(j) "cat-line" means a rope used to lift a pipe, drilling tool and other equipment from ground or base, pipe rack, tool platform or cat-walk on to the derrick floor;

(k) "cat-walk" means a ramp giving access to rig floor for drill pipe, tubing, casing and drilling or other tools;

(l) "cellar" means an excavation under the derrick to provide space for items or equipment at the top of the well which serves as a pit to collect drainage of water and other fluids under the floor for subsequent disposal;

(m) "cementing" means an operation by which cement and water mixture is pumped down through the casing in such a way that it fills the space between casing and walls of the well to a pre-determined height above the bottom of the well;

(n) "christmas tree" means the valves and fittings assembled at the top of a well head to control the flow of the fluid;

(o) "coal bed methane" means a natural gas trapped in a coal seam or adjacent strata;

(p) "cold work" means an activity which does not produce adequate heat to ignite a flammable air-hydrocarbon mixture or a flammable substance;

(q) "competent person" in relation to any work or any machinery, plant or equipment means a person who has been duly appointed in writing by the manager as a person competent to supervise or perform that work, or to supervise the operation or maintenance of that machinery, plant or equipment, and who is responsible for the duties assigned to such person;

(r) "completed well" means a well in which the petroleum bearing formations or effluent disposal formation is open to the well, complete with equipment installed in the well and at the well-head thereby it is physically able to perform as a petroleum producer, injector or disposal well;

(s) "contractor" means an individual, association of individuals, company, firm, local authority or local body who on contract basis provides for the services or operations in an oil mine, and includes a sub-contractor;

(t) "crown block" means a multi-sheaved assembly mounted at the top of the derrick or mast and used in conjunction with a travelling block for raising and lowering of equipment in drilling and servicing a well;

(u) "day light hours" means the period from sunrise to sunset;

(v) "deputy manager" means a person possessing qualifications as provided under these regulations and who is appointed in writing by the owner, agent or manager of a mine to assist the manager in the control, management, direction and supervision of the mine or part thereof, and who takes rank immediately below the manager;

(w) "derrick" means a compound latticed structure used over the well for drilling or well servicing purposes, and includes a mast;

(x) "designer" means an individual, association of individuals, company or institution who designs an oil or gas mining system, method of oil or gas mining, machinery, plant, equipment, appliance or substances for use in oil or gas mines;

(y) "District Magistrate" in relation to any mine means the District Magistrate or the Collector or the Deputy Commissioner, as the case may be, who is vested with the executive powers of maintaining law and order in the revenue district in which the mine is situated;

(z) "draw-works" means an assembly of shafts, sprockets, chains, pulleys, belts, clutches, cat-heads or other mechanical devices, suitably mounted and provided with control for hoisting, operating and handling the equipment used for drilling a well or servicing a producing well;

(za) "drilling" means perforation of the earth's crust by mechanical or other means and includes all operations for preventing collapse of the sides of such hole or for preventing such hole from being filled with extraneous material including water;

(zb) "drilling rig" means the complete structure and machinery required for drilling purposes at the bore hole site;

(zc) "elevator" means a steel mechanical device used in connection with the hoisting equipment suspended from the travelling block, for holding in suspension, pipe or rod being lowered into or pulled from a well;

(zd) "emergency-escape device" means an inclined wire line to carry a safety carriage or slide running from a point above the monkey board to a ground anchor and includes such carriage or slide;

(ze) "explosimeter" means an instrument to measure the concentration of flammable gas;

(zf) "explosive" shall have the same meaning as assigned to that term in the Explosives Act, 1884 (4 of 1884);

(zg) "flame proof enclosure" shall have the same meaning as assigned to it under the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010;

(zh) "flammable" means capable of being easily ignited, burning intensely or having a rapid rate of flame spread;

(zi) "flash point" means the lowest temperature at which any petroleum liquid yields vapour in sufficient concentration to form an ignitable mixture with air and gives a momentary flash on application of a small pilot flame under specified conditions of test as per standard, that is, IS 1448 [P:21] or its revised version;

(zj) "flare" means a flame used to dispose off gas as per process requirement;

(zk) "floor block" means a single sheave pulley or snatch block fixed at or near floor level by means of which the direction of pull on a rope may be varied;

(zl) "form" means a form specified by the Chief Inspector of Mines under these regulations;

(zm) "fracturing" means the process of forcing a fluid in the sub-surface strata with the purposes of enhancing flow passages;

(zn) "gas" means the vapour state of the hydrocarbons occurring in or derived from petroleum and includes natural gas;

(zo) "gas free" means an environment in which-

(i) the percentage of flammable gas does not exceed the limit specified under the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 for cutting off power supply in case of existence of such gas;

(ii) the percentage of oxygen is not less than nineteen, and

(iii) noxious gas is within the permissible limit specified in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-114 or its revised version;

(zp) "gas well" means a well which is on continuous production from a gas bearing zone or a well in which casing is run for continuous production of gas;

(zq) "hazardous area" means an area where hazardous atmosphere exists or is likely to occur;

(zr) "hazardous atmosphere" means an atmosphere containing any flammable gas in a concentration capable of ignition or containing noxious gas beyond permissible limits specified as per the Oil Industry Safety Directorate Standard, that is, OISD-STD-114 or its revised version;

(zs) "hot work" means an activity that can produce a spark or flame or other source of ignition having adequate energy to cause ignition, where the potential for flammable vapours, gas, or dust exist;

(zt) "Indian Standards (IS)" means the standards formulated by the Bureau of Indian Standards under the Bureau of Indian Standard Act, 1986 (63 of 1986) which have been concurred by the Chief Inspector of Mines by a general order;

(zu) "installation" means any fixed set up or structure or vessel or part thereof which is maintained within the mine or is to be established therein in connection with exploration or with exploitation of petroleum or natural gas with a view to such exploitation, production, storage or transport thereof;

(zv) "installation manager" means a person appointed in writing by the owner, agent or manager of a mine to be in-charge of and responsible for all operations and activities on or in connection with the installation;

(zw) "ionising radiation" means emission due to self-disruptive fission of atomic nucleus of any radioactive substance which is hazardous to health;

(zx) "kelly cock" means a valve installed between swivel and kelly or kelly and drill pipe to control pressure, should a high pressure backflow of fluids occur, and to keep the pressure off the swivel and rotary hose;

(zy) "kick" means a sudden pressure-surge of short duration caused by influx of formation fluids entering well being drilled;

(zz) "lifting appliance" means a combined unit with or without horizontal movement used for hoisting or lowering cargo;

(zza) "lifting gear" means every type of equipment placed on loading hook of a lifting appliance and includes container, steel basket, lifting yoke, multi slings or chain or wire;

(zzb) "living accommodation" means the part of the installation comprising of personnel living rooms, conference room, gallery and offices attached thereto;

(zzc) "lubricator" means a device fitted on top of a christmas tree and consists of a pressure sealing device at its upper end thereby afford an effective seal on the wire-line or other connection attached to tools run into the well;

(zzd) "machinery" means -

(i) any apparatus, appliance or combination of appliances intended for developing, storing, transmitting, converting or utilising energy, which is; or

(ii) any stationery or portable engine, air or gas compressor, boiler or steam apparatus, which is; or

(iii) any such apparatus or appliance if any power developed, stored, transmitted, converted or utilised thereby, is,

under use or intended for use in connection with mining operations;

(zze) "major accident" means an occurrence including in particular, a major emission of fire or explosion from uncontrolled developments in the course of drilling and for production, storage, handling or transportation of petroleum or machinery or owing to natural events leading to serious effects (both immediate and delayed and inside or outside the installation) causing or likely to cause substantial loss of life or property;

(zzf) "major fire" means any incident of fire not extinguished within fifteen minutes;

(zzg) "manager" means a person appointed under regulation 14;

(zzh) "manufacturer" means an individual, association of individuals, company or institution who manufactures machinery, plant, equipment, appliance or substances for use in oil mines;

(zzi) "monkey board" means a movable or fixed platform installed above derrick floor on which work-persons stand to handle pipes or other equipment racked on the derrick;

(zzj) "mud" means a liquid that is circulated through the well during drilling or work-over operations or in case of temporary closure so that the hydrostatic pressure of the fluid column over-balances the formation pressure to prevent leakage of petroleum at the wellhead;

(zzk) "mud-pump" means a pump used to circulate mud or well fluid on a drilling rig or Work-over rig;

(zzl) "mud tank" means the reservoir or tank through which the drilling mud is cycled to allow sand and fine sediments to settle out where additives are mixed with mud and where the fluid is temporarily stored before being pumped back into the well;

(zzm) "official" means a person appointed in writing by the owner, agent or manager to perform duties of supervision in a mine or part thereof and includes deputy manager, installation manager, safety officer, fire officer and surveyor;

(zzn) "oil" means mineral oil which includes natural gas and petroleum;

(zzo)"oilfield" shall have the meaning assigned to it in the Oilfields (Regulation and Development) Act, 1948 (53 of 1948);

(zzp) "oilfield pipeline" means a pipeline or pipeline network used for transporting petroleum or other commodities in an oilfield;

(zzq) "Oil Industry Safety Directorate-Standard (OISD-STD)", "Oil Industry Safety Directorate-Recommended Practice (OISD-RP)" and "Oil Industry Safety Directorate- Guideline (OISD-GDN)" means respectively, the standard, recommended practice and guidelines formulated by the Oil Industry Safety Directorate constituted by the Government of India, Ministry of Petroleum and Natural Gas, which have been concurred and notified by the Chief Inspector of Mines by a general order;

(zzr) "oil well" means a well which is producing or is capable of producing petroleum;

(zzs) "out-line" means a rope used to carry pipes, drilling tools or other equipment from a derrick to the derrick walk or other location outside the derrick;

(zzt) "petroleum" means naturally occurring hydrocarbons in a free state whether in the form of natural gas or in a liquid, viscous or solid form but does not include helium occurring in association with petroleum;

(zzu) "pipe-rack" means a structure located adjacent to but usually below the level of the rig floor, on which pipe or casing may be stored or racked;

(zzv) "platform" means a working space for persons, elevated above the surrounding floor or ground or sea for the operation of machinery and equipment;

(zzw) "racked" refers to tubular goods or rods standing in the derrick or mast or stored on a pipe rack;

(zzx) "racking platform" means a platform in the derrick or mast at an elevation where a derrick man is normally required to handle stands being racked;

(zzy) "railway" means a railway as defined in the Railways Act, 1989 (24 of 1989);

(zzz) "Regional Inspector" means the inspector of mines in-charge of the region or local area or areas in which the mine is situated or the group or class of mines to which the mine belongs, over which he exercises his powers under the Act;

(zzza) "rigging-up" means an act of assembling a drilling or work-over rig and auxiliary equipment prior to commencement of drilling or work-over operation and includes jacking up and positioning;

(zzzb) "river" means any stream or current of water whether seasonal or perennial and includes its banks extending up to the highest known flood level;

(zzzc) "rotary hose" means the hose that conducts the circulating fluid from the stand pipe to the swivel and kelly;

(zzzd) "rotary table" means a power operated turn-table on the rig floor primarily used for rotating the drilling string;

(zzze) "safety management system" means, collectively, those elements in the management system that are applied to identify or assess or control a hazard or recover therefrom;

(zzzf) "Schedule" means the Schedule appended to these regulations;

(zzzg) "stand" means sections of pipe consisting of two or more made-up lengths which are racked in a derrick;

(zzzh) "standard railing" means a vertical barrier erected along exposed edges of a floor opening, wall opening, ramps, platform or walk-way to prevent fall of person;

(zzzi) "sub-structure" means the foundation on which normally the derrick and engines are placed;

(zzzj) "supplier" means an individual, association of individuals, company or institution who supplies a technology, machinery, plant, equipment, appliance or substance for use in an oil mine;

(zzzk) "surface casing" means a steel pipe to cover unconsolidated formations, to provide protection against shallow gas flow, seal off water bearing formations, protect fresh water sands from contamination, case-off lost circulations zones and to provide structural support for the well head;

(zzzl) "swabbing" means the operation of activation on a wire-line to bring well fluid to the surface when the well does not flow naturally;

(zzzm) "toe board "means a vertical barrier at floor level erected along exposed edges of a floor opening, wall opening, platform, walk-way or ramp to prevent fall of materials;

(zzzn) "toxic gas" means any gas which may cause a reversible or irreversible disturbance of the normal physiological process of one or more bodily systems;

(zzzo) "travelling block" means a multi-sheaved pulley block used in conjunction with the fixed crown block for raising and lowering the drilling string, casing, tubing rods and other tools;

(zzzp) "well" means a hole in the earth crust-

(i) made or being made by drilling, boring or in any other manner from which petroleum is obtained or obtainable or for the purpose of obtaining petroleum or;

(ii) used, drilled or being drilled for the purpose of water injection or for injecting natural gas, air, water or any other substance into underground formation;

(zzzq) "wellhead" means an assembly on the top of the well casing strings with outlets and valves for controlling flow of fluid;

(zzzr) "well perforation" means perforating well casing, or tubing, or cementing to provide flow passage for production or for testing or well activation purposes;

(zzzs) "well servicing" means one or more type of remedial operations in well with the intention of restoring or increasing production without involving any work-over rig or outfit;

(zzzt) "work-over" means one or more of a variety of remedial operations on a well with the intention of restoring or increasing production;

(zzzu) 'zone "0" hazardous area' means an area in which hazardous atmosphere is continuously present;

(zzzv) 'zone "1" hazardous area' means an area in which a hazardous atmosphere is likely to occur under normal operating conditions;

(zzzw) 'zone "2" hazardous area' means an area in which a hazardous atmosphere is likely to occur only under abnormal operating conditions.

