Control			
Action	Name	Date	Signature
Report preparation			
Report Review			
Report Approval			

Incident/ Accident Investigation Report (Indicative)

Location / Project

Date of Investigation:

Prepared by:

Approved by:

Date of Incident/ Accident	Time of the Incident/ accident	Name of the Person affected	Employee No	Incident / Injury type	First Aid Provided

Describe root cause of the incident, and immediate action taken:

Suggest Preventive Actions to be taken in future:

Signature of Site Deputy EHS&S Manager

APPENDIX Q: Stakeholder Engagement Framework

The stakeholder engagement and communication framework has been prepared to guide stakeholder engagement across the lifecycle of the project, demonstrating Company's commitment towards its stakeholders while also addressing the requirements of the International Finance Corporation (IFC) Performance Standards (PSs). This engagement framework is focused on the engagement during the construction and operation phases of the project. It is expected that the framework will be a "live" document and will continue to evolve and be updated continuously as the project progresses.

Project phases and activities

The project life-cycle (PLC) can be divided into four phases and ensuring the completion of all the tasks in each phase, within the planned Turn-around Time (TAT), is the major responsibility of the corporate management. The four phases of the PLC are as follows:

- Planning and preconstruction phase;
- Construction phase;
- Operation (including maintenance and repair) phase; and
- Decommissioning.

Aims and objectives of SEF

This engagement framework will guide all the stakeholder engagement during construction phase and operation phase. The objectives of this SEF are to:

- Enable management to develop effective stakeholders management strategies for the various projects in order to build longer term relationships so as to ensure smooth functioning of the projects;
- To define and standardize the processes that the projects will use to communicate with respective stakeholders;
- To ensure regular and timely sharing of information with project teams to spruce up their understanding and skills of engaging with the stakeholders;
- Ensuring coordination in approach and message to be shared with the community regarding the company and the projects;
- To assess the efficiency of the communication process in meeting the objectives of the Stakeholder Engagement Plan and ensuring the project's 'Social License to Operate'

SAEL will develop a fit to purpose Stakeholder Engagement Plan (SEP) based on this framework that can be consistently implemented across its Plants/ Projects by its staff and contractors. Stakeholder engagement and consultation would involve dialogue between SAEL and its stakeholders to sustain constructive relationships over time. For its Plants, this will not be a single conversation but a series of opportunities to create understanding about the Plant among those it will likely affect or interest, and to learn how these stakeholders view the Plant and its risks, impacts, opportunities, and mitigation measures.

Stakeholder identification, mapping and analysis will be undertaken during ESIA stage and much stress has to be put in rationalizing the organisational structure for implementation of the stakeholder engagement and communication plan, depending upon the self-development model or turnkey development model to be followed for any project of SAEL.

Applicable reference framework

The disclosure of project information and consultations with stakeholders has been increasingly emphasized by project finance institutions and government regulatory bodies. A brief overview of the requirements of public disclosure and stakeholder consultation applicable to this project is in Table provided below.

Table Overview of Disclosure and Stakeholder Consultation Requirements

Institution/ Regulatory Body	Requirements

IFC PS-1	• In keeping with this PS, community engagement is to be undertaken with the affected communities and must be free of external manipulation, interference, or coercion, and intimidation. • Furthermore, in situations where an affected community may be subject to risks or adverse impacts from a project, the proponent must undertake a process of consultation so as to provide the affected communities with an opportunity to express their views on the project risks, impacts, and mitigation measures, as well as allow the proponents to consider and respond to them. • Informed participation: For projects with significant adverse impacts on affected communities, the consultation process must ensure that free, prior and informed consultation with affected communities occurs and that processes exist to facilitate participation by those affected. • Apart from such a consultation process, the project proponents are also to establish a Grievance Redressal Mechanism, which will allow the affected communities' concerns and grievances about the project proponent's environmental and social performance to be received and allow for steps to be taken to resolve the same • Broader stakeholder engagement: The proponent must identify and engage with stakeholders that are not directly affected by the Project but those that have established relationships with local communities and/or interest in the Project – local government, civil society organizations, etc. – and establish a dialogue.

Stakeholder Identification, Mapping & Analysis

"Stakeholder mapping" is a process of examining the relative influence that different individuals and groups have over a project as well as the influence of the project over them. Effective stakeholder mapping is done by identifying the people/groups that have stakes/ interests in the Project either directly or indirectly and the manner in which both can mutually benefit from each other.

Stakeholder engagement will enable SAEL to assess the socio-political environment in which they are to operate and in particular to:

- Train SAEL site officials to identify conflict of interests between stakeholders in order to help manage such relationships during the course of the project;
- Help project officials to identify relations between stakeholders that may enable "coalitions" of project sponsorship, ownership and co-operation;
- Generate information critical to planning, implementation and monitoring of the project; and
- Develop the framework of participatory planning and implementation.

1.1.82 Categorization of Stakeholders

A stakeholder is "a person, group, or organization that has a direct or indirect stake in a project/organization because it can affect or be affected by the Project/organization's actions, objectives, and policies". Stakeholders thus vary in terms of degree of interest, influence and control they have over the project. While those stakeholders who have a direct impact on or are directly impacted by the project are known as **Primary Stakeholders,** those who have an indirect impact or are indirectly impacted are known as **Secondary Stakeholders**. Keeping in mind the nature of the project and its setting, a broad list of stakeholders have been identified and listed in the table given in table below.

Table: Stakeholder Group Categorization

Stakeholder Groups	Primary Stakeholders	Secondary Stakeholders
Community	Sub-contractors Local Labourers	Local community Agricultural Labourers Vulnerable Community
Institutional Stakeholders	Gram Panchayats Project investors	Village Institutions (schools, health centers)

Stakeholder Groups	Primary Stakeholders	Secondary Stakeholders
Government Bodies	Regulatory Authorities District Administration	
Other Groups		Media Other industries/projects

1.1.83 Stakeholder Analysis

The *Table* below provides the profile of the key stakeholders who might have certain direct or indirect impact. These stakeholders will need to be classified in accordance with the level of influence they might have over the project as well as their priority to the project proponent in terms of importance. The influence and priority have both been primarily rated as:

- ***High Influence:*** This implies a high degree of influence of the stakeholder on the project in terms of participation and decision making or high priority to engage with the stakeholder*;*
- ***Medium Influence:*** Which implies a moderate level of influence and participation of the stakeholder in the project as well as a priority level to engage the stakeholder which is neither highly critical nor are insignificant in terms of influence*.*
- ***Low Influence:*** This implies a low degree of influence of the stakeholder on the project in terms of participation and decision making or low priority to engage that stakeholder*.*

The intermediary categories of low to medium or medium to high primarily imply that their influence and importance could vary in that particular range subject to context specific conditions or also based on the responses of the project towards the community.

The coverage of stakeholders as stated above includes any person, group, institution or organization that is likely to be impacted (directly or indirectly) or may have interest/influence over project. Keeping this wide scope of inclusion in stakeholder category and the long life of project, it is difficult to identify all potential stakeholders and gauge their level of influence over project at the outset of the project. Therefore, project proponent is advised to consider this stakeholder mapping as a live document which should be revised in a timely manner so as to make it comprehensive for any given period of time.

The ESIA socioeconomic baseline will be quantitative for CAT A, quantitative/qualitative for B projects or qualitative for B and C projects. Questions to include identification of persons of influence, and communication styles of stakeholders (e.g., literacy rate, mobile phone usage, internet availability or other forms of preferred communication). The E&S consultant presents findings to the site team to ensure a smooth flow of implementation. This information is important for the CLO to know when implementing the Stakeholder Engagement Plan.

Table: Stakeholder Analysis

Relevant Stakeholders	Profile/Status	Impact/Influence of the Project on this Stakeholder Group	Impact/Influence of the Stakeholder Group on the Project	Expectations, Opinions Key Concerns of Stakeholders	Rating of Stakeholder Influence
Developers and EPC Contractor					
Local Labourers					
Migrant Workforce					
Gram Panchayats					
Regulatory Authorities					
District/Tehsil Administration					
Local Community					
Vulnerable Community					
Civil Society/Local NGOs					

1.1.84 Stakeholder Engagement & Communication Strategy

Stakeholder engagement and communication strategy will take into cognizance the various stakeholder engagement and CSR activities already being undertaken by the company or partner NGO, or developer under turnkey model and existing communication routes being followed. Presence of CSR agencies needs to be considered, as they are considered to be an extension of the project and the staff therein is considered, to an extent, representative for the project. The construction team mobilized at the site, serves as another extension. Coordinated flow and collation of information, concerns and grievances, therefore becomes important.

1.1.85 Stakeholder Engagement Principle

The Stakeholder Engagement framework considers the analysis, mapping and feedback of consultations during the ESIA process and the same has been provided in this document.

This framework provides details on the general principles for SAEL stakeholder engagement which shall be used for implementing, monitoring and evaluating stakeholder engagement activities. In line with current international best practices, the SEF basically aims to:

- Describe the general requirements for engagement and disclosure;
- Identify the stakeholders being directly or indirectly affected or having any sort of interest in the project;
- Identify any specific requirements, expectations and preferences of key stakeholders (affected parties, authorities, NGOs) and pay particular attention to the needs of vulnerable groups;
- Provide a strategy for sharing of information and consulting with each of these stakeholder groups during various phases;
- Document SAELs resources and responsibilities for implementing activities and provide contact information at all levels and on all subjects;
- Maintain detailed reporting/documentation of engagement and disclosure activities; and
- Agree on monitoring and evaluation processes

By assessing the present status of stakeholder engagement, challenges in the process and the phase of project cycle, the way forward has to consider and address all the remnants of the previous stages and aspects that will add onto the current stage of development. In order to ensure the smooth functioning of the project a long-term engagement strategy has been formulated.

1.1.86 Overall Stakeholder Engagement Strategy

The overall stakeholder strategy will be cognizant of the requirement of the various stakeholders and the level at which communication is presently being undertaken by the project.

1.1.87 Regulatory Authorities

The regulatory authorities will be coordinated directly be SAELs legal team/ project based team. These consultations are in relation to the power purchase agreement, power evacuation arrangements; intimation to concern state pollution control boards / pollution control committees, revenue land allotment, or other requirements required for the renewable energy projects. The copy of the permits and communication will be made available to SAEL at various levels. SAELs team at the corporate level will be responsible for driving the timely fulfilment of the project level regulatory compliances. After completion, a copy of the relevant permits and compliances will be provided to the corporate team from all the projects, for records.

The corporate representatives of SAEL will drive the liaison (either through direct meetings or through state team) with authorities that include the Ministry of New and Renewable Energy, state Revenue Departments, state Renewable Energy Corporation, State Pollution Control Boards and other necessary agencies, as and when required.

1.1.88 Community around the Projects

The project liaison officer of each site will be solely responsible for interaction with the community members residing near each project, through village meetings and other platforms. The minutes of the meetings will be shared with the respective site in-charge as well as the corporate liaising team in standard reporting formats in pre- decided time intervals.

1.1.89 NGOs, Civil society, Political leaders and Media

SAELs corporate liaising in-charge/ person responsible for liaising will be accountable for any communication with NGOs, civil society members, political leaders and media. The details of any such communication concerning the projects will be made available to the SAELs corporate team in the form of stakeholder engagement records. Nobody apart from SAELs designated corporate liaising in-charge will be responsible for communication with the above mentioned stakeholder.

1.1.90 Organisational Structure & Roles and Responsibilities

During the construction stage, owing to the interplay of the various actors involved, it is important to have a system in place which ensures that the community as one of the key stakeholders is aware about the Stakeholder engagement as well as the communication protocol including the grievance mechanism. Due to the interplay of various actors, the organisational structure for CSR and stakeholder engagement has been shown in context to the complete organisational structure.

Section below suggests the mechanism in place for establishing clear protocol of communication between the corporate team and the various stakeholders including the community. It is also suggested above that all these communication platforms have to consolidate the stakeholder engagement records and submit it to the corporate team of SAEL.

1.1.91 Financial Resourcing

The corporate team of SAEL will ensure that the budgetary allocations for stakeholder engagement are adequate to meet its objectives as laid out in the stakeholder engagement policy. Once the construction phase of a project is over, the stakeholder engagement will continue to be budgeted for the complete lifecycle of each project. Community head at the corporate level will ensure that budgeting related to stakeholder engagement are not compromised and financial resources for conducting the stakeholder consultations are made available to the dedicated team at the project site level.

1.1.92 Engagement Methods

The methods of communication can be either verbal or written, on the basis of the purpose of communication and the target stakeholder group. Some of the key methods of communication are as follows:

- Meetings and Discussions: Meetings and discussions are an essential component of any communication exercise. The corporate CSR team of SAEL will have regular interface with their counterparts in the project in order to review the current engagement with local community. These discussions will be to communicate specific information to the target stakeholders and allow for the collective opinion of the groups to be captured and assessed.
- Reports and Notices: Information disclosure is an important process of communication with the local stakeholders and is part of the applicable reference framework for the project. A mandatory communication from the corporate team will guide project teams for the forthcoming meetings in each project. The process of disclosure of information to the communities at the project will involve the provisioning of information in an accessible manner (a manner which allows for easy understanding, such as in the local language) to the various stakeholders in a project. There will be visits of the designated members of corporate team at regular intervals to each project.

The details of the relevant stakeholders, stage at which the engagement needs to be undertaken, purpose of consultation, mode of engagement, responsible person for stakeholder engagement, person to whom reporting is to be done, and the system of maintaining records of stakeholder engagement is mentioned in table below.