(2) The words and expressions used but not defined in these regulations, but defined in the Act shall have the meanings respectively assigned to them in the Act.

CHAPTER-II

RETURNS, NOTICES AND PLANS

3. **Notice of opening.-** (1) The owner, agent or manager of a mine shall give notice of commencement of any mining operation under section 16 of the Act to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate in the Form and method specified by the Chief Inspector of Mines for the purpose, accompanied by a plan showing the geographical boundaries of the mine including locations of the installations and other prominent and permanent surface features and a copy of the Safety Management Plan prepared under regulation 131:

Provided that no fresh notice shall be required in case of drilling of a new well or performing work-over activity in a well of the existing mine in mining area:

Provided further that at the beginning of the year a drilling and Work-over plan in a mine shall be submitted to the Chief Inspector of Mines:

Provided also that subsequently the actual well drilled with respect to drilling and work-over plan shall be intimated to the Regional Inspector along with annual return.

(2) When a mine is opened the owner, agent or manager of the mine shall communicate forthwith the actual date of opening to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate.

4. **Annual returns.-** (1) The owner, agent or manager shall submit to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate annual returns in respect of preceding year in the Form and method specified by the Chief Inspector of Mines for the purpose on or before the 1st day of February every year.

(2) If a mine is abandoned or closed or working thereof is discontinued over a period exceeding four months or if a change occurs in the ownership of a mine, the owner, agent or manager of the mine shall submit returns required under sub-regulation (1) to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate within thirty days of abandonment, or closure, or change, of ownership, or within five months of discontinuance, as the case may be.

5. **Notice of abandonment, closure or discontinuance or reopening of mine.-** (1) When it is intended to abandon or close a mine or discontinue a mine or working thereof for a period exceeding four months, the owner, agent or manager of the mine shall give a notice in the Form and method specified by the Chief Inspector of Mines for the purpose, to the Chief Inspector of Mines, the Regional Inspector and District Magistrate stating the reasons for such abandonment or closure or discontinuance and the number of persons likely to be affected thereby, not less than thirty days before such closure or discontinuance:

Provided that where the mine is abandoned or closed or discontinued before giving the notice for a period exceeding four months in an unforeseen circumstance, the owner, agent or manager of the mine shall give notice forthwith.

(2) When a mine is abandoned or closed or working thereof has been discontinued for a period exceeding four months, the owner, agent or manager of the mine shall, within fourteen days of closure or expiry of such discontinuance, give to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate, notice in the Form and method specified by the Chief Inspector of Mines for the purpose.

(3) When it is intended to reopen a mine after abandonment, closure or discontinuance for a period exceeding four months, the owner, agent or manager of the mine shall, not less than thirty days before resumption of mining operations, give to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate, notice in the Form and method specified by the Chief Inspector of Mines for the purpose.

(4) When a mine is reopened, the owner, agent or manager of the mine shall forthwith communicate the actual date of reopening to the Chief Inspector of Mines, the Regional Inspector and the District Magistrate.

6. Notice of change in ownership, appointments, etc.- (1) (a) When a change occurs in the name or ownership of a mine or in the address of the owner, the owner, agent or manager of the mine shall, within

fourteen days from the date of the change, give to the Chief Inspector of Mines and the Regional Inspector a notice in the Form and method specified by the Chief Inspector of Mines for the purpose:

Provided that where the owner of a mine is a firm or other association of individuals, a change –

(i) of any partner in the case of a firm;

(ii) of any member in the case of an association;

(iii) of any director in the case of a public company; or

(iv) of any shareholder in the case of a private company,

shall also be intimated to the Chief Inspector of Mines and the Regional Inspector, within fourteen days from the date of such change.

(b) When the ownership of a mine is transferred, the previous owner or his agent shall make over to the new owner or his agent, within a period of fourteen days of the transfer of ownership, all plans, reports, registers and other records maintained in pursuance of the Act and the regulations, or orders made thereunder, and all correspondence relating to the working of the mine relevant thereto; and when the requirements of this clause have been duly complied with, both the previous and the new owners or their respective agents shall forthwith inform the Chief Inspector of Mines and the Regional Inspector in writing.

(2) When any appointment is made of an agent, manager, deputy manager, installation manager, safety officers or fire officer or when the employment of any such person is terminated or any such person leaves the said employment, or when any change occurs in the address of any agent or manager, the owner, agent or manager of the mine shall, within fourteen days from the date of such appointment, termination or change, give to the Chief Inspector of Mines and the Regional Inspector a notice in the Form and method specified by the Chief Inspector of Mines for the purpose.

(3) The manager of every mine shall maintain all documents pertaining to the appointment and termination of every deputy manager, installation manager, safety officer, fire officer and other officials and competent persons in respect of his mine and all such documents relating thereto shall be kept available in the office of the mine.

7. Notice of dangerous occurrence or accident.– (1) When there occurs in or about a mine,

(a) an accident causing loss of life or serious bodily injury in connection with any mining operation; or

(b) a readily identifiable event with potential to cause an injury to persons at work, hereinafter referred to as "dangerous occurrence", such as–

(i) an explosion or ignition;

(ii) a blowout;

(iii) an outbreak of major fire;

(iv) a bursting of any pipeline or equipment containing petroleum, steam, compressed air or other substance at a pressure greater than the atmospheric pressure;

(v) a major uncontrolled emission of petroleum or chemical spillage;

(vi) a breakage or fracture of any essential part of draw-works, casing line or failure of emergency brake whereby the safety of persons may be endangered;

(vii) a breakage, fracture or failure of any essential part of any derrick, machinery or apparatus whereby the safety of persons may be endangered;

(viii) an influx of noxious gases; and

(ix) any accident due to explosives,

the owner, agent or manager of the mine shall forthwith inform the Regional Inspector about the occurrence by telephone, fax, e-mail or by special messenger; and shall also, within twenty four hours of every such occurrence, give notice thereof in the Form and method specified by the Chief Inspector of Mines for the purpose, to the District Magistrate, the Chief Inspector of Mines and the Regional Inspector and in the case of an accident mentioned in clause (a), also to the competent authority for payment of compensation:

Provided that in case such notice is sent by e-mail, it shall be immediately followed by fax or letter.

(2) The owner, agent or manager of the mine shall simultaneously exhibit a copy of the notice on a special notice board at the office of the mine for a period of not less than fourteen days from the date of such exhibition.

(3) When an accident causing loss of life, serious bodily injury or burn injury occurs in or about a mine in connection with the generation, storage, transformation, transmission, supply or use of electrical energy, the owner, agent or manager of the mine shall also forthwith inform the Inspector of Mines (Electrical) by telephone, fax, e-mail or by special messenger:

Provided that in case such notice is sent by e-mail, it shall be immediately followed by fax or letter.

(4) If death results from any injury already reported as serious under sub-regulation (1) or if an injury other than the serious injury becomes serious, the owner, agent or manager of the mine shall within twenty four hours of his being informed of the same, give notice thereof to the District Magistrate, the Chief Inspector of Mines, the Regional Inspector and to the competent authority for payment of compensation and, if such death or injury is connected with any reason as specified under sub-regulation (3), also to the Inspector of Mines (Electrical).

(5) In respect of every person killed or injured, the owner, agent or manager of a mine shall send particulars in the Form and method specified by the Chief Inspector of Mines for the purpose, within seven days of the occurrence, and also within fifteen days of the injured person returning to duty.

8. Notice of disease.- Where any person employed in a mine contracts any disease notified by the Central Government under section 25 of the Act, the owner, agent or manager of a mine shall within three days of his being informed of the disease, give notice thereof in the Form and method specified by the Chief Inspector of Mines for the purpose, to the Chief Inspector of Mines, the Regional Inspector, the Inspector of Mines (Medical), the District Magistrate, and to the competent authority for payment of compensation.

9. Plans.- (1) The owner, agent or manager of every mine shall keep the following plans accurate and up-to-date, namely:-

(a) a key plan with reference to the national grid showing the area duly demarcated in which operations for winning of petroleum or natural gas and ancillary operations are carried on;

(b) a surface plan showing the location of all installations including wells, production facilities and pipe lines with their access routes, railways, power transmission lines, public roads, buildings or other permanent structures not belonging to the owner, rivers and water courses within the mine:

Provided that the Chief Inspector of Mines may, by an order in writing, require to keep a plan extending to such distance from the mine boundary, as he may specify therein.

(2) Every plan maintained in accordance with the provisions of these regulations shall-

(a) show the name of the mine and of the owner and the purpose for which the plan is prepared;

(b) show the true north or magnetic meridian and the date of the later;

(c) unless otherwise provided, be on a scale having a representative factor of –

(i) 50,000:1,in case of key plans;

(ii) 20,000:1,in case of plans such as showing location of oil well, gas well and other installations mentioned in clause (b) of sub-regulation (1):

Provided that the Chief Inspector of Mines may by an order in writing and subject to such conditions as he may specify therein, permit or require the plan to be prepared on any other suitable scale;

(d) be properly inked in on durable paper or a polyester tracing film and be kept in good condition or in electronic form:

Provided that where in a mine the plan is maintained in electronic form, the owner, agent and manager of the mine shall ensure that the plan is digitally signed and not liable to alteration or tampering and secured in such a manner as to facilitate retrieval by owner, agent, manager and the Chief Inspector of Mines or an Inspector;

(d) be accurate and maintained up-to-date not later than twelve months.

(3) The plan required to be maintained under these regulations or any order made thereunder shall be kept available for inspection in the office of the mine and a list thereof shall be maintained.

10. Preparation of plans, etc., by surveyor.- Every plan or section required to be maintained under these regulations or any orders made thereunder shall be prepared by or under the personal supervision of a surveyor and shall carry thereon a certificate by him to the effect that the plan or section or part thereof is correct and shall be signed and dated by the surveyor and counter-signed and dated by the manager of the mine on every occasion that the plan or section is brought up-to-date.

CHAPTER – III

INSPECTORS, MANAGEMENT AND COMPETENT PERSONS

11. Qualification for Inspector.- (1) No person shall be appointed as Chief Inspector of Mines unless he holds a degree in mining engineering of an educational institution approved by the Central Government.

(2) No person shall be appointed as Inspector of Mines unless he holds a degree in mining or petroleum engineering of an educational institution approved by the Central Government:

Provided that -

(i) In relation to electrical machinery installed in mines, the Central Government may appoint a person holding a degree in electrical engineering of an educational institution approved by it;

(ii) In relation to other machinery or mechanical appliance installed in mines, the Central Government may appoint a person holding a degree in mechanical engineering of an educational institution approved by it;

(iii) In relation to the provisions of the Act and of the rules and regulations which relate to matters concerning the health and welfare of persons, the Central Government may appoint a person holding a degree of bachelor of medicines and bachelor of surgery degree.

12. Definition of mine for purposes of this Chapter.- For the purposes of this Chapter, all borings, boreholes, oil wells and accessory petroleum conditioning plants including gas wells, workshops, installations, and pipe conveying petroleum within an area duly demarcated by the owner or agent shall be deemed to be a mine:

Provided that where special conditions exist, the Chief Inspector of Mines may, by an order in writing and subject to such conditions as he may specify therein, permit or require the division of any one such area into two or more separate mines.

13. Appointment of agent.- (1) The owner of a mine shall submit in writing to the Chief Inspector of Mines and the Regional Inspector, a statement showing names and designation of every person authorised to act on behalf of the owner in respect of management, control, supervision and direction of the mine.

(2) The statement shall also show the responsibility of every person in respect of matters for which such person is authorised to act on behalf of the owner.

(3) Every such person shall be deemed to be agent for the mine or group of mines, as the case may be, in respect of the responsibility as specified in such statement.

(4) The statement specified under sub-regulation (1) shall be submitted within one month from the date of opening or reopening of a mine or a group of mines, as the case may be:

Provided that in case of a mine or group of mines, as the case may be, which has already been opened, such statement shall be submitted within a month of coming into force of these regulations.

(5) Any change, addition or alteration in the names or other particulars of the statement referred to in sub-regulation (1), shall be reported in writing to the Chief Inspector of Mines and the Regional Inspector within fourteen days from the date of such change, addition or alteration.

14.Qualification and appointment of manager.- (1) No person shall open, work or re-open a mine unless there is a duly appointed manager of the mine.

(2) No person shall act or continue to act, or be appointed as manager of a mine under sub-regulation (1), unless he holds a degree or diploma in engineering or post-graduation in physics or geophysics or geology or chemistry of an educational institution recognised by the Central Government and has experience in the management and supervision of operations in oil mines for a period of not less than fifteen years in case of diploma in engineering and ten years in other cases.

(3) No person shall act or be appointed to act as manager of more than one mine.

(4) Where by reason of absence or for any other reason, the manager of the mine is unable to perform his duties under the Act, and the regulations or bye-laws and orders made thereunder, the owner or agent of the mine shall authorise in writing a person possessing the qualifications under sub-regulation (2) to act as manager of the mine.

(5) The person so authorised to act as manager of the mine shall during the period of such authorisation have the same responsibility, discharge the same duties, and be subject to the same liabilities as the manager of the mine.

15. Qualifications and appointment of deputy manager.- (1) At every mine having more than two installations, the owner, agent or manager of the mine shall appoint deputy manager at a scale of one deputy manager for every eight additional installations or part thereof, who shall assist the manager.

(2) No person shall act or continue to act, or be appointed as deputy manager of a mine under sub-regulation (1), unless he holds a degree or diploma in engineering or post-graduation in physics or geophysics or geology or chemistry of an educational institution recognised by the Central Government and has experience in the management and supervision of operations in oil mines for a period of not less than eight years in case of diploma in engineering and five years in other cases.

16. Qualification and appointment of installation manager.- (1) The owner, agent or manager of every mine shall ensure that every installation in the mine is placed under the charge of an installation manager appointed by him:

Provided that, where in a mine, the owner, agent or manager of a mine is of the opinion that the size, nature, location and extent of certain installations are such that one installation manager can perform his duties in proper manner for more than one installation, he may appoint one installation manager to hold charge of more than one installation recording justifications thereof and clearly specifying the area of jurisdiction in every such case.

(2) The Installation manager appointed under sub-regulation (1) shall hold a degree or diploma in engineering or a degree in science of an educational institution recognised by the Central Government and has experience in the management or supervision of operations in oil mines for a period of not less than five years in case of diploma in engineering and degree in science; and two years in case of degree in engineering.

17. Qualification and appointment of safety officer.- (1) The owner, agent or manager of a mine shall appoint a safety officer to assist the manager of the mine in promotion of safety and occupational health at work:

Provided that, where in a mine, the owner, agent or manager of the mine is of the opinion that, due to large size of the mine, or due to large number of installations in the mine, or due to other conditions existing in the mine, it is not possible for one safety officer to attend to his duties effectively by himself, the owner, agent or manager of the mine shall appoint such additional number of safety officers, clearly specifying their areas of jurisdiction, as may be adequate in carrying out duties effectively under these regulations.

(2) The safety officer appointed under sub-regulation (1) shall hold degree or diploma in engineering; or degree in science; or degree in industrial safety of an educational institution recognised by the Central Government or post-graduate diploma in industrial safety from Regional Labour Institute and has experience in the management or supervision of operations in oil mines for a period of not less than eight years in case of diploma in engineering and degree in science; and five years in other cases.

18. Qualification and appointment or authorisation of surveyors.- The owner, agent or manager of every mine shall appoint or authorize a person holding degree or diploma in mining or civil engineering of an educational institution recognised by the Central Government or certificate in surveying issued by Institution of Surveyors or surveyor's certificate issued under the Act as surveyor to assist the manager of the mine as and when required and for carrying out the survey, levelling and for preparing plans and sections of the mine as required under these regulations and the orders made thereunder.

19. Qualification and appointment of fire officer.- (1) The owner, agent or manager of every mine shall appoint a fire officer for fire fighting and to assist the manager on fire prevention measures:

Provided that, where in a mine, the owner, agent or manager of the mine is of the opinion that, due to large size of the mine, or due to large number of installations in the mine, or due to other conditions existing in the mine, it is not possible for one fire officer to attend to his duties effectively by himself, the owner, agent or manager of the mine shall appoint such additional number of fire officers, clearly specifying their areas of jurisdiction, as may be adequate in carrying out duties effectively.

(2) No person shall be appointed as fire officer unless he:-

(a) holds degree or diploma in fire and safety engineering of an educational institution recognized by the Central Government and having experience in dealing and management of fire services for a period of one year in case of degree or two years in case in diploma; or

(b) holds degree or diploma in engineering or degree in science and shall also have undergone divisional officers course of an educational institution recognised by the Central Government and having experience in dealing and management of fire services for a period of one year in case of degree or two years in case in diploma; or

(c) has undergone station officer's or sub-officer's course from an institute specified by the Chief Inspector of Mines for the purpose and having experience in dealing and management of fire services for a period of ten years.

20. Qualification and authorisation of competent persons for well perforation.- The owner, agent or manager of every mine shall authorise one or more persons to be competent persons for handling, transport and use of explosives meant for well perforation in accordance with the Oil Industry Safety Directorate standard, that is, OISD-STD-191 or its revised version.

21. Appointment of officials and competent persons.- (1) The owner, agent or manager of every mine shall appoint such number of competent persons including officials, as is sufficient to secure, during each of the working shift,-

(a) adequate inspection of the installation and the equipment thereof;

(b) a thorough supervision of all operations at the installation;

(c) the installation, running and maintenance, in safe working order, of all machinery in the mine; and

(d) the enforcement of the requirements of the Act and these regulations.

(2) The manager, deputy manager and installation manager of a mine shall ensure that the persons appointed under sub-regulation (1) are competent to perform duties assigned to them:

Provided that no person shall be so appointed unless he is paid by the owner or agent and is answerable to the manager.

(3) The record of all appointments made under sub-regulation (1) and duties assigned to the competent persons under sub-regulation (2) shall be maintained by the manager of the mine.

22. General management.- (1) The owner, agent and manager of a mine shall provide for the safety, health, welfare, environment and proper discipline of persons employed in the mine.

(2) Except in a case of emergency, no person who is not an official or a competent person shall give, otherwise than through the manager, instructions to a person employed in a mine, who is responsible to the manager.

CHAPTER-IV

DUTIES AND RESPONSIBILITIES OF MANAGEMENT, CONTRACTORS, MANUFACTURERS, COMPETENT PERSONS AND WORKMEN

23. Duties and responsibilities of owner.– (1) The owner of every mine shall ensure that-

(a) all provisions made under the regulations and rules pertaining to oil mines framed under the Act are complied with;

(b) all necessary measures are taken to eliminate or minimise the risks to health and safety of persons employed in mines;

(c) safety management plan required under these regulations are formulated and implemented in every mine;

(d) emergency plan specific to each mine required under regulation 102 is prepared for implementation in the event of an emergency;

(e) first aid, appropriate transportation from the workplace and access to appropriate medical facilities is provided to every person who receives injury or suffers from illness at the workplace;

(f) adequate training and re-training programs and comprehensible instructions on safety and health matters and on the work assigned are provided for workers, at no cost to them; and

(g) all accidents and dangerous occurrences connected with mining operations are investigated and appropriate actions taken to prevent recurrence.

(2) Where persons engaged in any operation of a mine are likely to be exposed to physical, chemical or biological hazards, the owner of the mine shall ensure that such persons are provided, at no cost to them, with suitable protective equipment, clothing as necessary and other facilities as required by these regulations.

24. General responsibilities of supplier, manufacturer and designer.- A person who designs, manufactures, imports, provides or transfers machinery, equipment or substances for use in mines, shall-

(a) ensure that the machinery, equipment or substances do not entail dangers for the safety and health of those using them correctly; and

(b) make available-

(i) information concerning their requirement for the correct installation, maintenance and use of machinery and equipment and the correct storage and use of substances;

(ii) information concerning the hazards of machinery and equipment, the dangerous properties of hazardous substances and physical agents or products; and

(iii) information on how to eliminate or control risks arising from the identified hazards associated with the products.

25. Duty of contractor.– (1) A contractor deployed in a mine for any work shall-

(a) establish effective ongoing communication and co-ordination between appropriate levels of supervisors, officials and senior officials of the mine prior to commencing work, which shall include provisions for identifying hazards and the measures to eliminate and control risks;

(b) ensure arrangements for reporting work related injuries and diseases, ill-health and incidents among the contractor's workers while performing work in the mine;

(c) provide relevant workplace safety and health hazard awareness and training to their workers prior to commencing work and as the work progresses as necessary; and

(d) ensure compliance of the provisions of the Act and the rules and regulations framed thereunder.

(2) When deploying contractors, the owner, agent and manager of every mine shall ensure that-

(a) the same safety and training requirements apply to the contractors and their workers as to the workers of the establishment;

(b) where required, only such contractors are deployed who have been duly registered or held licenses; and

(c) the contract specify safety and health requirements and sanctions and penalties in case of non-compliance and such contract shall include the right for mine officials to stop the work whenever a risk of injury is apparent and to suspend operations until the necessary remedies have been put in place.

26. Duty of persons employed in mine.- (1) Every person employed in a mine shall comply with the provisions of the Act and of the regulations and orders made thereunder and to any order or direction issued by the manager or an official of the mine with a view to the safety or convenience of persons, not being inconsistent with the Act and these regulations; and he shall not neglect or refuse to obey such orders or directions.

(2) Every person shall comply with the safety directives and be conversant with the safety instructions issued from time to time by the manager, deputy manager or installation manager of the mine.

(3) Before beginning work, every person shall examine his place of work and the equipment that he is to use and shall forthwith report to his superior any dangerous defect that he may discover.

(4) Every person shall make use of all safeguards, safety devices and other appliances provided for his protection or the protection of others.

(5) Except in an emergency, no person unless duly authorised shall interfere with, remove, alter or displace any safety device or other appliance provided for his protection or the protection of others or interfere with any method or process adopted with a view to avoid accidents and injuries to health.