Table Stakeholder Engagement

Relevant Stakeholders	Stage at which the consultation	Purpose of the Consultation	Mode of engagement	Responsible person	Reporting	Reporting Format
Developers and EPC Contractors	Mobilization Construction Stage Operation stage	• Engagement by Project team will be at various stages of the project	• Meetings • Submission of reports			• Reports on various aspects
Regulatory Authorities	Mobilization Construction Stage Operation stage	• Various permissions and licenses related to setting up of the project; • Land procurement on lease; • Submission of compliance related returns.	• Meeting • Submission of compliance documents • Official letters			• Evidence as well as details of communication
District/Tehsil Administration	Mobilization Construction Stage Operation stage	• Some of the regulatory permission in relation to land; • Development intervention for the district; • Other issues seeking participation of the project by the District Administration.	• Meeting • Submission of compliance documents • Official letters			• Evidence as well as details of communication • Verbal communication and relevant records as applicable
Gram Panchayats	Mobilization Construction Stage Operation stage	• NOC from the local Panchayat • Information on the project	• Meetings			• Records of communication at site level
Local Community	Mobilization	• Information sharing on the project; • Compensation and other issues; • Details on the activities to the project; • CSR and other benefits to the local population	• Meetings			• Records of communication at site level

	Construction Stage	• Information on employment opportunity; • Information on movement of vehicles and equipment; • Regular update meetings on monthly or bimonthly basis	• Meetings	• Records of communication at site level
	Operation stage	• Benefits from the project	• Meetings	• Records of communication at site level
Vulnerable Community	Mobilization Construction Stage Operation stage	• Benefits from the project	• Meetings	• Meeting records maintained at the village level as well as submitted to site in charge.
Civil Society/Local NGOs/ media	Mobilization Construction Stage Operation stage	• Information sharing on the project; • Discussion on specific issues of concern	• Meetings	• Records of communication at site level
Sub-contractor/ Local Labourers/ Migrant Workforce	Construction Stage	• Working conditions and terms of employment; • Any other issue including conflict of the migrant population with the locals		• Meeting and grievance records submitted to the site in-charge

1.1.93 Reporting and Monitoring

1.1.94 Monitoring and Evaluation

SAEL shall monitor the principles and commitments of the stakeholder engagement process and will need to report on the status of implementation of different aspects, such as information disclosure, grievance redressal, etc. Engagement levels can be monitored by developing a set of indicators which will include:

- Number and Type of Communications and Issues discussed.
- Frequency of communications;
- Type, subject and number of grievances;
- Sources of complaints;
- Average time taken to resolve and close grievances;
- Number of presentations and frequency on EHS and economic status of the company;
- Number and diversity of stakeholders involved per action;
- Comments on any disclosed documents/presentations;
- Level/degree of involvement for stakeholders;
- Partnerships with stakeholders; and
- Number of mass media articles/announcements.

1.1.95 Monitoring & Evaluation of Communication Process

In order to ensure the smooth functioning of the communication plan and fulfilment of the objectives identified, it is imperative to undertake regular monitoring, reviewing and reporting. The importance of the review process lies in the fact that it allows for the corrections of any oversight which may have been made during the initial stages of a project through mid-course corrections. This also serves as an important quality assurance mechanism.

The monitoring and review process becomes all the more important when it is kept in mind that the Communication Plan is a 'live document; or in other words a document which needs to be revised in a timely manner so as to make it comprehensive for any given period of time. In keeping with this, the project will undertake regular monitoring of the implementation of the communication plan, on the basis of which the plan will be updated as and when felt necessary.

This monitoring will thus be aimed at:

- Auditing the implementation of the Communication Plan;
- Monitoring the formal and informal communication activities conducted with the stakeholder groups;
- Monitoring the effectiveness of the communication processes in managing impacts and expectations, while dispersing information by:
    - Tracking feedback received from communication activities
    - Recording and tracking commitments made to communities; and
    - Assessing the efficacy of the communication activities in terms of the desired outcomes and the participation of the stakeholder groups.

For the purpose of monitoring and reporting the following checklist will be followed.

Table: Communication Plan Checklist

Stakeholder group	Location	Date of communicatio	Purpose of communication	Means of communication	Stakeholder Response	Further Action	Reference Document

All communication with the stakeholders will be properly recorded in the form of minutes and maintained as reference documents (as seen in the table above) across the lifecycle of the project. Such a database would allow for the effective monitoring of the communication process.

On the basis of the monitoring and documentation process, the performance will be reviewed on an annual basis. For the purpose of review, the quarterly reports will be prepared and reviewed. On the basis of these reports, a Stakeholder Engagement and Communication Report will be prepared and disclosed annually, including a summary of issues raised by stakeholders, numbers and subjects of grievances, a summary of key actions taken to address the concerns, analysis of trends and plans for engagement in the next time period.

APPENDIX R: Biodiversity Conservation and Management

The framework includes measures for protecting biodiversity in the project area throughout the project lifecycle. The main objectives of the framework are as below.

- To obtain a clear statement, supported by necessary analysis and maps, on the current extent of modified, natural habitat and/or critical habitat (as per IFC PS6 paragraphs 11 and 13). Special attention should be paid to areas within the plant premises and project's influence area;
- To obtain a clear statement on the presence of key biodiversity values related to the critical habitat, their location, status and condition, and as far as possible, information on areas of habitat, key resources, and critical areas that support the values;
- To identify, monitor and assess the specific risks and impact that key biodiversity values and the critical habitat are exposed to due to plant activities and operations; and
- To prescribe recommendations for management and monitoring measures required for compliance with IFC PS6 requirements.

Risks and Control Measures

Construction and operation of solar power/biomass/module assembly projects may have impact on flora and fauna such as loss of habitat due to site clearance, tree cutting and risks of electrocution from installation and operation of transmission lines etc.

Some of the broad level measures followed during construction and operation phase includes:

Construction Phase

- Vegetation clearance activities should be restricted within the project site and transmission towers
- Vegetation for the project surrounding area should be returned to the pre-construction state, after completion of construction activities
- The area for the storage yard, labour camps and other supplementary facilities should be selected away from any water body, canal, etc.
- There should be a ban on the use of woody plants as kitchen fuel, collected from the nearby areas
- Plantation of native plants in and around the project boundary, on the available land should be practiced and promoted.

Operation Phase

Collision and electrocution Risk due to Power Transmission Line:

- Relocate the rubbish dump, in association with the local authorities
- Cross arms transmission tower, suspended insulators, and insulated jump connectors should be utilized
- Bird diverters / diffractors, and perch rejecters should be applied
- Frequent checking of the transmission towers to avoid bird nesting

Human wildlife conflict

- Frequent checking of the boundary wall to avoid any space for wildlife entrance into project compound
- Good housekeeping practices in the project compound could help to reduce the faunal attraction

Bird Survey

- If there is a significant activity of migratory birds in the area, at least one time bird survey in migratory season will be taken.

Fuel Biomass Sourcing

- As a good business practice, it is suggested to generate awareness among the farmers or suppliers about the sourcing of the fuel biomass. This biomass should be the agricultural waste and should not be collected from the non-agricultural land (scrub lands, pasture lands, etc.) to avoid any adverse impact on the local vegetation.

Antipoaching

SAEL will establish Dos and Don'ts to ensure anti-poaching at all its Sites/ Plants. Staff (both direct and indirect) working at Sites during construction as well as operation phase will be educated about the same. Dos and Don'ts will include but not limited to as cited below.

Dos	Don'ts
Labour movement should be restricted between construction camps and construction sites;	Unnecessary movement of labourers and other staff in the surrounding vegetation during dawn (6:00 am to 7:30 am) and dusk (5:00 pm to 6:30 pm);
Proper availability of fuel for the labour camp kitchen;	Unnecessary disturbance of neighboring vegetation;
Strict prohibition on use of fuel wood and shrubs from nearby areas as kitchen fuel;	Fuel wood procurement from the surrounding forest / vegetation;
Arrangement of food (veg./non veg.) as per the habit / preference of the labourers;	Establishment of labour camps close to pre-existing burrows or ground roosting sites
General awareness regarding fauna should be enhanced through trainings, posters, etc. among the staff and labourers;	
Establish standards procedures for case reporting;	
Mandatory minimum penalties for poaching.	

Biodiversity Risk Assessment

If the E&S screening of the project and further E&S studies shows that the Project falls in eco-sensitive area, biodiversity risk assessment to be undertaken through qualified consultant and management measures will be implemented on site to reduce impacts of the project on biodiversity of the area. Scope of work for the report to include:

Sr.No.	Activity	Details
I	ACTIVITY – DESKTOP SCOPING AND REVIEW	
a	Review existing literature	To review literature such as: (i) existing environmental studies, scientific literature or any other type of pre-existing biodiversity assessments available for the project area and/or adjacent areas (e.g., Environmental and Social Impact Assessment, HCV Assessment); (ii) national or regional plans (e.g., Strategic Environmental Assessments, National Biodiversity Strategies and Action Plans); (iii) existing conservation programs or initiatives in the area and its surroundings (e.g. local NGO projects).
B	Identify and mark the Area of Interest	To identify and mark the area near the project site that holds biodiversity values or a critical habitat that can be impacted by the activities and the operations of the plant.
C	Review existing data for the Area of Interest	To review data for the area of interest (e.g., via the Integrated Biodiversity Assessment Tool, and associated databases on the identified priority species, key biodiversity areas or protected areas) and define in detail the occurring critical habitat values (PS6 para. 16), and internationally recognized areas (PS6 para. 20). Screen for any potential invasive species around interest and list out tree species to be felled for land clearing.
D	Identify relevant stakeholders	

Sr.No.	Activity	Details
		To identify the stakeholders associated within the area of interest and potential biodiversity values. For e.g., local communities and organizations or institutions that represent them, environmental or social organizations, academic or research organizations, government bodies, and other commercial users of potentially impacted natural resources.
II	STAKEHOLDER CONSULTATIONS	
		To conduct consultation with domain experts with relevant experiences or knowledge of the species, the region/project site, and its biodiversity values to fill any information gaps and understand the area of interest in terms of the occurrence of critical habitat values and any other biodiversity values associated with the area of interest;
III	CRITICAL HABITAT IDENTIFICATION	
A	Mapping of habitats	To map all major habitat types using existing data and maps and Map extent of IFC defined modified, natural, and critical habitat around interest;
B	Assigning values to habitats	Provide clear statement, with justification, defining the critical habitat values based on information collected in Activity 1. Determination must be justified according to definitions and thresholds described in PS6 Guidance Note 6 (GN66, Step 3: Critical Habitat Determination).
IV	IDENTIFICATION AND ASSESSMENT OF PROJECT IMPACTS ON CRITICAL HABITAT VALUES	
		Based on review of various studies, assessments and activities proposed as part of project and operations identify and assess the key risks and impacts to the critical habitat value
V	RECOMMEND MITIGATION AND MANAGEMENT MEASURES	
		To recommend mitigation and management measures that explicitly address project risks and impacts to critical habitat values. This must be based on the mitigation hierarchy (avoid, minimize, restore, and offset). Mitigation and management measures should be designed to achieve compliance with PS6. Recommendations should include assessment on the adequacy of existing activities to address risk and impacts to critical habitat values;
VI	MONITORING AND ASSESSMENT	
		To recommend monitoring measures for biodiversity and critical habitat values. This should include consultation with relevant experts and suggestions on potential capacity needs.

Reporting

The report should cover (at the minimum) the following information:

- Mapped area of interest, including boundaries of project area used for the assessment.
- Mapped extent of areas meeting IFC definitions of modified, natural habitat and critical habitat.
- List and maps of known or potentially occurring biodiversity values, if any.
- List of tree species to be felled and compensation plans.
- Prioritized list and with map of sampling sites for proposed or implemented field surveys.
- Where field surveys are conducted, a full description of methods used and sampling effort must be provided. This includes dates, duration, location, expertise, and techniques used.
- Interaction with legally protected areas and internationally recognized areas, including maps.
- Interaction with global and national conservation priorities or initiatives, including maps.
- Interaction with potentially sensitive habitats (e.g., globally, or regionally unique or threatened ecosystems).
- Findings regarding human settlements and infrastructure, agricultural areas, social context (ethnicity, major social trends, and land use activities), history of land use and development trends, including future (e.g., spatial planning maps, development initiatives and existing/proposed commercial exploitation and production licenses).

- Findings regarding invasive species.
- Findings, including maps, of exploitation of any kind (especially clearance) prior to the assessment.
- Recommended mitigation and management measures for existing and potential risks and impacts.
- Recommended monitoring measures.
- List of names, organizational affiliation, contact details and meeting dates for all stakeholders interviewed or consulted.
- List composition and qualifications of the assessment team, and their relevant expertise on the biodiversity and critical habitat values.
- List of all data sources reviewed.

This report should provide sufficient information to inform development of a Biodiversity Action Plan for the project Influence area.

APPENDIX S: Contractor Management Systems

Contractor Management System

Contractors and Contractual workers are a critical component of the working of SAEL and its plant level operations, especially during construction phases. The key contractors for SAEL include construction or civil contractors, labour contractors, contractors for facility management services and third-party suppliers and vendors. SAEL's operations and employees are governed by its internal policies and the ESMS, and the contractors and contractual workers are governed by their Contractual Agreements. Thus, to ensure that contractors and subsequently contractual workers undertake work in keeping with the overall objective of SAEL's ESMS, it is important to put in place a contractor management system. This system shall be applicable to all contractors that are recruited at SAEL, at the corporate level or plant level and shall be applicable to the construction, operation, and decommissioning phases of the Renewable energy portfolio projects of SAEL.

The subsequent sections provide the process to be followed at each key step of the contractor management.

SAEL engages with Contractors and Suppliers for various requirements during construction and operations stages in the project lifecycle. For common understanding, the roles and definition of each of them are defined below:

Contractors: Contractors are hired during construction/operation/decommissioning stages of the plants. They comprise of:

- EPC contractors providing services related to engineering, equipment, machinery and other construction, erection works along with manpower during construction and operational phase;
- Manpower Contractors engaged for electrical work, loading/unloading of products/ goods, housekeeping, civil and fabrication works, security services providers, etc.;

Selection of Contractors, Vendors and Service Providers (Housekeeping, Security, etc.) at SAEL takes place both at the Head Office as well as by the plants, depending on the requirements. Grading of existing suppliers and contractors is already in place at SAEL based on aspects of price, service quality and time, etc. and whenever need arises, the existing Suppliers and Contractors are considered and an RFQ is floated.

Thus, to ensure that contractors and subsequently contractual workers undertake work in keeping with the overall objective of the SAEL ESMS, it is important to put in place a contractor management system. This system is applicable to all contractors and thereafter contractual workers that are recruited at the plant level and the HO.

The subsequent sections provide the process to be followed at each key step of the contractor management.

The Contractor Selection Checklist enlists the criteria for selection of contractors and related safeguards to be integrated in the agreements with Contractors. After selection of Contractors, aspects like HSE and labour compliance criterion to be followed are included in the contract agreement with clearly stipulated guidelines and timelines for completion of action items.

Contractor Identification and Selection

The contractor identification and selection process shall be undertaken by the purchase and technical team. Each vertical or key department will provide the purchase team with a purchase request, which shall provide the following details:

- Nature of work/ scope of work for which contractual services are required;
- Any specifications in terms of work experience, qualifications or specialty of the contractors;
- Details of task in terms of number of worker required, duration, schedule, estimated budget etc.;
- Any other specific aspects to be kept in mind

Based on these requirements, the purchase team shall identify potential contractors for the task. The purchase team shall also consider putting in place a list of pre-approved contractors, which would form as a database and would be used for future engagements.