(6) No person shall, while on duty-

(a) throw any stone or other missile with intent to cause injury; or

(b) fight or behave in a violent manner; or

(c) impede or obstruct any other person in the discharge of duties; or

(d) offer or render any service or use any threat, to any other person with a view to prevent the other person from complying with the provisions of the Act or the regulations, or orders made thereunder or from performing duties faithfully.

(7) No person shall sleep or take rest in a dangerous place such as scaffolds, derrick floor or cranes or in the vicinity of dangerous or toxic substances, machinery, boilers, vehicles and heavy equipment.

(8) Every person shall wear protective equipment and clothing suited to his duties and to the weather conditions.

(9) Every person receiving any injury or notice any injury in the course of his duty shall, as soon as possible, report the same to an official or the competent person in-charge of a first-aid station, who shall arrange for the necessary first-aid to the injured person.

(10) No person shall, except with the authority of an official, remove or pass through any fence, guard barrier or gate, or remove any danger signal.

27. Duty and Responsibility of manager.-(1) The manager of every mine shall be responsible for overall management, control, supervision and direction of the mine to ensure that the work is carried on in accordance with the provisions of the Act and of the regulations and orders made thereunder.

(2) The manager of every mine shall ensure that sufficient supply of materials and appliances for the purpose of carrying out the provisions of the Act, the regulations and orders made thereunder and for ensuring the safety of the mine and persons employed therein, is always provided at the mine; and if he is not the owner or agent of the mine, he shall report in writing to the owner or agent of the mine when anything which he is not competent to order, is required for the aforesaid purpose and a copy of every such report shall be maintained.

(3) The manager of a mine shall assign to every competent person and official his specific duty and on his appointment provide to him a copy of the regulations, rules and bye-laws and any orders made thereunder which affect him and he shall take all possible steps to ensure that every such person understands, carries out and enforces the provisions contained therein in a proper manner.

(4) The manager of a mine shall examine all reports, registers and other records required to be made or kept in pursuance of the Act, the regulations and orders made thereunder and shall countersign the same and date his signature:

Provided that the manager may, by an order in writing, delegate this duty to a deputy manager except in cases where a specific provision is made requiring the manager to countersign a report or register.

(5) The manager of a mine shall pay attention to, and cause to be carefully investigated, any specific representation or complaint that may be made to him in writing by a work person of the mine as to any matter affecting the environment or safety or health of persons in or about the mine.

(6) When an accident resulting in any serious bodily injury to any person or loss of life occurs in a mine, the manager shall inspect the site of accident immediately and shall also either himself or through safety officer or through an enquiry committee duly constituted by him have an enquiry made into the causes of, and circumstances leading to, the accident and the result of every such enquiry and a plan and section of the site of the accident showing the details shall be submitted to the Regional Inspector within thirty days of the date of occurrence.

(7) The manager of a mine shall perform such other duty as specified under the Act, the regulations and orders made thereunder.

(8) The manager of a mine may suspend, or take such disciplinary action, or recommend as he thinks fit against, the work person for contravention of any provisions of the Act, or the regulations and orders made thereunder.

(9) The manager of every mine shall frequently inspect the mine and maintain a record therein the findings of each of his inspections and also the action taken by him to rectify the defects mentioned, if any.

(10) The manager of a mine shall identify operations of hazardous nature and ensure framing and usage of code of practice to be followed by persons engaged in the operation which shall be consistent with the Act and the regulations or orders made thereunder.

28. Duty and Responsibility of deputy manager.- (1) The deputy manager of a mine shall carry out the duties assigned to him by the manager of the mine, and shall ensure that in the part of the mine or installations assigned to him by the manager, all work is carried out in accordance with the provisions of the Act and of the regulations or orders made thereunder.

(2) The deputy manager shall –

(a) ensure that all operations in the part of the mine assigned to him under sub-regulation (1) are carried out in accordance with the code of practice framed under these regulations;

(b) subject to the orders of the manager, visit and examine the part of the mine and the installations under his charge or part thereof;

(c) maintain a detailed report of the result of each of his inspection and also action taken by him to rectify the defects noticed, if any;

(d) ensure that when any drilling rig, work-over rig and associated equipment, production equipment or pipeline is shifted or newly installed, it is given a trial run before being put into use; and

(e) in the absence of manager, the deputy manager shall have the same responsibility and discharge the same duty and shall be subjected to same liabilities as manager, but not so as to exempt the manager therefrom.

29. Duty and responsibility of installation manager.- The installation manager of a mine shall-

(a) have charge and control of the installation and shall carry out such duties, as may be assigned to him by the manager or deputy manager;

(b) ensure that in the installation assigned to him, all work is carried out in accordance with the provisions of the Act and the regulations or the orders made thereunder;

(c) ensure that all operations in the installation or part of the mine assigned to him under clause (a) are carried out in accordance with the code of practice framed under these regulations;

(d) ensure that a notice of his appointment is available at site and his name is displayed at a place in the installation in such a position that it may be easily and conveniently read;

(e) visit and examine the installation or part thereof under his charge on every working day to see that safety in every respect is ensured;

(f) maintain a detailed record of the results of each of his inspection and also of the action taken by him to rectify the defects noticed, if any;

(g) ensure that when any drilling rig, work-over rig and associated equipment or production equipment or pipeline is shifted or newly installed, a trial-run is given under his supervision or person so authorised by him before it is put into use;

(h) ensure that all persons employed at the installation are thoroughly instructed and familiar with the provisions of the standing orders, standard operating procedures, code of practices and emergency plan made under these regulations relating to prevention of blowout and fire;

(i) ensure that the provisions of the Act and the regulations or orders made thereunder relating to the installation, maintenance, operation or examination of machinery and equipment are properly carried out by himself or by officials or by competent persons or work persons, as the case may be, appointed for the purpose; and

(j) during the construction of an installation or any operation thereat, when there is an emergency or apprehended emergency endangering the life or safety of any person or the stability and safety of the installation, himself take or cause to be taken such measures as are necessary or expedient to avoid the emergency.

30. Duties of safety officer.- (1) The safety officer shall -

(a) inspect, as often as may be necessary, the installations of the mine with a view to identify the dangers which may cause bodily injury or impair health of any person or environment;

(b) advise the manager or deputy manager on measures necessary to prevent dangerous situations;

(c) enquire into the circumstances and causes of all accidents whether involving persons or not and advise the manager or deputy manager on measures necessary to prevent recurrence of such accidents;

(d) collect, compile and analyse information in respect of accidents and dangerous occurrences with a view to promote safe practices and improvement of working environment;

(e) organise regular safety education programmes and safety campaigns to promote safety awareness amongst persons employed in the mine;

(f) ensure that all new workers and workers transferred to new jobs receive adequate training in safety, firefighting and first aid; and

(g) maintain a detailed record of work performed by him every day.

(2) The safety officer shall be assisted by adequate number of assistants for the discharge of his duties.

(3) No duty other than those specified in sub-regulation (1) shall be assigned to the safety officer.

31. Duty of fire officer.- (1) The fire officer shall -

(a) ensure the compliance of the provisions of the Act and the regulations or orders made thereunder concerning fire detection, fire-fighting system and emergency plan and advise the manager and deputy manager on measures necessary to ensure adequate protection against fire;

(b) ensure that code of practice for fire-fighting is prepared and implemented;

(c) ensure proper layout, installation and maintenance of fire-fighting equipment;

(d) ensure that emergency plan for likely fire situations are prepared;

(e) organise regular training of persons in-charge of fire-fighting duty with particular reference to contingency or emergency plan for fire, correct assessment and handling of fire problem;

(f) ensure that persons on firefighting duty undertake simulated fire drills at least once in every month to study promptness of response and effective tactics;

(g) examine at least once in every quarter all devices and equipment of fire detection and fire-fighting systems in the mine and report any defects in the same to the manager or deputy manager;

(h) exercise a general supervision and co-ordination during control and extinguishment of any fire in the mine;

(i) assist the manager or other officials so authorised, to conduct enquiry into the causes and circumstances of all fires with a view to prevent recurrence in the mine; and

(j) maintain detailed record of work performed by him every day.

(2) No duty other than the duty specified in sub-regulation (1) shall be assigned to the fire officer.

32. Duty and responsibility of competent person for well perforation.-(1) The competent person appointed or authorised under sub-regulation (1) of regulation 20 shall be responsible, under these regulations or orders made thereunder, for handling, transport and use of explosives in the mine in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-191 or its revised version.

(2) The competent person for well perforation shall –

(a) be responsible for the compliance by his assistants, if any, of such provisions and of any direction with a view to safety, which may be given to them by a superior official;

(b) not hand over any explosive to any unauthorised person;

(c) be present when shot is being charged and shall himself fire the shot; and

(d) be responsible when a shot has misfired to see that the gun is safely disarmed.

(3) The competent person shall maintain detailed record of the work performed by him.

33. Duty of competent person.- (1) Every competent person shall be subject to the orders of superior officials and shall perform his duty assigned to him in accordance with the provisions of the Act and of the regulations or the orders made thereunder.

(2) The competent person shall not -

(a) depute another person to perform his work without the sanction of his superior official;

(b) absent himself without having previously obtained permission from such official for the period of his absence or without having been relieved by a duly competent person; and

(c) without permission from such official, perform during his shift, any duties other than those for which he has been appointed.

(3) The competent person shall, on the occurrence at his place of work any hazardous condition, take prompt corrective measures to eliminate the hazard.

CHAPTER – V

DRILLING AND WORK-OVER

34. Derricks.- (1) The owner, agent and manager of a mine shall ensure that every part of a derrick, mast and sub-structure is of sound construction and strength, meeting the maximum load criteria for which it is designed and shall be maintained in safe working condition all the time.

(2) The derrick shall be adequately secured to prevent it from overturning.

35. Derrick platform and floor.- (1) The owner, agent or manager of a mine shall provide on every derrick or portable mast, a platform at least sixty centimetre wide on all sides of the crown block equipped on its outer edge with a two-rail railing at least one metre high and toe-board fifteen centimetre high.

(2) The owner, agent or manager of a mine shall provide on every derrick, platform for persons to stand on while such persons handle pipe or other equipment racked in or on the derrick which shall cover the space from the working edge of the platform to the legs and girts of the derrick and be firmly secured.

(3) The working edge of monkey board platform shall be so placed that there is adequate clearance for safe passage of travelling block.

(4) The platform, floor and walkway shall be kept free of dangerous projection or obstruction and shall be so maintained that adequate protection against slipping is provided.

36. Ladders.- (1) Every derrick shall be equipped with a ladder arrangement ensuring safe access to the elevated walking and working platform.

(2) Access from ladder to working platform shall be properly secured with railings and toe boards.

(3) Every ladder shall have rungs equally spaced and the top end of each ladder section shall extend not less than one metre above the platform.

(4) The owner, agent or manager of a mine shall provide landing platform or cage on ladders of more than six metre to a maximum unbroken length of nine metre:

Provided that nothing in this sub-regulation shall apply where personal fall arrest system is used on the ladder.

(5) The landing platform shall be equipped with railings and toe-boards so arranged as to give safe access to the ladder.

(6) The ladder leading from derrick platform to monkey board shall be provided with fall prevention device meeting with applicable Indian or international standard to prevent persons from falling.

37. Safety belt and life line.- (1) The owner, agent or manager of a mine shall provide to every person who works above the first girt of a derrick, safety belt with full body harness and lifeline certified as per standard, that is, IS 3521 of the Bureau of Indian Standard or its revised version and he shall use the same unless otherwise protected against the danger of falling from height.

(2) No person shall work or travel from where he is likely to fall for more than one metre and eighty centimetre unless he is protected by certified safety belt with full body harness and lifeline and shall use the same whilst at work.

38. Emergency escape device.- (1) The owner, agent and manager of a mine shall ensure that an escape device with escape line and slide of adequate strength, as per the standard specified for the purpose by the Chief Inspector of Mines by a general or special order, is installed and maintained on every monkey board in such a manner that persons may come down safely from the monkey board to ground level in an emergency.

(2) The escape line shall be securely fastened to the girt immediately above the monkey board and it shall be securely anchored to ground at a distance, from centre of cellar pit, not less than the height of the monkey board from the ground.

(3) The landing place shall be provided with adequate quantity of sand or other suitable material for cushioning to prevent hard landing.

(4) A competent person shall inspect every part of emergency escape device, braking system as per the inspection and maintenance guidelines of original equipment manufacturer and the record of every such inspection shall be maintained by the person who made the inspection.

(5) The track rope of the emergency escape device shall have sufficient sag to avoid straining due to pre-tensioning.

(6) The track rope or any part thereof shall have no damage or kink.

(7) The braking unit pulleys of the emergency escape device shall be checked for free rotation prior to each installation and they shall be checked for any wear and cleaned to make it free from slippage.

39. Weight indicator.- (1) The owner, agent or manager of a mine shall provide and use on every rig, a weight indicator to register a close indication of the load suspended from the casing line.

(2) The weight indicator shall be maintained in working order and calibrated at intervals not exceeding six months.

40. Escape exit.- The rig floor area and each draw-works engine floor area shall have not less than two escape exits placed on opposite sides to allow unobstructed escape.

41. Guardrails, handrails and covers.- (1) The owner, agent and manager of a mine shall ensure that the floor openings and floor holes are guarded by a standard railing and toe-board or cover.

(2) Where any person is allowed to work or pass through open-sided floor or platform of height one metre and eighty centimetre or more above the adjacent floor or ground level, the open-sided floor or platform shall be guarded by a standard railing.

(3) The owner, agent and manager of a mine shall ensure that standard railing is provided on the inside of all mud tank runways, unless other means are available to prevent a person from falling into the mud tanks.

(4) The open sided floor, walkway, platform or runway above or adjacent to dangerous equipment and similar hazards shall be guarded with a standard railing and toe-board.

42. Draw-works.- The owner, agent and manager of a mine shall ensure that-

(a) the draw-works is fitted with a suitable device with its control near the driller's stand to stop the draw-works in case of an emergency;

(b) no draw-works is operated unless all guards are in position and maintained;

(c) the machinery is stopped for oiling and greasing if lubrication fittings are not accessible with guards in place;

(d) the brakes, linkage and brake flanges of draw-works are examined by a competent person once at least in every twenty four hours and if any defect is found during such examination, the draw-works are not used until such defect is remedied;

(e) the result of every such examination specified under clause (d)is recorded by the competent person making the inspection;

(f) the draw-works are provided with an automatic device which shall effectively prevent the travelling block from coming closer than two metres of the crown block on the one end and crashing on the rotary table at the other end;

43. Cat-head and cat-line.- (1) The cat-heads operated manually shall be equipped with a guide divider to ensure separation of the first wrap of line or rope.

(2) The key seat and projecting key on a cat-head shall be covered with a smooth thimble or plate.

(3) When a cat-head is in use, a competent person shall be at the controls and in the event of any emergency, he shall immediately stop the rotation of the cat-head.

(4) The operator of the cat-head shall keep his operating area clear and shall keep the portion of the cat-line not being used coiled or spooled.

44. Tongs.- (1) The uncontrolled rotation of pipes shall be effectively prevented while making or breaking pipe connections and a back-up tong shall be used for this purpose whenever required.

(2) The tong counter balance weights and lines shall be provided with guards to prevent accidental contact.

(3) The ends of tong safety lines shall be secured with not less than three wire-line clamps, or crimped.

45. Safety chains or wirelines.- The tongs, ends of rotary hose and suspension sheaves shall be fitted with safety chains or wire lines.

46. Casing lines.- (1) The casing line shall be visually examined by a competent person once at least in every seven days and the condition of the wire as to wear, corrosion, brittleness and fracture shall be noted, and a report of every such examination shall be recorded by the person who made the examination.

(2) If during any inspection, any defect or weakness is found by which the safety of persons may be endangered, such weakness or defect shall be promptly reported in writing to the installation manager or manager and until such weakness or defect is remedied, the casing line shall not be used.

(3) The slip and cut operation shall be carried out under the supervision of the installation manager or other competent person who shall record the date and other particulars thereof and shall sign with date.

(4) The Oil Industry Safety Directorate Standard, that is, OISD STD - 187 or its revised version for inspection, slip and cut procedure of casing line shall be complied with, so as to prevent excessive wear of the casing line.

47. Rigging equipment for material handling.- (1) The rigging equipment including cranes for material handling shall be checked prior to and during its use to ensure that it is safe.

(2) The rigging equipment shall not be loaded in excess of its recommended safe working load.

(3) While operating cranes in the vicinity of overhead electric transmission line, adequate precaution shall be taken against accidental contact with the electric transmission line unless the same is kept de-energised during movement of the crane.

(4) The rigging equipment and crane shall be inspected by a competent person at such interval and in accordance with the procedure as laid down by the manager or installation manager of the mine and he shall record the results of the inspection.

48. Storage of materials.- (1) The materials stored in tiers shall be stacked, racked or otherwise secured to prevent sliding, falling or collapse.

(2) The passage way shall be kept clear to provide for the free and safe movement of material handling equipment or persons.

49. Construction and loading of pipe-racks.- (1) The construction of pipe racks shall be designed and maintained to support any load placed thereon.

(2) The owner, agent or manager of a mine shall make adequate provision to prevent pipe, tubular material or other round material from rolling off pipe-racks.

(3) No person shall go or be allowed to go between pipe-rack and a load of pipe during loading, un-loading and transferring operations of pipes unless effective protection device or system is provided to protect such person from being hit by any load of pipe in motion.

50. Rigging-up and rig dismantling.- The manager of a mine shall ensure that-

(a) the raising and installation of heavy load is performed during daylight hours unless adequate general lighting arrangement is provided at the place of work;

(b) every loose part and tool of the rig is securely fastened;

(c) guy lines, cat lines, snub lines and such other lines are not installed within six metre of any electric overhead transmission lines;

(d) the exhaust of internal combustion engine is provided with water quench or other effective spark arrestors;

(e) high pressure circulating fluid line and steam line are securely anchored;

(f) during rigging-up and rig dismantling, the wellhead is protected against damage from sliding or falling objects of the rig and associated material;

(g) the components from a loft including nuts, bolts and cleats are lowered safely to the ground either singly, bundled or in containers; and

(h) the code of practice for rigging-up and dismantling is framed and implemented and kept updated by a deputy manager or an installation manager authorised in this behalf.

51. Mud tanks and pumps.- (1)The owner, agent or manager of the mine shall provide and maintain mud tanks and mud pumps of sufficient capacity for effective control of the well.

(2) The owner, agent and manager of a mine shall ensure that-

(a) the mud tanks are so designed and installed as to provide positive suction to mud pumps;

(b) the mud pumps connected to a drilling rig are equipped with a pressure relief valve and an operating gauge in the system;

(c) the pressure relief valve is set to discharge at a pressure not more than ten per cent in excess of the established maximum working pressure of the pump, pipes and fittings;

(d) the discharge from a pressure relief valve is piped to such a place which does not endanger persons and the discharge line is anchored securely; and

(e) there is no valve between a pump and its pressure relief valve.

52. Well control equipment and operation.- (1) The safe practice for work-over operations, well stimulation operations and blowout prevention equipment systems for drilling wells shall be in accordance with the Oil Industry Safety Directorate Guidelines, that is, OISD-GDN-182 and Oil Industry Safety Directorate Recommended Practices, that is, OISD-RP– 174 or their revised versions.

(2) In well control equipment and operations, the manager of the mine shall ensure that--

(a) well control fluid and equipment are available and installed and used as required;

(b) well is full of well fluid of adequate specific gravity to overbalance the bottom hole pressure;

(c) during tripping operation, closely watch to notice any sign of kick in the well and annulus is kept full;

(d) full opening safety valve with connection for circulation and operating key are readily available and kept in open position on the derrick floor;

(e) blow out preventer and related equipment like choke and kill manifold, control panel and accumulator are available, maintained and tested regularly;

(f) blow out preventer equipment is function-tested and pressure-tested when installed and also at the appropriate time during operations to determine that the blow out preventer functions properly;

(g) instructions of the blow out preventer operating manual of the manufacturer are complied with;

(h) all connections, valves, fittings, piping, and other equipment have a minimum working pressure equal to the rated working pressure of the blow out preventer;

(i) bolts, nuts and fittings of correct size are used and tightened to the recommended torque; and all connections are pressure-tested before resuming operation;

(j) all manually operated valves are equipped with hand wheels, and always kept ready for use; and

(k) pit drills are carried out regularly.

53. Selection of well control equipment.- The **s**election of well control equipment shall be made in accordance with the Oil Industry Safety Directorate Recommended Practices, that is, OISD-RP–174 or its revised version.

54. Periodic inspection and maintenance of well control equipment.- The owner, agent or manager of a mine shall-

(a) establish by taking into consideration the original equipment manufacturer's recommendations for inspection and maintenance procedures of well control equipment; .

(b) ensure that the well control equipment is cleaned, visually inspected and preventive maintenance performed, before installation at the next well after inspection of each well;.

(c) ensure that major inspection is carried out at intervals of not more than five years of service or as per Original Equipment Manufacturer's recommendation.

(d) ensure that the records of every inspection made under clauses(b) and (c) is maintained by the competent person who made the inspection.

(e) comply with the spare parts requirement as per Original Equipment Manufacturer;

(f) ensure that separate maintenance history or log book of the entire blow-out preventers, choke manifold and control units are maintained; and

(g) ensure that all pressure gauges on the blowout preventers control system are calibrated at least once in every six months.

55. Control system for blowout preventers.- The owner, agent or manager of a mine shall ensure that-

(a) all ram preventers have locking mechanism and instructions for operating the controls are posted prominently near the control unit;

(b) all controls of power operated blowout preventers are located within easy reach of the driller on the derrick floor;

(c) a remote control panel for the blowout preventer is installed at ground floor level at a safe distance from the derrick floor; .

(d) blowout preventers are connected to an accumulator system which shall be capable of providing fluid of sufficient volume to close all the blowout preventers in the stack and open hydraulically operated valve; and

(e) all controls for blowout preventers are clearly identified with suitable markers;

56. Testing of blowout preventer assembly.- The owner, agent and manager of a mine shall ensure that testing of blowout preventer assembly is conducted in accordance with the Oil Industry Safety Directorate Recommended Practices, that is, OISD-RP– 174.

57. Precautions against blowout.- (1) The owner, agent or manager of a mine shall ensure that the following control equipment for the drilling mud system are installed and kept in use during drilling operations, namely:-

(a) a pit level indicator registering increase or reduction in the drilling mud volume and a visual and audio warning device near the driller's stand;

(b) a device to accurately measure the volume of mud required to keep the well filled at all times;

(c) a gas detector or explosimeter at the primary shale shaker and connected to audible or visual alarm near the driller's stand;

(d) a device to ensure filling of well with mud when the string is being pulled out; and

(e) a control device near the driller's stand to stop the mud pump when the well kicks.

(2) If the control equipment referred to in sub-regulation (1) indicates that formation fluid is entering the well, immediate steps shall be taken to control the well.

(3) The manager of every mine in which blow out preventer assembly is installed, shall, immediately after such installation, frame standing orders specifying the action to be taken when a well kicks and the duty of each person employed on the rig and of such other persons as may be necessary.

(4) A copy of standing orders referred to in sub-regulation (3) shall be posted at conspicuous places near the rig.

(5) Every person employed on a rig shall have an adequate understanding of the warning sign of a kick, the standing orders mentioned under sub-regulation (3) and the blowout preventer assembly, and competent person on the rig shall have knowledge to operate the controls for blowout preventer; and blowout prevention drill shall be conducted for this purpose once in seven days.

(6) Suitable control valves shall be kept available near the well which may be used in case of emergency to control the well.

(7) When running in or pulling out string, a suitable mechanism shall be kept readily available at the derrick floor to prevent uncontrolled flow from the string.