The Contractor Selection Checklist enlists the criteria for selection of contractors and related safeguards to be integrated in the agreements with Contractors. After selection of Contractors, aspects like HSE and labour compliance criterion to be followed are included in the contract agreement with clearly stipulated guidelines and timelines for completion of action items. *(As mentioned in Appendix S)*

Once the list of contractors is identified, a desk-based evaluation[2] shall be undertaken of each. For this purpose, an initial document request list will be sent to the contractors, including all requisite documentation (registration, taxes, labour laws documentation, health, and safety etc.) in keeping with the prevalent rules and regulations. At this stage, only copies or proof of documentation shall be requested. Based on a review of these documents, the following contractor evaluation checklist shall be filled up.

Contractor Selection Checklist

Name of Contractor: Site of Engagement:					
Type of Service Provided:					
Total Workforce expected to be provided:					
Licenses and Permits					
Does the contractor have all requisite Labour licenses and permits applicable for the job (Yes/No)_____? If no please mention licenses pending or yet to be obtained_____ Does the contractor have any form of penalty, case, litigation or compensation claims pending against the same (Yes/No)_____If Yes, please provide details_____					
EHS Evaluation of the Contractor					
		Yes	**No**	**N/A**	**Reason/ Remarks**
1	Does the contractor have any established policies and procedures to manage EHS	☐	☐	☐	
2	Does the contractor have established guidelines or procedures for workforce or labour management	☐	☐	☐	
3	Has the contractor established any internal trainings mechanism for their staff on E&S	☐	☐	☐	
4	Does the contractor possess any form of EHS systems and processes in place such as ISO 9000/14000 or OHSAS 18000	☐	☐	☐	
5	Has the contractor established mechanisms to manage any sub-contractors expected to be engaged under them	☐	☐	☐	
6	Does the contractor have any workforce under any existing union or are affiliated to any association	☐	☐	☐	
7	Does the contractor maintain proper legal records pertaining to labour and workforce as per statutory norms	☐	☐	☐	
8	Has the contractor been involved in any form of illegal labour practices in the past for which it has been fined or penalised	☐	☐	☐	
9	Does the contractor have effective systems in place to eliminate unethical labour practices such as child labour, bonded labour or forced labour	☐	☐	☐	
10	The contractor has efficient systems and procedures in place for labour welfare such as	☐	☐	☐	

[2] The E&S evaluation will be undertaken in tandem with the procedure for Contractor/ Vendor Selection.

	providing them PPEs, proper labour camps, provisions for women workforce etc. as per statutory norms

Total Yes: _____

Total No: _____

Summary of Key Remarks (if any):

Key Risks Identified (if any):

Decision on Contractor Selection: _____

Signed by ESMS Manager: _____

Title: _____

Date: _____

In case of any information gaps, or need for further clarifications, the purchase team may undertake interviews with the contractors, ask for additional information and consult with their previous clients. A background check of the contractor will also be carried out through public domain.

On the basis of this checklist, a ranking shall be undertaken of all contractors and the highest ranking contractor, based on their E&S performance and cost considerations will be selected. This ranking and finalization shall be discussed and approved by the EHS officer at the corporate and plant (asset) level. Once a contractor is selected, the original copies of the documentary proof will be verified (if they have not already been provided for review) and the contractor will be notified of the selection.

Contract Agreement

Once the contractor is finalized, the formal agreement process will be initiated. While the Commercial and contract's team will be primarily responsible to formulate and finalize the work order, the Finance team may be engaged at this stage to oversee the finalization of the financial aspect of the contract, and the technical team (for specifications and technical approvals), while the EHS team (and any other team as appropriate) may be required to review the scope of work and E&S clauses included. The formal contract agreement to be formulated, will include (at a minimum) the following:

- Terms of engagement;
- Scope of work;
- Adherence to applicable rules and regulations especially, EHS and Labour (payment of wages, minimum wages, registration, prohibition of child labour and forced labour, overtime etc.);
- Compliance to E&S requirement under the ESMS;
- Clause on all applicable policies of SAEL;
- Requirement for documentation and reporting
- Monitoring and review process to be followed and penalty clause or the circumstances under which the contract will be nullified.

E&S Clauses in Agreements with Contractors

1.1.96 Special Clauses in Contractor Agreements

While onboarding contractors, after the screening and evaluation, SAEL's ESMS will have to be communicated to the contractor. The contractors will have to be introduced to policies and requirements that they may have not been practicing or aware of before their engagement with SAEL. Some of the indicative clauses to be included as part of the Contractor Agreements are suggested below:

- Compliance to SAEL's Policies and policies supporting Human Rights and their requirements which will be annexed to the Contract agreement (will be attached to the agreement);
- Compliance to SAEL's Policies and policies supporting Environment and Biodiversity and their requirements which will be annexed to the Contract agreement (will be attached to the agreement);
- Submission of relevant documents to regulatory authorities as agreed with/required and maintenance of relevant records of the same (such as the contract labour license, inter-state migrant worker's registration etc.);
- Compliance to all relevant requirements of the EC conditions/ ESMS requirements/ regulatory requirements and other studies undertaken (as applicable to the contactor's area of work);
- Inclusion of on boarding environmental health and safety officers and optional requirement of community liaison officers' clauses in EPC contracts. The number of personnel, job descriptions and qualifications are to be defined by the SAEL E&S team based on the E&S categorization of the assets, ESIA, and ESMP requirements.
- Preparation of all relevant plans and other documentation, as identified through the ESMS or other commitments of SAEL;
- Adherence to E&S management Plan for the site (as pre-approved by SAEL);
- Adherence to the Budget set aside for implementation of E&S management Plan for the site (As pre-approved by SAEL);
- Notice of any incident/accident on site or off-site to SAEL within 24 hours; and
- Acknowledgement and agreement to ongoing monitoring and periodic audits during the project lifecycle.

1.1.97 Health and Safety clauses in Contract Agreements

In case of big contracts requiring mobilization of more than 100 workers, separate HSE plan should be prepared by the contractor. At minimum following clauses should be included in the contract agreement

- All the workers must be provided with adequate personal protective equipment (PPEs) such as safety helmet, safety shoes, safety glasses, safety harness and gloves etc. as required for different construction and operation activities;
- Adequate and appropriate safety precautions (as per applicable standards and good industry practices) shall be taken by the contractor while conducting their activities onsite;
- The PPE requirement and adequacy for their work shall be decided by SAEL and the contractor shall implement and maintain 100% PPE compliance;

- Tool box talks should be conducted daily before starting the routine activities. A suitable format for recording the tool box talk should be filled and maintained at a site by the site safety in-charge or site manager;
- Areas being used for activities such as welding, bar cutting, bending, excavated areas and material stacking areas should be barricaded with a barricading tape and hard barricade;
- At areas in a construction or operation site, where work such as welding, cutting is carried out with aid of electrical power, proper care should be taken so that electrical wire with open joints are not spread on ground in haywire condition posing risk of electrocution and trip hazard to workers;
- Adequate safety signages indicating use of PPEs, different hazards etc. should be conspicuously displayed in local language at adequate locations within a construction and operation site;
- Walking pathways for the workers and the drive ways for the vehicles should be kept separate and properly marked;
- Vehicle parking areas should be maintained outside the areas of construction and operation activities and should be conspicuously marked;
- Adequate lighting arrangements should be made within the site if construction or operation activities are undertaken after sun set or in absence of day light;
- Heavy equipment such as hydra cranes and bulldozers or other earthmover equipment must be equipped with alert siren for reverse gear;
- Cranes, other lifting equipment, slings should be inspected thoroughly as per standard inspection procedures. Copy of such inspection records should be kept readily available for review with the respective equipment;
- SAEL sites are strictly 'No Smoking' zones. Smoking, naked fires, possession of matchboxes, lighters (other than industrial lighters) shall be strictly prohibited inside the premises. Appropriate fire extinguishers and buckets filled with dry sand should be maintained at appropriate locations;
- First aid kits should be maintained at site at appropriate locations and workers should be made aware of whom to contact in case of injuries requiring first aid. First aid kit should be kept in charge of a responsible person who shall be readily available during the working hours. Supervisors at site should have obtained formal first aid training;
- A site specific emergency contact numbers which should include, nearest police station, hospital, fire station and the site in-charge should be conspicuously displayed;
- An ambulance van or an arrangement with a nearby hospital should be made for transportation of serious cases of accidents or sickness of any worker/s;
- Standard operating/working procedures with respect to safety should be implement for undertaking works such as working in confined spaces, working at heights, lifting of heavy parts with cranes and other lifting equipment;
- In addition to the aforementioned activities, adequate safety measures, as required, during different phases of project development shall be implemented; and
- The contractor shall comply with all HSE instructions and guidelines of SAEL that may be updated from time to time.

1.1.98 Labour Clauses in Contractor Agreements

In case of labour contractors, the key labour clauses to be included in the contractor agreements are indicated below:

- Compliance to the SAEL's terms (as per the Contract Agreement- payment terms, special terms and conditions, code of ethics and general terms and conditions etc.);
- The contractor must be registered and have a valid license under the Contract Labour Regulation and Abolition Act, 1970 and the Inter-State Migrant Workmen Act, 1979 (where applicable);
- All workers shall be provided with appointment letters, clearly stating the following:
    - Name of worker;
    - Father's Name;
    - Mother's Name;
    - Spouse Name;
    - Present Address;
    - Permanent Address;
    - Contact Number;
    - Designation;
    - Type of work;
    - Date of joining;
    - Class of worker;
    - Wages or pay scale;
    - Other payables and benefits;

    - Terms and conditions of employment and the job description; and
    - Service rules applicable
- The contractor shall maintain a copy (duly signed) of the letter of appointment in the worker's personnel file;
- Each worker shall be provided with an identity card, clearly stating Name, class of worker, age and validity;
- The identity card and letter of appointment shall be issued once the worker clears the physical fitness to work test at the site;
- The workers shall be organized into shifts of 8 hours each. Any worker working more than 8 hours shall be paid overtime for the extra hours worked, in keeping with the labour regulations;
- No worker shall be forcibly required to work for more than 8 hours a day or 48 hours in a week without payment of overtime. Overtime should not exceed the regulatory requirement as mandated by law;
- Every worker shall be given one day off in a week;
- Each worker shall be eligible for the following leaves:
    - Casual Leave;
    - Sick Leave;
    - Festivals;
    - Maternity Leave; and
    - Annual Leave.
- All Workers shall be paid at least minimum wages;
- SAEL shall put in place the following clauses in its contractor agreements in keeping with the labour regulations:
    - Prohibition of Child Labour and forced labour;
    - Abolition of Discrimination
    - Prohibition of Gender-based violence and harassment (GBVH)
    - Working Hours and Overtime policy;
    - Leave policy;
    - Conviction and misconduct policy;
    - Punishment and termination policy ;
    - Wages and remuneration policy;
    - Bonus policy ;
    - Maternity benefits
- The contractor shall provide wages and benefits in keeping with the labour regulations, including service benefits, Provident Fund, ESIC (or workmen compensation), festival bonuses etc.,
- The contractor must maintain but not limited to the following registers, in keeping with the labour regulations:
    - Labour/Worker's Register;
    - Leave Register;
    - Wage register;
    - Overtime Register;
    - Register for night duty female workers;
    - Register for advance amounts ;
    - Proof of age and competence of all workers;
    - Register of cleanliness;
    - Register of the accidents and report of half yearly accidents.
- In case of sudden natural disasters or an emergency outside of human control, which results in laying off of workers, the contractor shall be liable to pay the legal arrears or full pay to the workers in keeping with the labour rules. These costs shall be invoiced and claimed from the project;
- The contractor shall initiate a group insurance policy for all of its workers; and
- No worker shall be disbarred from seeking membership in a trade union or association
- If it is discovered that a sub-contractor or contractor is engaged in Forced Labour Activity, the Company will cease to engage such identified sub-contractor or contractor from that point onward.

Contractor Induction

Once the contractor agreement is signed, and prior to initiation of work, an initiation training will be provided to each contractor and all the contractual workers involved. This training will typically be a day long training and will be undertaken by the EHS team and HR team (possibly supported by Legal team). The intent of this training will be in keeping with the specific scope of work and aimed at familiarizing the contractor and workers of the requirements of the ESMS and their responsibilities thereunder,

particularly, in terms of EHS and labor law compliance aspects and duties and rights of contractors and contractual workers. Job specific H & S trainings may be provided if required. In case required, the EHS team and HR/ legal team may also consider a longer capacity building workshop/ training of the contractors, depending upon present capacity.

In addition to this class room training, a day of hands on training shall also be provided to contractual workers, if required. Once all these trainings are complete, an assessment shall be undertaken of the contractors and contractual workers. Only those contractors and contractual workers, who successfully pass these assessments will be issued a Contractor/ Worker Safety Card and ID number to print as proof of successful induction completion. If the contractor or contractual worker fails to pass the training, an option of a refresher training shall be provided. A documentary proof of these inductor trainings will need to be maintained outlining the duly signed list of participants, training covered and the minutes thereunder.

Monitoring of Contractor Performance and Compliance

Once the contractor scope of work is initiated, SAEL shall undertake regular monitoring of the contractor performance, against applicable regulations and ESMS requirements. This monitoring will aim at identifying any compliance gaps and identifying resolutions to address such gaps. This monitoring shall be carried out by the following teams.

SAEL team	Purpose of Monitoring	Aspects to be covered	Monitoring Mechanism	Timeline for Monitoring
EHS team	Ensure Contractor's compliance to ESMS requirements Monitor Contractor's EHS performance	PPE usage by Workers Following safety protocols in tasks Maintenance of Documentation	Accident Register Review	Weekly and Monthly
			Visual observation	At least weekly
			Discussion with Workers	Monthly
			Discussion with Contractor	Monthly
			Review of grievances (if any)	Monthly
HR CLO & Legal Team	Ensure Contractor's compliance to ESMS requirements Monitor Contractor's HR and Labour law compliance	Maintenance of Registers as required by labour laws. Valid registrations under labour laws Payment of wages Overtime work done and payment for the same Labour working conditions- especially labour camp monitoring Child labour and forced labour issues Other compliances against labour law	Registration and certifications review	Based on validity of documents submitted
			Registers required by law	Monthly
			Records/ Registers of wage payments and overtime	Monthly
			Review of identification documentation of workers	At the time of contractor signing and renewal
			Visual reconnaissance of labour camp	Weekly
			Discussion with Workers	Monthly
			Discussion with Contractor	Monthly
			Review of grievances (if any)	Monthly
Finance Team	Ensure Contractor adherence to contract terms and conditions (excluding EHS and labour) Monitor timely completion of scope of work and invoicing	Compliance to general terms and conditions of contract Compliance to timeline Compliance to invoicing terms and conditions	Visual reconnaissance Discussion with SAEL teams involved Documentation review	In keeping with milestones identified in agreement

The monitoring records will be duly signed by the EHS, HR & Legal representatives and will be submitted to ESMS Officer for review. The contractor and the contractual workers will be informed of the recommended measures to close the gaps. If minor

non-compliance is observed more than two times a warning may be issued to the contractor. In case of grave non-compliance (such as engagement of work without a labour license) will deem in immediate termination of the contract.

Audits will be undertaken for contractor performance on E&S aspects and non-compliance to them would result in penalties. Termination of contracts shall be considered in cases of repetitive non-compliances to national labour regulations and corrective actions recommended from the audits.

APPENDIX T: E&S Reporting Formats

Monthly Project Level E&S Report

This report is to be submitted by Project level ESMS Officer to ESMS Manager on Monthly Basis, during construction and operation phase

SAEL	Monthly EHS&S Statistic Report Biomass 2024-25											Doc No: SAEL/HSES/MS/F-02/R3			
Name of the Plant:		Plant Head: Mr.						Monthly data shall be updated by 2nd of preceding Month							
Month:		EHS&S Manager: Mr.						EHS&S Manager Shall Maintain backup records for the Monthly Data							
Sr.No	Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Cumulative
1	Manpower													
	Number of Empolyee													
	Number of Contractor workforce													
	Total Number of Workforce (SAEL + Contractor)													
2	Man Hours													
	Man Hours Worked (Employee) (No. of Employees*Shift Hours* No.of working days)													
	Man Hours Worked (Contractor Workforce) (No. of workers *Shift Hours(8)* No.of working days)													
	Total Man Hours (Emp+Cont)													
	LTI Free Days													
	Safe Man Hours													
3	Training and Campaign													
	EHS&S Training Program - (Batches)													
	(Employee + Worker)Trained													
	Training Man Hrs. (No of person trained*duration of training)													
	Tool Box Talk (No of batches.)													
	TBT- Participant Nos.(Daily)													
	Training Rate (No. of Training Hours per month per person)													
	EHS&S Promotional Campaign													
	Stakeholder Consultation													
	CSR Activity													
4	Audits													
	EHS&S Audit (Internal)													
	EHS&S Audit (External)													
	EHS&S Equipment Inspection													
	Safety Walkthrough (Senior Leadership)													
5	Incidents													
	Near miss Incident													
	First Aid Case (FAC)													
	Occupational Illness (OI)													
	Medical Treatment Case (MTC)													
	Lost Time Injuries													
	Total Recordable Injuries													
	Fatalities													
	Fire Incident													
	Vehicle Accident													
	Property Damage (Except the Vehicle & Fire Incidents)													
	Environmental Incident													
	Security Incidents													
	Man Days Lost (MDL)													
6	Violation and Grievances													
	Unsafe Acts & Conditions Reported													
	Unsafe Act & Condition Closed													
	Unsafe Act & Condition Open													
	Stop Work													
	Fines & Penalties													
	Grievance Reported													
	Grievance Closed													
	Grievance Open													
7	Water Management													
	Water Consumed Projects (under construction) (KL)													
	Water Consumed Operational Projects (KL)													
	Total Water Purchased from Third party or used from water source, reservior or Borewell (KL)													
8	Waste Management													
	Metal (KG)													
	Plastic (KG)													
	Paper (KG)													
	Food waste (KG)													
	Ash (MT)													
	Packaging Materials (KG)													
	Empty Chemical Drum (Numbers)													
	Lube Oil (Litres)													
	IT Equipment's, Battery etc. (Number)													
9	Emergency Management													
	Emergency Mock Drill													
10	Others													
	EHS&S Committee Meeting													
	Electricity Consumption (KWH)													
	Vehicle Driven (KM)													
	Diesel Consumption (Litres)													
	Petrol Consumption (Litres)													
	Industrial Hygiene Monitoring (Noise, Water, Stack Monitoring and Air Monitoring)													

Quarterly Project Level E&S Performance Report for Operational Projects

This Quarterly E&S Performance Report is to be prepared by Plant Level ESMS Officer with help from Project Specific Deputy EHS&S Manager and is to be submitted to ESMS Manager and ESMS Head.

Quarterly E&S Performance Report on all operational projects

1. <Name of Project>

Prepared and submitted by:

Submitted to:

Date of submission:			
Reporting Period/ Quarter:			
Status of each Project (tick as applicable)	Name of project	Operation	Major Maintenance
Commissioning dates:	Name of project	COD	

List of events[8] that may have caused damage; brought about injuries or fatalities or other health problems; any environmental contamination, attracted the attention of outside parties; affected project labor or adjacent populations; affected cultural property; or created liabilities for SAEL?	Name of project Not applicable ☐	Details
Pending E&S Action Plan (ESAP) items		

[8] Examples of significant incidents follow. Chemical and/or hydrocarbon materials spills; fire, explosion or unplanned releases, including during transportation; ecological damage/destruction; local population impact, complaint or protest; failure of emissions or effluent treatment; legal/administrative notice of violation; penalties, fines, or increase in pollution charges; negative media attention; chance cultural finds; labor unrest or disputes; local community concerns.

	S. No	Name of Project	Pending Corrective Action	Status	Budgeting	Key Remarks	Document Submitted

Not applicable ☐

Concerns w.r.t. environmental monitoring results conducted for current period	Name of project	Ambient Air	Stack emission	Ambient Noise	Treated effluent	Ground water quality	Surface water quality

Attach the monitoring results with this report.

Not applicable ☐

Waste Genaration, Handling and Disposal Records	**Type of Waste:**

	Quantity: Storage Details: Disposal Details with Quantity and Date of Disposal:

Corrective actions in case of exceedance of standards

Name of project	Parameter Exceeded	Cause of Exceedance	Corrective Action and Completion Status

Accidents and incidents Details	**Name of Project**	**Number of accidents/ incidents**	**Fatalities**	**Total Lost Time Accidents (including vehicular)[9]**	**Total number of lost workdays[10] resulting from incidents.**	**Total man-hours worked (total hours worked by all employees) during the reporting period and Incidence calculation.**	**Community related accidents/ incidents**
			1. Date(s) of fatality: 2. Cause of fatality: 3. Corrective or preventive measures to prevent reoccurrence:	1. Date(s) of lost time accidents: 2. Cause(s) of lost time accident(s): 3. Corrective or preventive measures to prevent reoccurrence:	Total lost workdays this reporting period: Total lost workdays last reporting period:	1. Total man-hours worked this reporting period: 2. Incidence = total lost workdays/total hours worked 3. Incidence this reporting period: 4. Incidence last reporting period: 5. Incidence next to last reporting period:	
			1. Date(s) of fatality: 2. Cause of fatality: 3. Corrective or preventive measures	1. Date(s) of lost time accidents: 2. Cause(s) of lost time accident(s): 3. Corrective or preventive measures	Total lost workdays this reporting period:	1. Total man-hours worked this reporting period: 2. Incidence = total lost	

[9] Incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

10 Lost workdays are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

			to prevent reoccurrence:	to prevent reoccurrence:	Total lost workdays last reporting period:	workdays/total hours worked 3. Incidence this reporting period: 4. Incidence last reporting period: 5. Incidence next to last reporting period:	
			1. Date(s) of fatality: 2. Cause of fatality: 3. Corrective or preventive measures to prevent reoccurrence:	1. Date(s) of lost time accidents: 2. Cause(s) of lost time accident(s): 3. Corrective or preventive measures to prevent reoccurrence:	Total lost workdays this reporting period: Total lost workdays last reporting period:	1. Total man-hours worked this reporting period: 2. Incidence = total lost workdays/total hours worked 3. Incidence this reporting period: 4. Incidence last reporting period: 5. Incidence next to last reporting period:	

Summary of trainings provided on environment,	Name of Project	Type of training and date	Number of employees

health, and safety issues[11], including social aspects such as terms of employment, community engagements etc.	

For each type of training, list the date and number of employees that attended during this reporting period.

Environmental and safety non-compliances identified by the local regulatory authorities	

Community engagement activities				
Name of project	**Activity Description**	**Total Individuals Benefited**	**Total Budget/ Total Expenditures/ % of Total**	**Completion Date**

Details of community complaints or grievances received in this reporting period					
Name of Project	**Type of Grievance**	**Number of Cases**	**% of Grievances Closed**	**Total Monetary Impact**	**Grievances forwarded for Legal Redress**

11 Personnel should be trained in fire drills, environmental, health and safety matters including accident prevention, safe lifting practices, the use of Material Safety Data Sheets (MSDS), safe chemical handling practices, proper control and maintenance of equipment and facilities, emergency response, personal protective equipment (PEP), emergency response, etc.

Details of internal / external E&S audits conducted for the project	Name of Project	Type and Date of Audit	Key NCs	Corrective Actions and status
Details on E&S targets adopted by the project	Name of Project	E&S Target	Status	
Details of any litigations/ PIL filed against the projects	Name of Project	Details of Litigation/ PIL/ court case	Actions taken by the company	

Format for ESAP Progress Report

Name of Facility / Project:	Date :
Prepared by:	Reviewed and approved by:
Designation:	Designation:

S. No	Corrective Action	Status	Budgeting	Key Remarks	Supporting Document	Responsibility	Timelines
1							
2							
3							
4							

This form to be used to monitor and report ESAP status on monthly basis, in case any ESAP has been developed as part of detailed E&S studies/due diligence.

Internal Audit Checklist

Name of Asset_____ Date of Audit_____

Audit conducted by_____ Approved by_____

S. No.	Aspect	Details			Remarks/ Non Compliances
1.	Are there contract workers engaged for any work onsite? If yes, following questions need to be answered.	Yes ☐	No ☐	NA ☐	
A	Minimum wages paid for any contract workers onsite (are wages as per the latest notification) - check for males and females and workers categories- unskilled, semi-skilled, skilled, highly skilled. (review of wage register)	Yes ☐	No ☒	NA ☐	
B	Working hours in accordance with Indian Labour Law (review of attendance records)	Yes ☐	No ☐	NA ☐	
C	Overtime wages paid by contractor for any contract workers onsite (review of wage register)	Yes ☐	No ☐	NA ☐	
2.	Any child labour observed at site	Yes ☐	No ☐	NA ☐	

	(review of age proof documents)				
3.	Are there migrant workers engaged onsite? Please state the number. If yes, check applicability for Interstate Migrant Workers Act 1979 and whether valid registration is in place.	Yes ☐	No ☐	NA ☐	
4.	Has the contractor (if any) obtained Contract Labour Licenses under Contract Labour (Regulation and Abolition) Act, 1970	Yes ☐	No ☐	NA ☐	
5.	Are workers being provided Provident Fund and ESIC?	Yes ☐	No ☐	NA ☐	
6.	Is the Grievance redressal system implemented and well documented?	Yes ☐	No ☐	NA ☐	
7.	Number of grievances reported by workers/ employees in this quarter				
8.	*List actions to be taken by Contractor* 1. 2. 3.				*To be completed by* 1. 2. 3.
	General	**Status**			**Remarks/ Non Compliances**
9.	EHS Policy is conspicuously displayed at site office?	Yes ☐	No ☐	NA ☐	
10.	Potable water available for workers and staff?	Yes ☐	No ☐	NA ☐	
11.	Smoking and alcohol consumption areas designated at offices?	Yes ☐	No ☐	NA ☐	
12.	Are confined spaces labelled?	Yes ☐	No ☐	NA ☐	
13.	Runoff control measures in place and in good condition?	Yes ☐	No ☐	NA ☐	
14.	Daily wage rates displayed at office?	Yes ☐	No ☐	NA ☐	
15.	External grievance register maintained?	Yes ☐	No ☐	NA ☐	
16.	E&S Permits are being tracked and complied with? Note non-compliances, if any.	Yes ☐	No ☐	NA ☐	
17.	Adequate Toilet provided at site	Yes ☐	No ☐	NA ☐	

18.	Condition of washroom / pantry and other area w.r.t. hygiene	Yes ☐	No ☐	NA ☐	
19.	Sanitization frequency and condition	Yes ☐	No ☐	NA ☐	
	Emergency Preparedness	**Status**			**Remarks/ Non Compliances**
20.	Emergency contact numbers displayed at offices?	Yes ☐	No ☐	NA ☐	
21.	Fire extinguishers readily available, and identified?	Yes ☐	No ☐	NA ☐	
22.	Fire extinguishers periodically inspected, maintained and tagged at all locations?	Yes ☐	No ☐	NA ☐	
23.	First aid kit(s) available and inspected weekly?	Yes ☐	No ☐	NA ☐	
	Personnel Protective Equipment	**Status**			**Remarks/ Non Compliances**
24.	Hard hats worn where there is danger of head injury?	Yes ☐	No ☐	NA ☐	
25.	Safety glasses worn by all employees and workers/ maintenance staff?	Yes ☐	No ☐	NA ☐	
26.	Safety boots worn by all employees and workers/ maintenance staff?	Yes ☐	No ☐	NA ☐	
27.	Personal fall protection used when personnel are working above six feet without guardrails or other means of fall protection?	Yes ☐	No ☐	NA ☐	
28.	Hearing protection available and used when needed?	Yes ☐	No ☐	NA ☐	
29.	Goggles or face shields provided and used when wielding, grinding or chipping?	Yes ☐	No ☐	NA ☐	
30.	Insulating rods available and used by maintenance staff?	Yes ☐	No ☐	NA ☐	
	Chemical, Oil and Waste Storage and Handling	**Status**			**Remarks/ Non Compliances**
31.	All flammable liquid supplies are kept in sealed containers in flammable safety cabinets in designated storage areas?	Yes ☐	No ☐	NA ☐	
32.	All loose oily rags and waste stored in proper covered containers?	Yes ☐	No ☐	NA ☐	
33.	All trash and combustible material removed from office premises as necessary?	Yes ☐	No ☐	NA ☐	