58. Precautions after occurrence of a blowout - (1) On the appearance of signs indicating that a well is blowing out, the manager of the mine shall ensure that all persons other than those whose presence is deemed necessary for controlling blowout are immediately withdrawn from the installation and suitable action is taken in accordance with the procedures formulated in the emergency plan prepared under regulation 102.

(2) During the whole time that any work of controlling a blowout is in progress, the manager of the mine shall ensure that-

(a) a competent person is present on the spot throughout;

(b) an area within five hundred metre of the well on the down wind direction is demarcated as danger zone, and-

(i) all electrical installations within the danger zone is de-energised to prevent the ignition;

(ii) flameproof or intrinsically safe lamp or torch is only be used within the danger zone; and

(iii) no naked light or vehicular traffic is permitted within the danger zone;

(c) a competent person ascertains the condition of ventilation and presence of gas with a flameproof or intrinsically safe instrument so far as safety of person is concerned;

(d) adequate number of self-contained breathing apparatus or any other apparatus of such make in accordance with the standards, that is, IS 10245 Part-2 or IS 10245 Part 1 of the Bureau of Indian Standards or its revised versions are available at or near the place for use in emergency; and

(e) adequate fire-fighting facility is kept readily available for immediate use.

59. Drilling and work-over operation.- (1) At the beginning of every shift, the instruments and controls at the driller's stand, draw-works, mud pumps, sensing and monitoring instruments, mud logging, casing line, cat-line and blowout preventer assembly shall be examined by the person in- charge of the shift or a competent person and he shall satisfy himself that they are in good working order.

(2) The manager of a mine shall ensure that a detail plan of operations relating to safety and geo-technical matters is formulated before the commencement of drilling operation or work-over plan for work-over operation for the individual well and the same is made available to installation managers, other concerned officials and competent person before the commencement of the said operation.

(3) Before commencement of drilling or work-over operation, a pre-spudding or pre-work-over meeting shall be carried out to examine and ensure safe operation of drilling or work-over and other related activities, and the finding shall be recorded and signed by the members.

(4) The driller shall see that no person remains in a position of danger at or near the rotary table before the rotary table is set in motion.

(5) The casing line shall not be in direct contact with any derrick member or foul with any material in the derrick excepting the crown block and any travelling block sheaves, a line spooler, a line stabilizer or weight indicator.

(6) When cementing, no person shall be allowed on the rig floor near the wellhead or near the cementing line and equipment except those actually engaged on the operation.

(7) All high-pressure pipes fitted with flexible points shall be suitably anchored and pressure tested before the commencement of cementing operation.

(8) After the cementing operation and prior to perforation, casing shall be hermetically tested at a pressure at least seventy per cent of the casing burst pressure.

(9) Tools or other materials shall not be carried up or down a ladder unless properly secured to the body leaving both hands free for climbing.

(10) The manager of the mine shall make risk assessment to fix the minimum distance between the well to be drilled and railway, public road, public works or other permanent structure not belonging to the owner:

Provided that, no well shall be drilled within a distance of forty five metre of any railways, public road, public works or any other permanent surface structure not belonging to the owner.

Explanation.- For the purposes of sub-regulation (10), the distance shall mean the shortest distance between the well and any railways, public road, public works or any other permanent surface structure not belonging to the owner measured in any direction on surface.

60. Drill stem test.- (1) The owner, agent or manager of a mine shall ensure that prior to the commencement of drill stem test-

(a) pressure test and function test of the blowout preventer assembly is conducted;

(b) fire-fighting equipment is kept readily available for immediate use;

(c) no person other than those required for the test is admitted on the drilling floor;

(d) the test line is securely anchored at each end and at each nine metre interval;

(e) thekelly hose is not used as part of the test line; and

(f) the test line and valves are examined by a competent person and no test is conducted if any defect is discovered until such defect is rectified.

(2) No person shall conduct the initial opening of drill stem test tool except in daylight hours.

(3) No drill pipe shall be pulled out when petroleum or natural gas has been recovered during a drill stem test, unless the well is properly killed and there is no possibility of petroleum or natural gas being present in the drill pipe.

(4) The gas produced to the atmosphere during a drill stem test shall be burnt through a flare-line or burners.

CHAPTER VI

PRODUCTION

61. Well perforation.- No well perforation shall be carried out except in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-191 or its revised version.

62. Well testing and activation.- (1) The Christmas tree and flow line including the associated fittings shall be tested by applying maximum pressure likely to be encountered and the result of such test be recorded before commencement of testing or activation of well.

(2) The installation manager or an official shall perform well testing and activation under his direct supervision and he shall ensure that-

(a) flow-lines are firmly anchored to the ground;

(b) the separator safety valve is in good working order and properly adjusted;

(c) hydro tested separator is used;

(d) adequate fire-fighting equipment is readily available for immediate use; and

(e) adequate facility is provided to safely collect the well products in tanks.

(3) The installation manager or official referred to in sub-regulation (2) shall ensure that well control procedure is made available to every person at the site and he has understood the same, considering all eventualities before commencement of well testing.

(4) The well testing and activation shall not be carried out beyond day light hours or under conditions of lightning, thunder, high wind and heavy rain, except with the permission of the manager based on job safety analysis and subject to observance of the control measures and other conditions he may specify.

(5) A record of every permission referred to in sub-regulation (4) along with sufficient justification shall be maintained.

63. Production facility.- (1) Whenever the owner, agent or manager of a mine proposes to construct any new production facility or carry out material alterations at existing production facility, which covers quick production system, early production system, oil collection station, group gathering stations, gas collecting station, gas compressor plant, central tank farm, intermediate tank farm, water injection plant, polymer injection plant, in-situ combustion plant or any other important facility in oilfield within any mine, he shall ensure that -

(a) the following particulars are shown on the surface plan and a copy thereof is kept at the facility -

(i) the name and location of any other production facility connected with the facility;

(ii) the pipelines connected with the facility;

(iii) the name of each well connected to the facility;

(iv) the extent of the land over which right of use or right of way has been established; and

(v) any railway, public road, public works, building or any other surface features lying within sixty metres of such facility;

(b) the documents, in compliance to all relevant statutory requirement, safety standards and safety guidelines are made available at site;

(c) the production facility where the quantity of petroleum gas or liquid stored or handled exceeds three hundred tones respectively, and one lakh tonnes, the safety report in the form and method specified by the Chief Inspector of Mines for the purpose are made available at site; and

(d) the detailed piping and instrumentation diagram of facility is maintained and kept updated and a copy of the same is kept available at the facility.

(2) The owner, agent or manager of a mine shall ensure that the production facilities are of sound construction and required strength and designed, constructed, operated and maintained based on risk assessment.

64.Storage tank.- Every tank for the storage of petroleum in bulk shall be designed, constructed, operated and maintained in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-118 or its revised version.

65. Dyked enclosures.- (1) The petroleum storage tanks shall be located in dyked enclosures with roads all around the enclosure and all dyked enclosures shall be provided with proper discharge system to prevent accumulation of oil or water in the enclosures.

(2) The layout and design of dyked enclosures for petroleum storage tanks shall be in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-118 or its revised version.

66. General requirement for storage tank and dyked enclosures.- (1) The owner, agent or manager of a mine shall ensure that the design practice for the tanks used for storage of petroleum is in accordance with the Oil Industry Safety Directorate Recommended Practices, that is, OISD-RP-108 or its revised version.

(2) The height of the storage tank shall not exceed one and half times its diameter or twenty metre, whichever is less.

(3) The piping from and to any tank located in a dyked enclosure shall not pass through any other dyked enclosure and the piping connected to tanks shall run directly to outside the dyke to the extent possible to minimise piping within the enclosures.

(4) The minimum distance between a tank shell and the inside toe of the dyke wall shall not be less than half the height of the tank.

(5) There shall be access on all four sides of each dyke area and roads shall be linked to minimise the effect if one road is cut off during fire.

(6) An air space of not less than five per cent of the total capacity of the tank shall be kept in each tank.

(7) Every tank after being installed or reinstalled and before being put in use, shall be hydro tested in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-129 or its revised version by a competent person so as to ensure that it is free from any leakage and is suitable for storage of petroleum.

(8) A report of such test shall be maintained in the mine.

(9) Every storage tank including its roof and all metal connections shall be electrically connected with very low earth resistance system in accordance with the standard and procedure as per an Indian standard or an international standard adopted by the Bureau of Indian Standards through harmonisation, specified by the Chief Inspector of Mines by a general order notified in the Official Gazette:

Provided that where no such standard exists, an international standard specified by the Chief Inspector of Mines on merit, by a general order notified in the Official Gazette, may be accepted:

Provided further that any other international standard equivalent to the harmonised standard, specified by the Chief Inspector of Mines on merit, by a general order notified in the Official Gazette, may also be accepted:

Provided also that such earth resistance system shall not be used with storage tank in the mine unless the same has been tested and passed the test as per the applicable standards and the manager of the mine has kept a record of the type, details of specification, reference of the particular standards, test criteria as per the standards and status of testing, place of testing, copies of test report and any other relevant details.

(10) The effectiveness of earthing shall be tested once in twelve months and the result of every such test shall be maintained.

(11) No person shall enter or be permitted to enter a tank for cleaning or maintenance unless work permit for confined space entry has been obtained or issued and the tank has been examined by a competent person and found to be gas-free.

(12) The agent or manager of a mine shall provide walkway with handrail on the roof of the tank to facilitate inspection and checking of vents, flame arrestor and other facilities so that movement of personnel on roof is safe.

(13) Every tank shall be painted and its numbering, safe filling height and reference height shall be painted on the tank to avoid operating errors.

(14) No gauging or sampling of tank shall be undertaken during thunder or hail storms.

67. Safety precaution in oil dispatch pump area.- The owner, agent or manager of a mine shall ensure that-

(a) all moving parts of a pump are adequately guarded;

(b) the discharge outlet of safety relief valve is fixed with the suction end of the pump;

(c) the engine exhaust is fixed with spark arrestor;

68. Manifold area.- The manager of every mine shall ensure that pressure gauge of suitable range and non-return valve are fitted on each inlet lines to the manifold.

69. Process area.- (1) The manager of every mine shall ensure that in process area-

(a) discharge line of safety relief valve or pressure safety valve of the pressure vessel is connected to the flare through a common header;

(b) all bath heaters, indirect heaters and flare line are provided with remote ignition system;

(c) water level is always above the level of fire tube in operational bath heaters;

(d) flame arrestor is in place in air intake line of the burners;

(e) all vessels, equipment, bath heaters or indirect heaters handling petroleum are effectively earthed;

(f) insulating mat of standard, that is, IS 15652 of the Bureau of Indian Standards or its revised version shall be provided near the electrical control panels;

(g) records of vessels and testing of safety relief valve or pressure safety valve are inscribed on the vessels and on the safety relief valve and pressure safety valve.

(2) In gas fired heaters, namely heater treaters, bath heaters and indirect heaters, the manager of the mine shall provide burner management system in case of new fired heaters which shall shut off gas supply to main and pilot burners in the event of pilot flame out and necessary provision of audible alarm on pilot flame out.

(3) For the existing gas fired heaters, there shall be regular monitoring of hydrocarbon gas and record maintained by a competent person authorised in this behalf.

70. Generator area.- Wherever generator set is used in a mine, the owner, agent and manager of a mine shall ensure that the same is maintained and operated in accordance with the Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010 and the noise and emission levels in the nearby area are maintained within the limits specified under the Environment (Protection) Rules, 1986.

71. Gas compressor shed or house.- (1) The gas compressors shed or house shall be located at a safe distance from heaters in accordance with the Oil Industry Safety Directorate Standard, that is, OISD-STD-118 or its revised version and shall have roofing and open from sides to avoid accumulation of heavier vapour or gas on the floor of compressor house.

(2) The compressor shed or house shall be located near the battery limits to facilitate ease in maintenance and operation.

(3) The compressors in the compressor shed or house shall be fitted with-

(a) pressure relief valves on inlet and all stages to prevent pressure build up above the pre-determined set point;

(b) high discharge temperature shut down mechanism and high cooling water temperature switch fitted on cooling water return line to shut the compressor in the event of a fault;

(c) high inlet, inter stage and discharge pressures shut down mechanisms;

(d) low lube oil pressure shut down mechanism;

(e) low cooling water flow switch fitted to the cooling water return line to shut the compressor in the event of fault; and

(f) a remote isolation switch, wherever applicable, for emergency shutdown with manual reset at control panel.

(4) The safety devices under sub-regulation (3) shall be inter-coupled with automatically operated hooter or audio alarm for indication to the operator.

(5) The manager of every mine shall install adequate number of hydrocarbon gas detectors in gas compressor shed or house inter-coupled with audio alarm system which triggers at twenty per cent of lower explosive limit.

72. General safety for production facility and installation.- The manager of every mine shall -

(a) provide wind sock in the production facility or installations;

(b) provide facility for washing eyes and display material safety data sheets in the chemical handling shed;

(c) provide an emergency vehicle in all the time in every production facility or installation;

(d) ensure that pipelines are painted as per colour code indicated in the standard, that is, IS 2379 of the Bureau of Indian Standards or its revised version and the said colour code are displayed in the installation;

(e) ensure that display boards are posted in strategic locations for prohibitory messages; and

(f) ensure that all relevant documents pertaining to new production facility regarding construction and material alterations are maintained and kept available at facility.

73. Precautions during acidising operations.- (1) The manager of a mine shall ensure that-

(a) acidising operations at a well is carried out under the direct personal supervision of an official authorised for the purpose;

(b) prior to the acidising operation, all pressure lines and associated equipment are tested to a pressure ten per cent higher than the expected working pressure; and

(c) a non-return valve in the treating line as close to the wellhead as practicable is installed.

(2) The official shall ensure that -

(a) no person other than those required for acidising operation remains in the vicinity of the well; and

(b) material safety datasheet is displayed at the site of operation and the requirements of material safety data sheet and personal protective equipment and other protective facilities are provided.

74. Precautions during fracturing operations.- (1) Fracturing operations at a well shall be carried out under the direct personal supervision of an official authorised for the purpose.

(2) Prior to the fracturing operations, discharge pipeline up to the last valve on the wellhead shall be tested to a pressure ten per cent higher than the expected fracturing pressure.

(3) A non-return valve shall be installed in each discharge line as close to the wellhead as practicable.

(4) All discharge and bleed-off lines shall be securely anchored and the bleed off lines shall discharge into open tanks with proper precautions.

(5) The official shall ensure that in the vicinity of the well -

(a) no person other than those required for fracturing operation remains;

(b) no naked light or other source of ignition is permitted;

(c) all electrical equipment is de-energised; and

(d) adequate fire-fighting equipment is made available for immediate use.

(6) The pumping units shall be located cross wind at safe distance from the wellhead.

(7) All high pressure pipes shall be anchored and secured.

75. Precautions during loading and unloading of petroleum tankers.- (1) A competent person authorised for the purpose shall supervise and check every tanker for its fitness and safe condition, and loading and unloading of the tanker.

(2) The loading and unloading of tankers carrying petroleum shall not be carried out beyond day light hours or under conditions of lightning, thunder, high winds and heavy rain, except with the permission of the manager of the mine based on job safety analysis and subject to observance of the control measures and other conditions as he may specify.

(3) A record of every permission referred to in sub-regulation (2) along with sufficient justification shall be maintained by the manager of the mine or other competent person authorised for the purpose.

(4) All pipe-lines, fittings and delivery hoses or metal pipes, metallic loading arms, swivel joints, tanks, chassis of tankers in the loading and unloading area shall be electrically continuous and be efficiently earthed.

(5) No tanker shall be loaded or unloaded until its engine has been stopped and battery isolated from electrical circuit and the engine shall not be restarted and the battery shall not be connected to the electrical circuit until all tanks, and valves have been securely closed.

(6) No smoking or open flame shall be permitted within thirty metre of the loading point and within the protected area of the loading terminal.

(7) The owner, agent or manager of a mine shall make adequate arrangement for ventilation in the loading and unloading area to prevent accumulation of flammable vapour near ground level due to low ambient temperature.

(8) Adequate fire-fighting equipment shall be kept readily available during loading and unloading of tankers for immediate use.

(9) There shall be provision for spill containment.

76. Effluent Treatment Plant for water produced from wells.- (1) The effluent treatment plant for water produced from wells shall be designed in such a manner that oil content in each discharge stream meets the stipulation as fixed by the Government of India in the Ministry of Environment, Forest and Climate Change.

(2) The discharge point for water produced from the wells shall be placed in such a manner that such discharges shall not cause harm to the environment.

77. Well servicing operations.- The manager of every mine shall-

(a) prepare and implement a well servicing plan or work-over plan for each well to be serviced, detailing all activities to be done during the operations and a copy of the plan shall be kept at well site;

(b) ensure that pre-work-over conference to examine and ensure safe operations and other related activities are held before commencement of well servicing operation,.

(c) ensure that the casing is hermetically test at a pressure at least ten percent higher than the formation pressure is conducted prior to perforation and before lowering completion assembly;

(d) ensure that well servicing operation is done under the direct supervision of a competent person authorised for the purpose.

(e) ensure that every person keeps clear of the wire line between the drum and floor block;

(f) ensure that every person remains at a safe distance from the bailing line during swabbing and scraping operations;

(g) ensure that a master gate valve and tubing hanger are pre-assembled and kept readily available at the well for immediate use in case the well kicks during pulling out or running in tubings;

(h) ensure that no well servicing operation is carried out at any livewell unless proper blowout preventer assembly is securely installed and maintained;

(i) ensure pressure and function testing of the blowout preventer assembly before commencement of well servicing operation;

(j) ensure that no tubing is pulled out of any well unless the well is properly killed.

78. Artificial lifting of oil.- (1) The owner, agent or manager of a mine shall-

(a) provide a properly constructed working platform at the well where artificial lift equipment is to be used unless a submersible pump is used for the purpose;

(b) ensure that repairs, lubrication or greasing are not performed unless the pumping unit is stopped; and

(c) ensure that all surface control valves for gas lift, intermittent gas lift or free plunger lift systems are clearly marked for ready identification;

(2) The manager of every mine shall ensure that job safety analysis is conducted before carrying out artificial, secondary or enhanced oil recovery operation and suitable technical and other control measures thereof formulated.

(3) The manager of every mine shall frame and circulate to all persons engaged therein a code of practice.

79. Temporary closure of producing well.- The manager of every mine shall ensure that temporarily closed wells for a period exceeding thirty days are monitored periodically and wherever the wells are not monitored, the following precautions shall be taken, namely:

(a) it shall be filled with mud or water or oil or salt solution or any special chemical so that the hydrostatic pressure of the fluid column over-balances the formation pressure to prevent leakage of petroleum at the wellhead;

(b) the control valves of the Christmas tree shall be completely closed and control wheels be removed;

(c) the Christmas tree shall be examined for leakage at least once in thirty days by a competent person authorised for the purpose and in case any leakage is detected during such examination, the competent person shall take immediate steps to stop it;

(d) a report of every such examination shall be recorded and maintained by the person who made the examination;

(e) the well head shall be preferably covered with suitably designed portable protective cover as a security measure.

80. Plugging requirements for abandonment of wells.- (1) When it is intended to abandon a well, the manager of a mine shall ensure that-

(a) all permeable formations are isolated with cement plug;

(b) a cement plug of minimum length of fifty metre is placed at the bottom of the well or proper bridge plug;

(c) a cement plug of a minimum length of fifty metre is placed across the shoes of the surface casing or bridge plug;

(d) the cellar or pit around the well are filled up and the land shall be restored to the original level; and

(e) a bridge-plug above the top of perforations capped with a thirty metre cement plug is placed in case of cased well.

(2) Every abandoned well shall be clearly identified at site and on the plan.

CHAPTER –VII

TRANSPORT BY PIPELINE

81. Application.- The regulations in this Chapter shall apply to transportation of petroleum by means of pipelines within any mine referred to in regulation 12.

82. Procedure for laying of pipeline.- (1) No liquid and natural gas transmission pipeline and distribution of piping system shall be laid except in accordance with the Oil Industry Safety Directorate Standards, that is, OISD- STD-141 and OISD-STD-226 or their revised versions.

(2) While laying a new pipeline, or making any alteration in the existing pipeline in oilfield within any mine, the owner, agent or manager of a mine shall:-

(a) keep at the mine a surface plan of the area where the pipeline is proposed to be laid showing the extent of land over which right of use has been established and route of the pipeline clearly indicating the districts and states through which the pipeline would pass;

(b) forward to the concerned railway administration an intimation accompanying a plan where it is proposed to lay pipeline within forty-five metre of any railway in respect of which this regulation is applicable by reason of any general or special order of the Central Government; and

(c) forward to such authority as the Central Government may by a general or special order specify, an intimation accompanying a plan where it is proposed to lay pipeline within forty-five metre of any public works in respect of which this regulation is applicable by reason of any general or special order of the Central Government or of any public road or building or of other permanent structure not belonging to the owner of the mine.

(3) When any pipeline has been commissioned, the owner, agent or manager of the mine shall forthwith submit self-certification in support of complying with the requirements and communicate the actual date of commissioning to the Regional Inspector and a copy thereof be sent to the Chief Inspector of Mines and the District Magistrate.

(4) The details of all new pipeline laid and any significant alteration in the existing pipelines made during the year in mine shall be maintained and a copy of it shall be forwarded to the Regional Inspector along with annual return.

83. Design of pipeline and fittings.- (1) The owner, agent or manager of a mine shall ensure that-

(a) the pipeline is designed in a manner that ensures adequate public safety under all conditions likely to be encountered during installation, testing, commissioning and operating conditions;

(b) all materials and equipment are selected to ensure safety and suitability for the condition of use;

(c) all pipes, valves, flanges and other fitting conform to the Oil Industry Safety Directorate Standards, that is, OISD-STD-141 and OISD-STD-226 or their revised versions;

(d) all underground pipes and their components are protected against corrosion using suitable external anti-corrosion coating or painting and cathodic protection and all above ground pipes and their components are protected against corrosion by providing suitable anti-corrosion coating;

(e) (i) the sectionalising valves are installed where required for operation and maintenance and control of emergencies;

(ii) the factors such as topography of the location, ease of operation and maintenance including requirements for section line fill are considered in deciding the location of the valves:

Provided that the distance between two consecutive sectionalising valves shall not be more than fifty kilometre in any case.

(iii) the sectionalisation valve is provided based on risk assessment survey to limit the hazard and damage from accidental discharge from pipeline and to facilitate repair and maintenance of pipeline;

(f) the pressure safety valves or other devices of sufficient capacity and sensitivity is installed to ensure the normal operating pressure in the pipeline network;

(2) The owner, agent and manager of a mine shall ensure that adequate precaution is taken to protect the pipeline from washout, erosion, land slide, excessive load, impact or other likely hazards, which may cause serious movement or damage to the pipeline.

(3) Where pipeline is laid across the railway or public road, casing pipe shall be extended as specified by the concerned authorities.

84. Construction, laying and maintenance of pipeline.- (1) The pipeline shall be buried with minimum cover as specified in the Oil Industry Safety Directorate Standard, that is, OISD-STD-141 or its revised version.

(2) The laying of pipeline shall be planned along a pre-identified surveyed route within right of way or right of use.

(3) No pipeline shall be laid unless the land is under the sole control of the owner or right of use has been obtained.

(4) The manager of a mine shall ensure that-

(a) all welding and weld inspection are done in accordance with Oil Industry Safety Directorate Standard, OISD-STD-141 or its revised version.

(b) back filling are carried out after the pipeline has been laid in the trench prior to commissioning of the pipeline.

(c) pipeline markers to indicate presence of pipeline and chainage are provided all along the pipeline route.