34.	Covered, labelled and separate dust bin for dry and wet waste collection	Yes ☐	No ☐	NA ☐	
35.	Separate storage of Hazardous material	Yes ☐	No ☐	NA ☐	
36.	Disposal of waste and records	Yes ☐	No ☐	NA ☐	
	RoW Maintenance Work Areas	**Status**			**Remarks/ Non Compliances**
37.	Housekeeping well maintained?	Yes ☐	No ☐	NA ☐	
38.	Maintenance work areas kept free of slipping, tripping, cutting and falling hazards, barricading of trenches?	Yes ☐	No ☐	NA ☐	
	Electrical Hazards at Office	**Status**			**Remarks/ Non Compliances**
39.	Covers installed on all outlets, switches, junction boxes, pull boxes, panel boards, etc., that are in service at the office?	Yes ☐	No ☐	NA ☐	
40.	All circuits identified at panel boards?	Yes ☐	No ☐	NA ☐	
41.	Extension cords in good condition (not frayed, broken) with current inspection markings?	Yes ☐	No ☐	NA ☐	
42.	Extension cords and other temporary wiring protected from damage and arranged so as not to create tripping hazards?	Yes ☐	No ☐	NA ☐	
	Other HSE Aspects	**Status**			**Remarks/ Non Compliances**
43.	Workers Screening and records including ID cards	Yes ☐	No ☐	NA ☐	
44.	Acrophobia (phobia of height) test practiced for height workers.	Yes ☐	No ☐	NA ☐	
45.	Health check-up and analysis	Yes ☐	No ☐	NA ☐	
46.	Safety Induction to all and records	Yes ☐	No ☐	NA ☐	
47.	Gang Evaluation process and records	Yes ☐	No ☐	NA ☐	
48.	Training and awareness about Shutdown / Electrical safety / Height work safety	Yes ☐	No ☐	NA ☐	
49.	Emergency Mock drill and action plan for improvement	Yes ☐	No ☐	NA ☐	

50.	Activity wise HIRA and involvement of workers	Yes ☐	No ☐	NA ☐
51.	Activity wise Safe Operating Procedure (SOP) availability, Practice and Awareness	Yes ☐	No ☐	NA ☐
52.	Deployment of Personnel including HSE personnel as per contract requirement	Yes ☐	No ☐	NA ☐
53.	Tool Box Talk (TBT) records	Yes ☐	No ☐	NA ☐
54.	HSE committee, meetings, and MoM tracking	Yes ☐	No ☐	NA ☐
55.	First Aid box availability at vehicle / office / working site	Yes ☐	No ☐	NA ☐
56.	Competency of the workmen including Engineers	Yes ☐	No ☐	NA ☐
57.	Permit to work and its compliance	Yes ☐	No ☐	NA ☐

Concern Reporting Checklist for Unsafe Act – Unsafe Condition

Project Site		Date	
Name of Auditor		Time	

#	Points	Observation	Measures taken	Open / Close
Unsafe Act (UA)				
1	Non-adherence of the safety rules / Bypassing / Taking shortcut			
2	Non usage of proper PPEs / safety gadgets			
3	Climbing tower without anchoring full body harness			
4	Working without taking Permit to Work (PTW)			
5	Unauthorized entry in restricted area / zone			
6	Unauthorised operation of equipment's / vehicles			
7	Energizing an electric line / element without ensuring that all the persons working on it have reported back			
8	Replacing fuses or closing breakers without knowing the reason for keeping it open			
9	Opening and closing of switches without authority or warning			

10	Failure to place warning signs or signals where they are needed.
11	Throwing materials or tools at another worker
12	Over speeding
13	Drunken driving
14	Driving without fastening seat belt
15	Jumping from vehicles and platforms
16	Operating hoists / man lift / trucks without proper communication
17	Making safety devices inoperative
18	Working with defective tools
19	Over confidence, disobeying safety instructions
20	Taking unsafe position or posture while doing work
21	Drinking, distracting, teasing, smoking, abusing at workplace
22	Using restricted articles (arms, weapons) at workplace
23	Working in adverse weather condition (rain, storm, lightening, high wind etc)
24	Fire sand bucket empty
25	Water type fire extinguishers available in electrical panel room / equipment
26	Working without prior permission from respective Asset In charge
27	Others unsafe Act
Unsafe Condition (UC)	
1	Presence of snakes at working area
2	Presence of Honeycomb bees in tower, equipment, site trees etc.
3	Hand tools, any Loose materials kept at height for accidental fall
4	Working at elevated places without protection.

5	No edge protection at height
6	Exposed live wires
7	Poor illumination / visibility
8	Working in confined area without monitoring oxygen and other toxic gasses level.
9	Issue of electrical Induction to residents / farmer
10	Materials blocked emergency exit
11	Hazardous chemicals kept unsecured
12	Electrical panel without rubber mat
13	Fire hydrant operation under auto mode not working
14	Panel doors / DG enclose are kept in open condition
15	Cable trench are open / broken/ uneven/ projected
16	AC is not working in kiosk room
17	Combustible materials are kept near Electrical connections
18	Dry grasses are inside switchyard / near to Electrical elements / building
19	Oil leakage from transformer
20	Insufficient storage of oil for emergency operation of fire hydrant
21	Others
Asset Defects as Unsafe Condition (UC)	
1	Any hanging hardware materials on tower which may fall and cause incident (Spacer, Earth wire etc.)
2	Conductor damage more than 6 strand and likely to Snap
3	Missing multiple copper bond in consecutive towers
4	Tree within induction zone likely to trip the line, equipment (clearance less than 5 meter)
5	Damaged / missing earthing
6	Earth resistance value more than permissible limit

7	Number/Phase/Ckt plate/ Wrongly Placed
8	Soil erosion may result fall of cattle's in pit, ditches
9	Others

Appendix U: Supplier Code of Conduct

SAEL is strongly committed in observing the highest ethical standards in all its procurement activities - for equipment's and for services. With respect to SAEL's activities, suppliers are the providers of the following:

Site Preparation, Construction and Establishment Phase:

- Supply of switchyard equipment, transformers, electrical items, reinforcement steel, cement, building materials, boiler and supporting accessories based on technical specifications etc.
- Tippers and trucks for transportation and movement of material and equipment within the plant.

Operations Phase:

- Biomass/Fuel sourcing- cotton stalk, saw dust, wood waste, ground nutshell, rice husk, castor shells, husk etc.
- Raw material sourcing for Module Assembly sites
- Pre-processing equipment like chipping, shredding and cutting & bailing operation;
- Tippers and trucks for transportation and movement of material and equipment within the plant.

As such, this Supplier Code of Conduct (SCC) has been prepared to provide clear summary of SAEL's expectation from the suppliers in all procurement related dealings. The SCC defines the non-negotiable minimum standards that the suppliers to respect and to adhere to when engaging with SAEL. The SCC (in addition to the Code of Ethics) also enables SAEL to engage with suppliers on the following:

- Material sustainability issues relating to their operations;
- Minimum criteria that should be met (includes compliance to local laws, zero tolerance to corruption and bribery);
- Transparency and accountability in procurement dealings;
- Monitoring of supplier performance; and
- Capacity building opportunities.

Applicability of the code of conduct

This Code of Conduct shall apply to all Suppliers, sub-contractors and to other entities acting on behalf of them.

Suppliers are required to familiarize themselves with this Code of Conduct to ensure successful working relations with SAEL. Acknowledgement of the Code is a prerequisite in every SAEL contract for supply. Through the acceptance of the Purchase Order, referring to the Code, the Supplier commits that all its operations are subject to the provisions contained in this Code (among other E&S clauses included in the Contract Agreements with SAEL.

This Code, or the demonstration of its compliance, does not create any third-party beneficiary rights for the Supplier. The standards of the Code are in addition to, and not in lieu of, provisions of any legal agreement or contracts between suppliers and SAEL.

Legal Compliance

Suppliers shall abide by all applicable laws and regulations that govern their business activities.

Human rights

SAEL shall seek to not and shall use best efforts to procure that none of our affiliates, none of the members of the Company Group and none of our employees shall, engage in any action or omission that consist of or maintain or support Forced Labour Activity. The Company will undertake reasonable efforts to verify if agents of the Company are engaged with any Forced Labour Activity, and if discovered, the Company will cease to engage such identified agents from that point onward.

- Suppliers shall not use child labour/ forced/bonded labour, or use corporal punishment or other forms of mental and physical coercion as a form of discipline;

- Wages and working time shall, at a minimum, comply with all applicable Indian laws and regulations on minimum wage, maximum permissible overtime work and overtime wages;
- Suppliers shall support equal opportunities at the workplace; and
- Suppliers shall respect and support the free association of labour and employee rights to join a trade union were allowed by law.

Environment, Health, Safety and Social

- Suppliers shall be compliant with relevant environmental laws and regulations;
- Suppliers shall use resources (water, materials, energy) in an efficient manner and strive to minimize their impact on biodiversity, climate change and water;
- Waste shall be managed responsibly and steps shall be implemented to reduce, reuse or recycle waste;
- Suppliers shall demonstrate compliance with the policy and continuously strive to minimize health and safety risks;
- Suppliers shall provide safe and healthy working conditions for their employees and contract workers; and
- Suppliers shall ensure that either their own or SAEL's Occupational Health & Safety Policy and Environment Health and Safety Policy is available to all employees and workers to access at any time.
- Compliance to all relevant requirements of the EC conditions and other studies undertaken (as applicable);

Fair operating practices

- The Supplier is expected to report to SAEL any situation that may appear as a conflict of interest, and disclose to SAEL if any SAEL employee or professional under contract with SAEL may have an interest of any kind in the supplier's business or any kind of economic ties with the supplier;
- Suppliers shall not be involved in any form of corruption, bribery and facilitation payments; and
- Suppliers shall operate in accordance with the principles of fair market competition.

Quality and Safety

All products and services delivered to SAEL shall meet the quality; health and safety criteria specified by SAEL and shall be safe for their intended use.

Emergency preparedness

Suppliers shall make a reasonable effort to implement SAEL's emergency response programme (ERP) to address the most likely anticipated emergencies and provisions shall be made to mitigate such risks.

Monitoring compliance to the Code of Conduct

To facilitate the monitoring of suppliers' compliance with this Code of Conduct, SAEL expects suppliers to:

- Develop and maintain all necessary documentation to support compliance with the required contract agreements and specified standards; such documentation must be accurate and complete;
- Provide SAEL's representatives access to relevant records, upon SAEL's request;
- Allow SAEL's representatives to conduct interviews with the supplier's employees and with management separately;
- Allow SAEL's representatives to conduct announced and unannounced site visits of supplier locations;
- Respond promptly to reasonable inquiries from SAEL's representatives in relation to the implementation of the Code of Conduct; and
- Preparation of all relevant plans and other documentation, as identified through the ESMS or other commitments of SAEL.

Appendix V: Communication & Participation

This procedure shall applies to all Company's personnel and, where applicable, operational activity unless the EHS or HR Department permits any other variations. This Procedure summarizes the role of other Management Procedures and Operational Procedures in communication and describes methods to assist the flow of information.

Responsibility

- Top Management (CEO)– Ensure communication of the EHS Policy to all personnel at Company
- Safety/EHS/ESMS Manager– Assists effective communication for E&S issues, coordinates all internal and external communication, and communicates internal audit reports to CEO
- ESMS Officer – Report E&S concerns to E&S Associate & Safety/ Site Deputy EHS&S Manager and brief staff on changes to E&S Policy statement, and reports to senior management on the effectiveness of communication
- Internal Audit Team (comprising of the Site Safety/EHS Manager, E&S Manager and Other Department HODs) – Monitors and reports the effectiveness of communication in procedures to the CEO
- All Personnel – Report E&S concerns to Supervisor/Manager

Procedures

Management Procedures and Operational Procedures describe the information and data to be recorded and communicated for effective operation of the E&S Management System. All personnel are responsible for fulfilling their defined responsibilities.

1.1.99 Management Procedures that have a specific role in the formal communication system:

- Structure and Responsibility – informing all personnel of the structure, responsibility and resources for E&S management. This will assist in understanding the sources of environmental information reporting structure for environmental events and issues.
- Performance Reporting – describing key methods of communicating information to management for corrective action and continual improvement. In particular, the information collated and reported by the ESMS Manager to the CEO and GM during annual Management Review.
- Document and Data Control – ensuring appropriate communication of instructions to all personnel whilst defining and controlling the distribution of the E&S Management System documentation.
- Supply Chain Management/Procurement – communicating E&S expectations to individuals and organizations that provide products and services. Contractors are expected to comply with E&S rules relating to policy and procedures when on site.
- Accidents, Incidents, Non-conformance and Corrective and Preventative Action – identifying problems arising from incidents, accidents, emergencies and internal audit, and communicating the causes, responsibilities and remedial action.
- Internal Audit – monitoring the effective implementation of the E&S Management System Policy and Procedures and communicating the results to E&S Manager.

1.1.100 Other specific communication methods:

- Safety representatives – Site Deputy EHS&S Manager shall appoint Safety representatives in every department and EHS committee meetings are to be conducted quarterly and recorded. Safety representatives along with E&S Associate will be involved in carrying out risk assessments, accident and incident investigations.
- Team Briefings – To be conducted by shop floor managers and supervisors identified by the Site Deputy EHS&S Manager along with E&S Associate in order to advise employees of current issues and to seek feedback. All relevant communication in terms of complaints / feedbacks to be recorded in EHS Aspects Feedback / Complaint Form and submitted to the Site Deputy EHS&S Manager for further action.
- Notice Boards – Notice boards shall be place at different locations inside Company premises in order to communicate E&S policy commitment and other E&S updates to working staff on shop floor.

1.1.101 Internal Communication Channels:

- Policy Statement, core values and guiding principles (management commitment)
- EHS Notice Boards
- EHS Posters

- External and Internal grievance communication details to be displayed at relevant places
- EHS Alerts and Lessons Learned
- EHS Induction
- Training, workshops and interactive sessions
- Hazard communication, procedures, work instructions and guidelines
- Meeting summary – Safety Committees, Senior Managers, Management reviews, EHS meetings
- Memorandums and Emails

Records

EHS Aspects Feedback / Complaint Form

Appendix W: Internal Grievance Redressal Mechanism

The GRM applies to all of SAEL's internal stakeholders during the construction and operations phase. This GRM does not cover the grievances raised by external stakeholders, such as local communities, interested persons and local governments etc., who are to refer to SAEL's community grievance redressal mechanism. Internal grievances are those grievances that are received from internal stakeholders such as, employees, contractors, sub-contractors, workers (including migrant workers) etc.

Term	Definition
Complaint	A complaint is a minor issue which can be resolved directly and by means of simple actions.
Concern	Concerns are questions and requests for information, or general perceptions unrelated to a specific impact or incident. If not addressed to the satisfaction of the complainant, concerns may become complaints.
Contractor	Persons working for external companies (or employed by an employment agency, directly engaged by SAEL) that are under contract to carry out for SAEL, but not being part of SAEL's workforce.
Employer	The organisation SAEL, which utilises the services of someone for remuneration or compensation in return
Employee	Persons engaged directly under the payroll of SAEL
External Stakeholders	Those individuals or groups outside SAEL that are impacted by SAEL's activities during construction or operations or SAEL's employees or workforce; or have an interest or influence in the same.
Grievance	A grievance is any discontent or dissatisfaction that may arise due to SAEL's construction or operational activities or the behavior of its workforce. The grievances may also include adverse economic, environmental and social concerns. If the grievances among the stakeholders go unattended and unaddressed, it might lead to unhealthy relations and affect the efficiency of the project operations.
Grievance Mechanism	A formalized way to receive, assess, resolve, escalate and close external grievances concerning SAEL's activities during construction or operations or SAEL's employees or workforce.
Internal Stakeholders	Those employed by SAEL including not only the employees and management teams, but also its investors, contractors, sub-contractors and workers.

Roles and Responsibilities

Responsible Parties	Roles and Responsibilities
Administration Team/ HR department	Responsible for the enforcement and implementation of internal grievance redressal.
Grievance Officer (Responsibility to be allocated to a personal from HR or Admin Team)	Responsible for receiving, recording, escalating, resolving and reporting grievances.
Site In-Charge/Project Manager	Responsible for addressing various complaints, concerns and grievances either directly, indirectly (if escalated), formally or informally.

Types of Grievances

Based on the understanding of the nature of activities during the construction and operations phase and SAEL's internal stakeholders, an indicative list of the types of grievances have been identified for the project, as can be seen below:

1.1.101.1 Employee/ Workers Grievances

- Grievance related to working conditions: Examples include poor physical condition of work place, non–availability of proper tools and machines, unplanned changes in schedules and procedures;
- Grievance related to Management policies: Examples include terms of employment, wage rates and payment, overtime and incentive related issues, working conditions, hours of employment, work load, training and settlement of terminal benefits, lack of opportunities for career growth amongst others;

- Interpersonal grievances at workplace. Examples include discrimination of any form, poor relationship with supervisor, gender bias, unethical behavior, harassment or abuse of any form etc.;
- The Grievance arising out of or related to Management's decision on transfers, promotion, demotion and discharge on disciplinary grounds shall not come under the purview of this Grievance handling procedure.

1.1.101.2 Contractor and Contract Employees'/ Workers' Grievances

- Grievance related to working conditions Contractual workers' grievances can include denial of services based on discrimination, dissatisfaction with treatment by management, any dissatisfaction with working practices or conditions, concerns over health and safety, or any form of bullying or harassment, terms of employment, payment of applicable wages and overtime compensation etc.;
- Grievance related to Management policies: Also included are issues or grievances pertaining to contractor's internal management policies, any internal personal conflicts between the contractor and contractual employees and workers, contractors' style of working, etc.

Grievance Redressal Process for Internal Grievances

The following underlines the process that will be adopted in handling employees and contractors' or contractual workers' grievances:

Figure 0.1 Stages in Greivance Redressal

1.1.102 Step 1: Publicizing the Grievance Procedure

- SAEL's Site In-Charge/Project Manager and Admin Team/HR department will ensure suitable disclosure of its grievance handling and redressal process to their workers;
- The description of the procedure will be shared on information boards and the Admin Team/HR department will undertake a workshop session for all workers to share the purpose and process of this procedure, encouraging legitimate complaints throughout the construction and O&M phase;
- Should the contractors have their own GRM, SAEL will ensure that it is functioning effectively and review their grievance records on a periodical basis (monthly).

1.1.103 Step 2: Grievance receipt and recording

- A complaint can be submitted through the following channels:
    - During regular meetings held on site before or after the day's activities;
    - By submitting verbal complaint to any member of the Grievance Redressal Committee
    - By telephonic conversation (by the individuals or through Department Heads/ Contractor Supervisors);
    - By submitting a complaint in the complaint box set up at the Security Control Room, Main Control Room, workers' accommodation (or any other prominent location on site) that will be established during the construction phase;

- For written communication of complaints, a sample grievance form (Template attached in records subsection). The daily grievance log register will be recorded by the security personnel and shared with the Admin Team on a daily basis.

- Any grievance from any employee (including contractor employee and contractual worker) will be detailed and submitted as per the grievance form. Along with the grievance form, any supporting documentation that substantially explains the grievance will be attached;
- The grievance form along with necessary attachments will be submitted with to the Grievance Officer and periodically reviewed by the Site In-Charge/Project Manager;
- The designated Grievance Officer will be accountable for receiving and maintaining all the grievances along with the reference number and assisting the Site In-Charge/Project Manager with the effective implementation (recording, reviewing, escalating, resolving, tracking, reporting, monitoring and reviewing) of the grievance redressal mechanism;

The following information will be recorded in a Grievance Register Format as depicted in Table below.

Grievance Register Format

S. No	Date	Individual Name	Department	Medium of Communication	Details of Issue	Grievance within Scope	Investigation Requirement	Concerned Department	Timeline for Closing Grievance	Present Status (Open, Closed, and Pending)	Remarks

1.1.104 Step 3: Acknowledgment on receipt of Grievance:

- On receipt of a complaint in person, the Grievance Officer will sign on the grievance form (stating acknowledgement of the grievance received) and hand over a copy to the aggrieved person on the same day, if possible;
- Alternatively, a written acknowledgement will be sent back to the aggrieved person within three (3) working days from the date of receipt of any grievance;
- The acknowledgement will mention the unique reference number allotted to the grievance;
- In case any additional requirements (such as details or supporting evidence) are deemed necessary, the Grievance Officer will communicate the same to the aggrieved person. Anonymous complaints shall also be received and resolved as per the GRM of the Company.

1.1.105 Step 4: Reviewing and Investigating Grievances

The Admin Team will organize the process to validate the complaint's legitimacy and arrange for investigation of details. To begin this process, the nature of the grievance will be established to determine the measures needed for review and investigation. All grievances will undergo some degree of review and investigation, depending on the type of grievance and clarity of circumstances:

- Minor, straightforward issues may only need screening before proceeding to the next step (resolution options and response). Review of minor issues, especially those related to a complainant's request for information, can generally be handled easily by providing information on the spot, or referring the person to community liaison personnel.

- Less clear, more problematic, or repetitive issues, or group complaints may need a more detailed review prior to action. The Grievance Coordinator will seek advice internally from the Site In-Charge/Project Manager, and in some cases turn to outside parties to help in the validation process, especially in cases of damage claims.
- Complex issues with multiple parties may need further investigation. This will be organized internally, or SAEL will designate third-party experts to investigate when impartiality is important or when complex technical matters are involved. If an extensive investigation is found to be necessary, it will be initiated swiftly before circumstances change or the conflict escalates further.

1.1.106 Step 5: Addressal of grievances

- Grievances that are deemed resolvable directly at the asset level would be redressed and the subsequent response of addressal will be communicated back to the aggrieved person within 10 working days;
- A database will be maintained by the designated Grievance Officer for all grievances received, their subject and status of closure;
- In case it is adjudged that the grievance addressal requires participation of additional site representatives, the Grievance Officer resort to the Grievance Redressal Committee , and a meeting of the committee will be convened at an appropriate time, either with or without the participation of the aggrieved person as deemed necessary by the committee. The grievance will be mutually discussed and a resolution will passed by the committee members in unanimity;
- The Grievance Redressal Committee will comprise of but not be limited to the Site In-Charge, designated Grievance Coordinator (appointed from the Admin Team/HR Department), technical representative at manager level from SAEL, contractor representative (if required), among others;
- The decision taken by the committee members will be approved by the Site In-Charge;
- Once the approval from the Site In-Charge/Project Manager is received, the decision will be communicated to the aggrieved accordingly;
- The committee will endeavor to resolve the complaint/grievance within two (2) weeks from the date of receipt of the complaint/grievance. The resolution provided will be in line with the terms and conditions of the contract agreements and other relevant SAEL policies;
- In cases where additional time is required to resolve, the same will be noted in the grievance database (providing reason for delay) and practical/implementable timelines will be fixed.

1.1.107 Step 4: Back communication and closure of grievance

- The Grievance Officer on behalf of the committee will communicate the grievance resolution decision to the complainant and the same will inter-alia, contain the details of the resolution offered or in-case of rejection (if the grievance is out of the scope of internal grievances, the reasons for the same;
- The decision taken by the Grievance Redressal Committee with the concurrence of the Site In-Charge will be deemed as final.

Handling of Other Grievances

Non Project Related Complaints

It is sometimes difficult to determine which issues are related to the project and which are not. If in doubt, employees designated to receive grievances will accept the complaint and assess its legitimacy and escalate them as required.

Complaints Constituting Criminal Activity and Violence

In these cases, complainants will be referred to the formal justice system. The EHS Officer/Manager will also record the same in the grievance register (and the database); however in terms of action will refer it to the concerned administration for suitable legal and criminal action.

Commercial Disputes

Commercial matters will be stipulated for in contractual agreements and issues will be resolved through a variety of commercial dispute resolution mechanisms or civil courts.

Monitoring, Reporting and Reviewing the Procedure

Monitoring and reporting can be tools for measuring the effectiveness of the grievance mechanism, and for determining broad trends and recurring problems so they can be resolved proactively before they become points of contention. Monitoring helps identify common or recurrent claims that may require structural solutions or a policy change, and it enables the project to capture any lessons learned in addressing grievances. A periodic review of SAEL's internal grievances will be carried out at the ESMS committee meetings at the corporate level.

1.1.108 Monitoring Indicators

Grievance records will be maintained by the Admin Team/HR department and reported to the ESMS committee at the corporate level. These records will provide the context and relevant information for regular monitoring, both in an informal and formal manner. Depending on the extent of project impacts and the magnitude of grievances, monitoring measures will vary. Some of the monitoring indicators identified that will be monitored include:

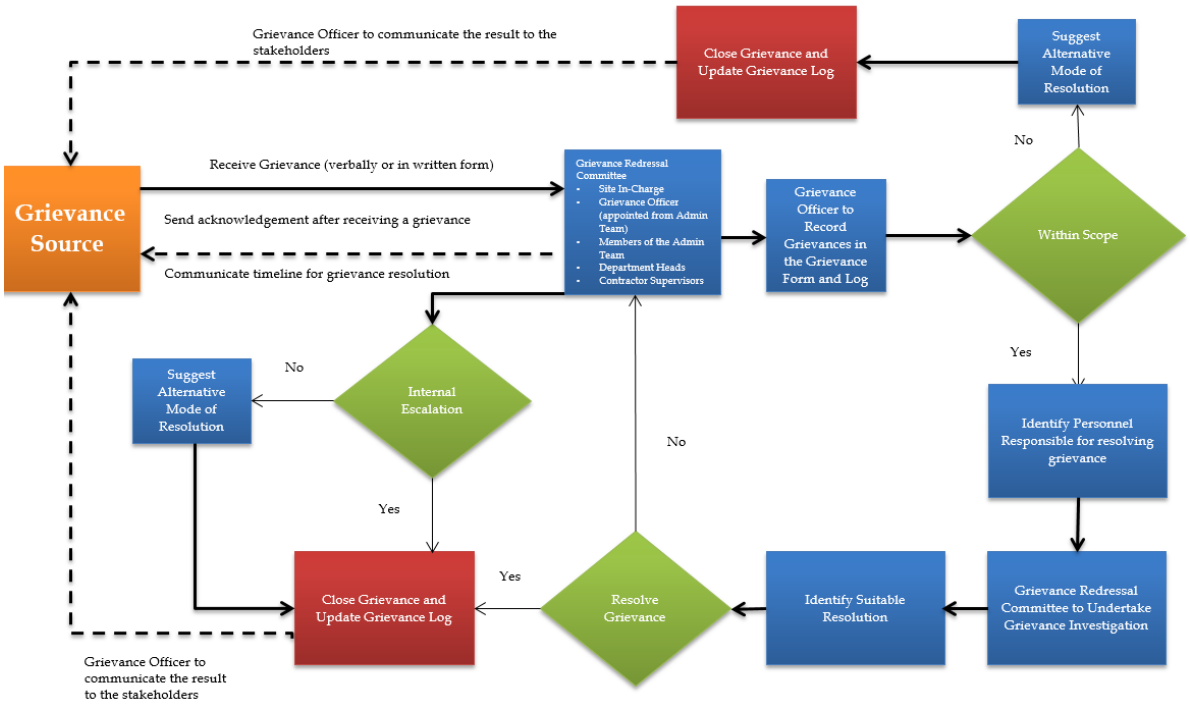
- Tracking the number of grievances received and resolved (by gender, male/female);
- Apart from reviewing each grievance and analyzing effectiveness of the redressal mechanism, using the complaint records to analyze systemic deficiencies;
- Recognize patterns in the grievances received, and how they are being resolved;
- Whether there is a trend in particular complaints relating to working or living conditions, operations or any specific issues;
- Understanding the types of solutions that work in addressing various category of grievances;
- Whether there are matters significantly construction activities or efficient operations, affecting company policy or requiring legal review;
- Whether the GRM (including the EPC contractor's existing mechanisms) meets requirements established by SAEL as well as the expectations of all stakeholders.

Based on all grievances received, registered, documented and tracked through a central database (excel sheet), periodic reports (quarterly or depending on the frequency of grievances received) shall be prepared for reporting to the management at SAEL. This shall assist in tracking overall trends and patterns in concerns allowing emerging issues to be flagged and understood at an early stage. The statistics on grievance handling and redress will be included in action plans and annual reporting.

1.1.109 Reporting and Recording

Based on all grievances received, registered, documented and tracked through database regular reports are prepared for reporting to the senior management. This assists in tracking overall trends and patterns in concerns allowing emerging issues to be flagged and understood at an early stage. The statistics on grievance handling and redressal are to be included in action plans and annual reporting. Monitoring and reporting also create a base level of information that can be used by the company to report back to communities.

Internal Grievance Redressal Mechanism Schematic Representation



Grievance Registration Form	
Grievance No.:	Date:
Name	
Designation/ Department	
Phone no.	
Category of grievance	
Summary	
Name of person recording grievances:	
Designation of recording person:	
Proposed date of response to grievance:	

Signature of recording person	Signature of complainant

This receipt is acknowledgement of grievance registration by_____ _____, on date _____. His/her case number is _____ and the date for response is _____.

Name of the person recording grievances:	
Designation of the recording person:	
Date of redresses:	
Decision of Grievance Redressal Committee (give full details):	
Claimant accepts the outcome:	Accepted Not accepted

Signature of claimant :

Signature of Grievance Officer:

Note:
Please note, if at any time the grievant is unsatisfied with the resolution of the grievance, they may choose to ask for an escalation to the next level or may resort to legal redress.

Resourcing

SAEL has set up a Grievance Redressal Committee that will ensure the implementation of the Internal Grievance Redressal Mechanism. The Grievance Redressal Committee will comprise of the following members:

- The Site In-Charge will be the Chief Grievance Officer.
- The day to day functioning of the GRM will be done through the Administration Team on site.
- A Grievance Officer will be appointed from the Admin Team/HR Departments to receive, record, review, escalate, communicate resolution, track and report grievances.
- The Admin Team/HR Department will be responsible for catering to labour and interpersonal concerns and complaints;
- The Site In-Charge will be supported by the Admin Team in implementing the GRM on site by effectively receiving, recording, reviewing, escalating, resolving, tracking, reporting, monitoring and reviewing grievances.
- SAEL's Legal department and Site In-Charge for legal compliance related grievances;
- EHS and other Team Leads/Managers to address grievances of those directly working in their teams;
- SAEL will ensure a budget allocation to ensure the effective function of the Internal Grievance Redressal Mechanism.

Training

Training will be provided to all SAEL employees, contractors, contractual workers (including migrant workers and security guards), for handling of both internal and external stakeholders, in order to allow for systemic engagement with stakeholders and avoid grievances. The training with respect to reporting and managing internal grievances will be relevant to their exposure and responsibilities for managers, all other employees, contractors and workers, which shall include as a minimum:

- Expected behaviors and accepted practices when interacting with employees and stakeholders in order to avoid a grievance in the first instance;
- Routes available for the complainants/ aggrieved to lodge grievances;
- Roles and responsibilities for handling and resolving grievances (including key internal stakeholder contacts), and;
- Recording and tracking procedures.

Appendix X: External Grievance Redressal Mechanism

The GRM applies to all of SAEL's external stakeholders during the construction and operations phase. This GRM does not cover the grievances raised by internal stakeholders, such as employees, contractors etc., who are to refer to SAEL's internal grievance redressal mechanism. Community grievances are those grievances that are received from external stakeholders such as project affected families, residents from surrounding villages, local administration representatives etc.

Definitions

Term	Definition
Contractor	Persons working for external companies (or employed by an employment agency, directly engaged by SAEL) that are under contract with SAEL, but not part of SAEL's workforce.
Community Liaison Officer	A person employed by SAEL, whose main purpose is liaison with authorities and the local communities regarding the activities and presence of SAEL in the project area. As a minimum, the Community Liaison Officer (CLO) is appointed for the construction period.
Complaint	A complaint is a minor issue which can be resolved directly and by means of simple actions.
Concern	Concerns are questions and requests for information, or general perceptions unrelated to a specific impact or incident. If not addressed to the satisfaction of the complainant, concerns may become complaints.
Employer	The organisation SAEL, which utilises the services of someone for remuneration or compensation in return
Employee	Persons engaged directly under the payroll of SAEL
External Stakeholders	Those individuals or groups outside SAEL that are impacted by SAEL's activities during construction or operations or SAEL's employees or workforce; or have an interest or influence in the same.
Grievance	A grievance is any discontent or dissatisfaction that may arise within the community due to SAEL's construction or operational activities or the behavior of its workforce. The grievances may also include adverse economic, environmental and social concerns. If the grievances among the stakeholders go unattended and unaddressed, it might lead to unhealthy relations and affect the efficiency of the project operations.
Grievance Mechanism	A formalized way to receive, assess, resolve, escalate and close external grievances concerning SAEL's activities during construction or operations or SAEL's employees or workforce.
Internal Stakeholders	Those employed by SAEL including not only the employees and management teams, but also its investors, contractors, sub-contractors and workers.
Vulnerable Groups	Individuals or groups who could experience adverse impacts more severely than others based on their vulnerable or disadvantaged status. This vulnerability may be due to ethnicity, gender, language, religion, political views, dependence on natural resources, sickness or disability or other factors.

Roles and Responsibilities

Responsible Parties	Roles and Responsibilities
Designated Community Liaison Officer (CLO)	Community liaison officer (s) will be recruited to liaise with the local community and local government authorities to ensure that SAEL's construction and operation activities can be implemented as per schedule and scope. The Community Liaison Officer (CLO) will address the day to day concerns of the community, update them on project's progress, project's plans, etc.
Designated Grievance Officer	Responsible for receiving, recording, escalating, resolving and reporting grievances.
Site In-Charge	Responsible for addressing various complaints, concerns and grievances either directly, indirectly (if escalated), formally or informally.
Administration Team	Responsible for the implementation of information disclosure and external grievance redressal.

Types of Grievances

The following types of community grievances would be taken into account under this grievance handling procedure:

- Grievances pertaining to any adverse impacts from SAEL's construction activities or operations on community assets or resources such as impacts on community's water supply system, damage to crops and livestock, damage to any private property or village structures from movement of vehicles, amongst others.
- Grievances due to project activities from construction and operations phase including noise and dust complaints during the construction, destruction of landscape and local visual aesthetics, project related traffic blockages, etc.
- Grievances arising from land based disputes including irregularities on payment of dues or inadequate land compensation, land procured through unfair means, unauthorized encroachment by the project for storage of parts and materials or parking bays, amongst other issues.
- Conflict between any workers or labourers engaged during SAEL's construction or operations and local community. Grievances pertaining to any misbehavior, alcohol abuse, misconduct with any community member especially women, etc.
- Any other issues relevant to SAEL's construction activities or operations.

Grievance Redressal Process for External Grievances

SAEL is committed to establish relevant communication tools and strategies in order to communicate with stakeholders in respect to relevant disclosures and grievances. SAEL will establish a Community Grievance Redressal Mechanism (CGRM) Cell. This CGRM Cell will comprise of the Site In-Charge, Community Liaison Officer and the Admin Team. The step-wise redressal process for community grievances is given below:

Stages in Grievances Redressal

1.1.110 Step 1: Publicizing the Grievance Procedure

- SAEL will ensure public disclosure of its grievance handling and redressal process to the local community;
- The CGRM Cell and/or the designated Community Liaison Officer (CLO) will be responsible for the disclosure of the grievance redressal mechanism to the community and external stakeholders. They will undertake verbal and written, as well as formal and informal communication to disclose the grievance mechanism.
- The CGRM Cell or the CLO will undertake the sensitization of the community for grievance redressal. Information on the following will be communicated to the community and vulnerable groups in particular (women headed households, women's groups, scheduled castes, scheduled tribes, physically disadvantaged persons etc.):
    - Information on the types of complaints that fall under the ambit of this CGRM;
    - Who can raise complaints (persons affected by SAEL's activities);
    - Where, when and how grievances can be lodged;
    - The types of responses that complainants can expect from the CGRM Cell or the CLO (a preliminary response will be made within 48 hours of the date on which the grievance was recorded)

- The CGRM will be communicated and reminded widely during stakeholder engagement activities. The community will be informed as soon as possible in the event that there is a change in the CLO, Site In-Charge or the grievance redressal process.
- The disclosure of the CGRM will be undertaken in a culturally appropriate manner and will be displayed at prominent locations within the villages, in the local language.

1.1.111 Step 2: Grievance Receipt and Recording

The receipt and tracking of grievances will involve the following stages:

- Collecting and recording grievances as they come in;
- Registering them in a grievance log; and
- Tracking them to reflect their status and important details.

There are multiple channels of reporting a grievance. All members of the CGRM Cell are charged with the collection/receiving of grievances. Grievances from the local community members (and other external stakeholders) will be registered (documented) at the project site directly by the CLO. The CLO will also document complaints received during group or individual meetings, during village visits, or at designated locations in the village (such as the panchayat office etc.). These grievances are to include:

- Complaints received during community/government meetings;
- Through the Community Liaison Officer (CLO);
- By submitting a complaint in the complaint box set up at the Security Control Room by walk-in by the community;
- Complaints received through staff or employees that have direct contact with communities (if authorized).
- Grievance forms will be maintained at a few strategic locations (substation/site office/main entrance gate), such that they are accessible by the community members. For written communication of complaints, a sample grievance form is included. The daily grievance log register will be recorded by the CLO and shared with the Admin Team on a regular basis.
- Site level personnel (authorized to take grievances, i.e., CGRM Cell) might also take complaints verbally at group or individual community meetings, during field visits, or any resourcing engagement activities. These will noted in the grievance register as well.
- The grievance will be registered formally in the grievance register and contact information of the aggrieved person would be taken for back communication of resolution.

The grievances will be registered in a format as per the table below:

Grievance Register Format

S. No	Date	Individual Name	Department/ Village	Medium of Communication	Details of Issue	Grievance within Scope	Investigation Requirement	Concerned Department	Timeline for Closing Grievance	Present Status (Open, Closed, and Pending)	Remarks

- Keeping proper records will help to track cases, respond to grievances in a timely manner, check the status of complaints and track progress, measure effectiveness, and report on results.

- The CLO will track the resolution status, coordinate it with the personnel/departments responsible for corrective actions, and maintain a record of progress (for example- open, pending or closed). An aggregated monthly report on the status of complaints will be maintained by CLO.

A few key considerations that will be kept during handling and management of grievances are as follows:

- All incoming grievances will be acknowledged immediately at the time of grievance being recorded. In case grievances are heard in village meetings, they will be recorded after the meeting and consented by the aggrieved in form of signatures of individuals or representative of the aggrieved group;
- A formal confirmation will be assigned to each grievance with a complaint number (or another identifier), and a timeline for response (where possible and in the control of CLO) to assure the complainant that the company is responding properly.
- If a complaint is received in person, it will be acknowledge on the spot; and
- SAEL will explain up front what complaints are outside the scope of the grievance mechanism and what alternative avenues communities can use to address these potential issues.

1.1.112 Acknowledgment on receipt of Grievance:

- On receipt of a complaint in person, the CLO will sign on the grievance form (stating acknowledgement of the grievance received) and hand over a copy to the aggrieved person either immediately or on the same day, if possible;
- Alternatively, a written acknowledgement will be sent back to the aggrieved person within three (3) working days from the date of receipt of any grievance;
- The acknowledgement will mention the unique reference number allotted to the grievance;
- In case any additional requirements (such as details or supporting evidence) are deemed necessary, the CLO will communicate the same to the aggrieved person.

1.1.113 Step 4: Reviewing and Investigating Grievances

- The CLO and Site In-Charge will try to resolve the grievance at hand immediately in case feasible, or within 10 working days or two weeks;
- Minor, straightforward issues may only need screening before proceeding to the next step (resolution options and response). Review of minor issues, especially those related to a complainant's request for information, will be handled easily by providing information on the spot by members of the CGRM Cell, CLO or Site In-Charge. In the event that the grievance is received by an internal stakeholder, who is not part of the CGRM Cell (employees, contractual workers etc.), they will refer the agrrived to the CLO.
- In-case the grievance is outside of the purview of CLO and is complex in nature, he/she will communicate the grievance to the Site In-charge, who will take up the issue for addressal (an additional 6-12 working days) depending on the sensitivity of the grievance;
- Less clear, more problematic, or repetitive issues, or group complaints that need a more detailed review prior to action will be discussed by the CGRM Cell for the appropriate and necessary resolution. The aggrieved persons will be provided with an update explaining the actions required and timeline to resolve the complaint (between 6-12 working days or two weeks at most);
- Complex issues with multiple parties which will need investigation may be taken forward to third-party experts to investigate impartially. If an extensive investigation is found to be necessary, it will be initiated swiftly before circumstances change or the conflict escalates further.
- Upon discretion of the Site In-Charge, the issue may also be taken forward to relevant personnel in the management at SAEL, in case their involvement is necessitated.

1.1.114 Stage 5: Grievance Resolution

- Once a decision is reached, the same will be communicated back to the aggrieved person through the contact information shared by the same through phone, letter or in-person;
- The records within the grievance register will also be updated and the case closed, when addressed to the satisfaction of the complainant;
- The closure date of the grievance will be recorded and communicated to the aggrieved and an acknowledgement will have to be received from the complainant. This may be in form of minutes of meeting with an aggrieved group signed off by its designated head or a written signature/thumb-print of an individual/ written email etc.
- The CGRM Cell will make every effort to ensure that all grievances are addressed satisfactorily. In case no decision is reached, the same will also be communicated back to the aggrieved person;
- In case the grievance is not resolved, the aggrieved person is free to register the grievance with local/statutory authorities having necessary power and authority to resolve the grievance.

1.1.115 Handling of Other Grievances

Non Project Related Complaints

It is sometimes difficult to determine which issues are related to the project and which are not. If in doubt, the CGRM Cell designated to receive grievances will accept the complaint and assess its legitimacy.

Complaints Constituting Criminal Activity and Violence

In these cases, complainants will be referred to the formal justice system for suitable legal and criminal action. The CLO will also record the same in the grievance register.

Commercial Disputes

Commercial matters will be stipulated for in contractual agreements and issues will be resolved through a variety of commercial dispute resolution mechanisms or civil courts.

1.1.116 Monitoring, Reporting and Evaluating the Procedure

Monitoring and reporting are tools for measuring the effectiveness of the grievance mechanism, and for determining broad trends and recurring problems so they can be resolved proactively before they become points of contention. Monitoring helps identify common or recurrent claims that may require structural solutions or a policy change, and it enables the project to capture any lessons learned in addressing grievances. A periodic review or external grievances will be carried out regularly by the CGRM Cell.

1.1.116.1 Monitoring Indicators

Grievance records will provide the background information for regular monitoring, both informal and formal. Depending on the extent of project impacts and the magnitude of grievances, monitoring measures will vary. Some of the monitoring indicators identified that will be a part of the monitoring mechanism include:

- Tracking the number of community grievances received and resolved (by gender, male/female);
- Apart from reviewing each grievance and analyzing effectiveness, using complaints to analyze systemic deficiencies;
- Recognize patterns in the grievances the project receives, and how they are being resolved;
- Average time taken for resolution of grievances falling under particular categories;
- Communities preference/feedback to any of the several channels to submit grievances;
- Whether there is particular sub group in the community raising complaints (for example, women, elderly);
- Whether there is a trend in particular groups particular kind of complaints relating to operations or accessibility or any specific issues;
- Effectiveness of different solutions in addressing various category of grievances;
- Whether there are matters significantly affecting company policy or requiring legal review;

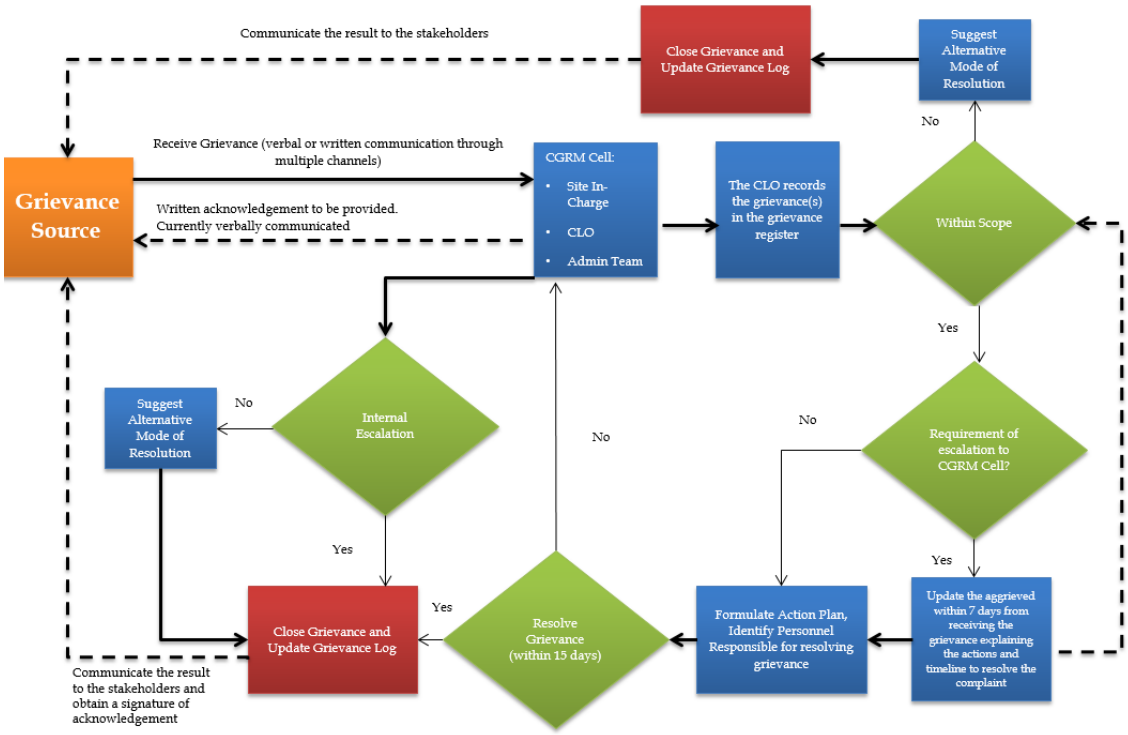
- Issues of cultural appropriateness and transparency;
- Whether the existing system meets requirements established by the project as well as the expectations of all stakeholders; and
- Circulating good practices and effective grievance redressal at the project level across to the respective community groups;

1.1.116.2 Reporting and Recording

Based on all grievances received, registered, documented and tracked through a central database (excel sheet), periodic reports (quarterly) will be prepared for reporting to the SAEL ESMS committee. This will assist in tracking overall trends and patterns in concerns allowing emerging issues to be flagged and understood at an early stage. The statistics on grievance handling and redress will be included in action plans and annual reporting. Monitoring and reporting will also create a base level of information that will be used by the SAEL to report back to communities.

Additionally, any events of community agitation or other significant disturbances, that may have the risk of business interruptions or hamper the image of the project, will be reported to the SAEL ESMS committee within 24 hours (verbally) and 72 hours (documented report) of the occurrence of the event.

External Grievance Redressal Mechanism Schematic Representation



External Grievance Redressal Form

Grievance No.:	Date:
Name and Gender	
Village	
Phone no.	
Category of grievance	

Summary
Concerned Department
Name of person recording grievances:
Designation of recording person:
Proposed date of response to grievance:
Signature of recording person Signature of complainant

This receipt is acknowledgement of grievance registration by_____ _____, on date _____. His/her case number is _____ and the date for response is _____.

Name of the person recording grievances:
Designation of the recording person:
Date of redresses:
Decision of Community Grievance Redressal Mechanism Committee (give full details):
Claimant accepts the outcome: Accepted Not accepted
Signature of claimant :
Signature of Grievance Officer:

Note:
Please note, if at any time the grievant is unsatisfied with the resolution of the grievance, they may choose to ask for an escalation to the next level or may resort to legal redress.

Resourcing

SAEL will establish a CGRM Cell at the project site in Eval throughout the construction and operations phase. The CGRM Cell will comprise of the Site In-Charge, CLO and Admin Team. The CGRM Cell will work closely with the CSR Team. SAEL will ensure a budget allocation to ensure the effective function of the CGRM.

Training

Training will be provided to all SAEL staff, for handling of both internal and external stakeholders, in order to allow for systemic engagement with stakeholders and avoid grievances. The training shall also cover understanding of community grievance redressal in particular, relevant to their exposure and responsibilities for managers, all other employees, contractors and visitors, which shall include as a minimum:

- Expected behaviors and accepted practices when interacting with communities and external stakeholders in order to avoid a grievance in the first instance;
- Routes available for community members and other interested external stakeholders to lodge grievances;
- Roles and responsibilities for handling and resolving grievances (including key internal and external stakeholder contacts), and;
- Recording and tracking procedures.

Appendix Y: Prohibited Criteria

SAEL has identified a list of Categorically Prohibited Criteria's where potential adverse environmental or social impacts are anticipated. SAEL will ensure that none of the criteria's mentioned are triggered in any of the facilities and nor will any of the operations of SAEL will trigger any of the below mentioned criteria's.

S. No.	Criteria	Remarks
1.	Use of banned and/or unauthorised radioactive materials	This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded.
2.	Use of radioactive material without required authorisation(s)	
3.	Introduction of genetically engineered organisms	--
4.	Production or trade in products containing Polychlorinated Biphenyls (PCBs)	--
5.	Production or trade in pharmaceuticals subject to international phase outs or bans	--
6.	Working of Coal Dryer	--
7.	Upstream activities (exploration and production of fossil fuels)	--
8.	Midstream activities (transportation and storage of raw fossil fuels)	--
9.	Downstream activities (refining and distribution of refined fossil fuels)	--
10.	Power generation through the use of fossil fuels[12]	--
11.	Mining or excavation of live coral	--
12.	Production or trade in tobacco	--
13.	Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals	--
14.	Production and/or use of or trade in un bonded asbestos fibre or asbestos containing products	--
15.	Production or trade in ozone depleting substances (ODS) subject to international phase out	Chemical compounds which react with and deplete stratospheric ozone, resulting in the widely publicized 'ozone holes'. The Montreal Protocol lists ODSs and their target reduction and phase out dates.
16.	Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements	--

[12] **Coal** + Coal-fired power plants, including dual-power plants. + Refurbishment, retrofitting and rehabilitation of existing coal power facilities, including dual-power plants. + Coal prospection, exploration, mining, processing and trading. **Oil** + Upstream oil exploration and production. + Midstream oil, including pipelines. + Downstream oil, including refineries and petrol stations. + Heavy fuel oil (HFO) or diesel-only, dual-fuel HFO or diesel/gas and HFO or diesel/renewable hybrid power plants. + Refurbishment, retrofitting and rehabilitation of existing4 HFO or diesel-only, dual-fuel HFO or diesel/gas and HFO or diesel/renewable power plants leading to an increase of absolute GHG emissions (i.e. where energy efficiency measures do not compensate for any capacity or load factor increase) and/or where the lifetime of an asset that would be otherwise retired would be substantially increased. + Diesel-only mini grids. **Gas** + Upstream gas exploration and production. + Midstream/downstream gas (including gas import/export infrastructure and processing facilities) except gas transport, storage and distribution infrastructure where the primary purpose is power generation consistent with a country's pathway to net zero emissions by 2050 or liquid petroleum gas (LPG) and associated facilities for sourcing, transport, storage, bottling and distribution. **Transport** + Transport (road/rail/port) infrastructure where the primary use is fossil fuel transport.

17.	Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without full documented consent of such peoples	--
18.	Production or activities involving harmful or exploitative forms of forced labour/harmful child labour	Forced labour means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty. Harmful child labour means the employment of children that is economically exploitive, or is likely to be hazardous to, to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.
19.	Non-compliance with workers fundamental principles and rights at work	Fundamental Principles and Rights at Work means (i) freedom of association and the effective recognition of the right to collective bargaining; (ii) prohibition of all forms of forced or compulsory labour; (iii) prohibition of child labour, including without limitation the prohibition of persons under 18 from working in hazardous conditions (which includes construction activities), persons under 18 from working at night, and that persons under 18 be found fit to work via medical examination; (iv) elimination of discrimination in respect of employment and occupation, where discrimination is defined as any distinction, exclusion or preference based on race, colour, sex, religion, political opinion, national extraction, or social origin. (International Labour Organization: www.ilo.org)
20.	Trade in wildlife or wildlife products regulated under Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	--
21.	Falling within protected area Categories I, II, III, and IV (Strict Nature Reserve/Wilderness Areas and National Parks, Natural Monuments and Habitat/ Species Management Areas), as defined by the International Union for the Conservation of Nature (IUCN). Projects in IUCN Categories V (Protected Landscape/Seascape) and VI (Managed Resource Protected Area) must be consistent with IUCN management objectives[13]	Project can only be developed if it can be demonstrated through an environmental assessment (i) there is no degradation of the protected area and (ii) there are positive environmental and social benefits.
22.	Production or trade in wood or other forestry products from unmanaged forests	--
23.	Any impact on natural World Heritage Sites[14]	Unless it can be demonstrated through an environmental assessment that the project (i) will not result in the degradation of the protected area and (ii) will produce positive environmental and social benefits.

[13] https://www.protectedplanet.net/
[14] https://whc.unesco.org/en/list/

Appendix Z: Standard Operating Procedure for Management of COVID 19

In the view of prevailing situation of Corona Virus Disease 2019 (COVID 19) across the world and in India, the following guideline is to be strictly followed

Steps for reduction of exposure within the workplace

- Encourage workers to stay home if they are sick.
- Establish flexible work hours (e.g., staggered shifts), if feasible.
- Practice sensible social distancing and maintain six feet between co-workers, where possible.
- Monitor public health communications about COVID-19 recommendations for the workplace and ensure that workers have access to and understand that information.
- Train workers on how to properly put on, use/wear, take-off, and maintain protective clothing and equipment.
- Allow workers to wear masks over their nose and mouth to prevent spread of the virus.
- Encourage respiratory etiquette, including covering coughs and sneezes.
- Discourage workers from using other workers' tools and equipment.
- Use Environmental Protection Agency-approved cleaning chemicals from List N or that have label claims against the coronavirus.
- Promote personal hygiene. If workers do not have access to soap and water for handwashing, provide alcohol-based hand rubs containing at least 60 percent alcohol. Provide disinfectants and disposable towels workers can use to clean work surfaces.
- Encourage workers to report any safety and health concerns

HR and administrative initiatives to reduce risk of COVID-19

- Allowing all employees to visit in-house doctors if available for any COVID-19 symptom, sending workers away from premises with leave if they have fevers
- Establishing hand wash stations with adequate number of taps and soap facility to facilitate frequent hand wash
- Divide lunch/dinner/prayer breaks into several shifts to avoid large number of workers who gather at a time and place simultaneously
- Change the attendance system of fingerprint to the use of punch card attendance. If temporary registers are used, then the pens should be wiped with hand sanitizers after each use.
- Provision for providing face masks for all employees, complemented by training on how to use, take off and disposal of personal protective equipment properly
- Provision of separate dustbins for collection all used PPE
- Ensure adequate PPE for security guards
- Provision of screening system for prompt identification of COVID -19

Return to Work Planning

As COVID-19 business restrictions are eased, companies are designing and implementing Return-to-Work Plans. Creating a plan that incorporates a confusing array of changing requirements will be challenging, but necessary:

- Local, state, and federal requirements and guidelines
- Scientific guidelines (WHO and country-level authoritative bodies)

This plan can be digitally enabled to make it effective and sustainable and will use a combination of software and hardware tools to achieve the desired objectives. Essential items to address in your Return-to-Work Plan include

1.1.117 Culture

- Address employee concerns through education and listening
- Create an environment of healthy respect for potential spread, but not fear, encouraging safe behaviors and compliance with procedures

- Address perceived unfairness that non-work-from-home employees may have for their safety
- Communicate often
- Maintain crisis response during phased approach and follow local restrictions
- Compensate for human factors—fatigue and stress
- Maintain a sense of vulnerability amid the crisis

1.1.118 Compliance with Standards

- Get organized around the correct references and review daily for changes
- Manage deferrals and understand regulatory relief (if any)
- Understand New Standards and enforcement
- Create process for finding and reviewing New Standards and changing guidance on COVID-19
- Understand regulations and their effects in all geographic areas of operation

1.1.119 Workflows and Organizational Design (and Competencies)

- Communications and training
- Regular inspection and selection of personal protective equipment [PPE].
- Return-to-work protocols
- Employee access and screening
- Preventive materials sourcing and inventory
- Enforcement and audits

1.1.120 Stakeholder Outreach

- Communicate with employees, suppliers and customers, regulators, contractors, and the community
- Partner with other companies to redeploy idle talent externally for the broader community
- Complete contractor risk assessment to understand their return-to-work limitations and process

1.1.121 Hazard Identification and Risk Analysis (HIRA)

- Update HIRA as needed—don't forget risk present before crisis
- Complete risk assessments for new risk and the associated changes to operations
- Manage risks related to staffing levels that may have been caused by staggered return-to-work policies (e.g., different teams returning at different times)
- Maintain control of risk decisions
- Communicate changes identified in risk assessments

1.1.122 Safe Work Practices and Procedures

- Maintain safety-critical equipment identified in risk assessments
- Focus on maintenance and essential repairs required to ensure reliability and safety
- Address new safety concerns and incorporate into existing work practices, e.g., work design, partitions and engineering controls, pre-work screening and testing, social distancing, hand-washing and surface disinfection, and PPE
- Implement a clear process for tracking incidence in workforce and notifying at-risk employees
- Communicate new procedures and changes to complete workforce

1.1.123 Contractor Management

- Review risk assessment completed on contractors to understand current capabilities and current risk
- Collaborate with contractors and integrate plans—use bridging documents
- Establish expectations for COVID-19 management from contractor partners

1.1.124 Management of Change

- Continue to manage change
- Conduct risk assessment of all changes to establish proper mitigation and controls
- Recognize organizational change
- Use established programs and maintain communication

What can individuals do?

- Be informed and prepared.
- Wear a mask.
- Maintain social distancing (6 feet).
- Wash your hands frequently.
- Use alcohol-based hand sanitizer.
- Avoid touching your eyes, nose, and mouth.
- Stay home when you are sick.
- Cough or sneeze into a tissue or your elbow.
- Clean and disinfect frequently touched objects and surfaces such as cell phones.