(d) the markers are provided on each side of national highways or state highways, major district roads, railway crossings, turning points and water body crossings and at other crossings where third party activity is expected and at entrance to stations one marker shall be provided.

(e) markers of the following types are installed along the pipeline in right of way or right of use, namely:-

(i) kilometre markers;

(ii) right of way or right of use boundary pillars on either side at a maximum of two hundred and fifty metre interval; and

(f) warning signboards and markers at crossings display caution words “High Pressure Pipeline”, “name of the operating company” and “emergency telephone contact numbers.” in regional or Hindi and English languages.

(5) The owner, agent or manager of a mine shall-

(a) obtain permission from the competent authority while crossing structures such as roads, railways or other public works;

(b) ensure that the minimum hydraulic test pressure at any point along with the pipeline is maintained 1.25 times the internal design pressure; and

(c) ensure that the test pressure is maintained for a minimum period of twenty-four hours except where specifically mentioned.

85. Preparatory works before commissioning of pipelines.- The owner, agent and manager of a mine shall, before the commencement of the commissioning activities of pipelines, ensure that-

(a) commissioning procedure is in place;

(b) pressure testing is completed for entire pipeline and associated station piping;

(c) pressure leak check of the above ground piping and flanged joints is completed;

(d) pipeline has been cleaned and debris has been removed;

(e) mainline sectionalising valves are installed as per requirement;

(f) all Golden joints are inspected and accepted;

(g) geometric survey of pipeline section is carried out, if applicable; and

(h) trained and experienced officials in adequate numbers are appointed for supervision of commissioning work of pipelines.

86. Re-lay, renew or repair of pipeline.- Where the Chief Inspector of Mines is of the opinion that it is in the interest of public safety so to do, he may, by an order in writing, require the owner, agent or manager of a mine to relay, renew or repair such pipeline in accordance with requirements as may be specified in such order.

87. Maintenance of Right of Way or Right of Use and inspection of crossings.- (1) The owner, agent or manager of a mine shall maintain a periodic pipeline patrol program to observe surface conditions on and adjacent to the pipeline right of way, indication of leaks, construction activity other than that performed by the company, and any other factors affecting the safety and operation of the pipeline.

(2) The owner, agent or manager of a mine shall give special attention to activities and features such as road, building, erosion, excavation, encroachment and vegetation growth along the pipeline system.

(3) Encroachment, pilferage, theft and other activities of miscreants shall immediately be brought to the notice of district administration and other concerned authorities.

(4) The owner, agent or manager of a mine shall maintain right of way or right of use and access to various stations including valve location to ensure reasonable access to maintenance crews and ensuring visibility or availability of pipeline markers.

88. Patrolling of Right of Way or Right of Use.- (1) The owner, agent or manager of a mine shall ensure that ground patrolling of right of way is carried out at least once in a month to observe surface conditions, leakage, any construction activity, encroachments, washouts and any other factors affecting the safety and operation of pipeline.

(2) The manager of the mine shall ensure inspection of the roads and railway crossings at least once in three months by an official authorised for the purpose.

(3) The manager of the mine shall ensure inspection of water body crossings at least twice a year, prior to and after monsoon or flash flood for exposure by an official authorised for the purpose.

(4) The official authorised by the manager shall-

(a) inspect the rail, road bridge, suspended crossings once in three months to check support and structure and anti-corrosion coating where pipe exits or enters ground;

(b) Inspect right of way or right of use of the mine at least once in a year for the entire length of the pipeline preferably to be done after monsoon;

(c) make the villagers and public along the right of way or right of use adequately aware of the possible consequence of leaks and this shall be included as a part of regular audit; and

(d) maintain regular liaison with the police stations, local panchayats and district authorities along the right of way and right of use about the possible consequences of leakage and pilferage.

89. Maintenance Procedure or Manual of pipeline system.- (1) The manager of every mine shall formulate and implement detailed operation and maintenance procedure or manual for control system and safety interlocks for entire pipeline system of a mine considering the recommendations made of the original equipment manufacturer and based on the local conditions.

(2) The manual or procedure shall include preventive maintenance schedule with periodicity, that is, daily, weekly, monthly, half yearly and yearly and activities to be carried out during each schedule of maintenance.

(3) The maintenance schedule shall include activities like detecting, isolating and repairing a leak in the pipe line in a safe and efficient manner in accordance with the code of practice developed and approved by the competent authority within the organisation.

(4) The manager of a mine shall develop and maintain a standard operating procedure of pipeline.

(5) The manager of a mine shall ensure that the standard operating procedures for integrity assessment of piggable and non-piggable pipelines are followed.

(6) The manager of a mine shall ensure that the job safety analysis is carried out for any non-repetitive nature of job.

(7) The manager of a mine shall ensure that work permit system for repair and maintenance work is complied with..

(8) The manager of a mine shall modify from time to time the plan and procedure of operating practice as the situation warrants in operating conditions through the management of change document, which shall be serially numbered and maintained at the mine with copies at the locations.

(9) The management of change shall include the justification requiring the change of operating conditions and the benefit resulting thereof.

(10) The management of change shall be closed with amending the "as built" drawing and the change made in the standard operating procedure along with the completion of the change.

90. Pipeline replacement and revalidation policy.- (1) Every mine shall have a documented policy for repairing, replacement, re-evaluation of safe operating pressure and re-validation of residual life of all pipelines based on recommended practice developed by the owner.

(2) The recommended practice may be based on the Oil Industry Safety Directorate standards, guidelines, safe operating procedures and applicable international standards.

91. Abandonment or discontinuation of pipeline.- (1) A pipeline system that is no longer required for transportation shall be taken out of service with all hazardous fluid removed from the system.

(2) In case the owner, agent or manager of the mine decides to abandon full or part of the pipeline system, he shall ensure that-

(a) the pipeline section and facility are disconnected with positive isolation from all sources of supply prior to abandonment; and

(b) the pipeline system and facility to be abandoned are purged with nitrogen gas, inert materials or inhibited water and after purging, the ends of the pipeline are positively isolated.

(3) In case the owner, agent or manager of the mine intends to revive an abandoned or discontinued pipeline, he shall develop and sign the integrity assurance plan before such revival.

92. Documentation.- The manager of a every mine shall maintain record of design, construction, map, maintenance, and pipeline health monitoring and operations as specified in this Chapter in hard copies or in electronic form at the mine.

93. Emergency procedure for pipelines.– (1) The Manager of every mine in which any pipeline is laid for transport of petroleum shall submit to the Regional Inspector within sixty days of the coming into force of these regulations or in the case of a new pipeline, within thirty days of the installation of pipeline, comprehensive emergency procedure specifying the action to be taken in the event of fire, uncontrolled escape of petroleum or natural gas from the pipeline, bursting or damage to the pipeline.

(2) The manager of every mine shall maintain the copies of the emergency procedure specific to the pipeline and the station at each control room along with plans and sections and the following records, namely:-

(a) operational data;

(b) pipeline patrolling records;

(c) leak or tapping records;

(d) routine or unusual inspection records; and

(e) pipeline repair records.

CHAPTER-VIII

PROTECTION AGAINST GAS AND FIRE

94. Storage and use of flammable material.- (1) No flammable material shall be stored within thirty metre of any oil well except for fuel in the tanks of the operation equipment:

Provided that, where special conditions exist, the manager of the mine may permit such storage within the aforesaid limit in writing based on risk assessment made and subject to observance of the control measures under the charge of an official as he may specify therein.

(2) The official specified in sub-regulation(1) shall-

(a) maintain a record of the measures taken by him in respect of the permission referred therein;

(b) use safety cans for handling and use of flammable liquid;

(c) ensure that drainage from any fuel storage is in a direction away from the well and equipment;

(3) Any flammable liquid having a flash point of less than sixty-five degree celsius shall not be used for cleaning purpose except with the prior permission in writing of the manager, deputy manager or an installation manager of the mine.

95. Precaution against noxious and flammable gas.- (1) No person shall enter or be permitted to enter any cellar, sump, pit or any confined space or zone "0" hazardous area or the area where a flare has accidentally extinguished unless it has been examined by a competent person and found to be gas free.

(2) Where any examination made under sub-regulation (1) shows the concentration of flammable gas in excess of the limit specified for the purpose under the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010, the supply of electric energy shall be cut off immediately from all cables and apparatus lying within thirty metre of the installation and all sources of ignition shall be removed from the said area and normal work shall not be resumed unless the area is made gas-free.

(3) The manager of the mine shall provide fixed gas detection system for hydrocarbons and hydrogen sulphide gas, if present, at suitable locations in gas collection station and gas compression plant where there is likelihood of hazard due to gas leakage to continuously monitor the presence of flammable or toxic and to alert persons and initiate action manually or automatically to minimise the probability of exposure of persons and consequences of fire.

(4) For the production installation other than those specified under sub-regulation (3) the manager of the mine shall take decision for provision of fixed gas detection system based on assessment of risk due to gas leakage and he shall maintain a record of every such decision along with sufficient justification.

(5) The manager of the mine shall provide portable gas detectors for hydrocarbons and hydrogen sulphide gas, if present, at the installation to ascertain the presence of gases before issuing work permit and for use in areas not covered by fixed gas detection system.

(6) On detection of hydrogen sulphide gas, every persons on and near the well head, drill floor, shale shaker area, mud pump and tank shall put on suitable escape breathing apparatus of standards, that is, IS 10245 Part 1 or IS 10245 Part 2 of the Bureau of Indian Standards.

(7) Every person other than those required for control measures shall be withdrawn to a safe area.

(8) No normal operation shall be resumed unless checks with hydrogen sulphide gas detectors is made and the area has been examined and declared gas free by the installation manager.

(9) The installation manager shall record and maintain at the installation, the particulars of every occurrence as to where and when the flammable gas was found, when it was removed, and the percentage thereof.

96. Safe distance.- (1) No person shall smoke or be permitted to smoke within thirty metre of any well, separator, petroleum storage tank or other source of flammable gas.

(2) The manager shall ensure that "no smoking" area in every mine is clearly demarcated.

(3) No naked light or open flame or spark shall be permitted within thirty metre of any well or any place where petroleum is stored except with the permission of the manager as granted under sub-regulation (1) of regulation 94.

(4) No flame type treater, crude oil treater or other flame-type equipment shall be placed or located within thirty metre of any well, separator, petroleum storage tank, except where such flame type equipment is fitted with a flame arrestor.

(5) The manager of every mine shall maintain separation distance between blocks and production facilities in accordance with the Oil Industries Safety Directorates Standard, that is, OISD-STD-118 or its revised version or any other standard specified by the Chief Inspector of Mines by a general or special order based on quantitative risk assessment.

97. Precautions against fire.- (1) The manager of the mine shall ensure that dead leaves or dry vegetation is not allowed to accumulate or remain, and any combustible material other than that required for use within a period of twenty-four hours is not stored, within a distance of fifteen metre from any oil well or fuel tank storage area.

(2) Where an internal combustion engine is located within thirty metre of any well, separator or storage tank -

(a) its exhaust pipe shall be insulated or sufficiently cooled and the end of the exhaust pipe shall be directed away from the well head; and

(b) its exhaust manifold shall be shielded to prevent its contact with liquid or gas which might otherwise fall on it.

(3) The manager of the mine shall-

(a) provide with an air intake shut-off valve with readily accessible remote control arrangement where a diesel engine is located within thirty metre of a well;

(b) provide with water bath treater, heater treater and flare line, a suitable device for remote ignition of burners; and

(c) ensure to effectively earth all plant, machinery and derricks for dissipation of any static electric charge.

98. Precautions during welding, cutting or grinding .- (1) No person other than a competent welder duly authorised by the manager shall carry out welding or cutting work requiring use of flame or electric welding apparatus.

(2) No welder shall undertake any welding or cutting work in any classified hazardous area unless a written permit, called "hot work permit" in the form and method specified by the Chief Inspector of Mines is issued to the supervisor of the welder by the manager, deputy manager or installation manager and copies of every such hot work permit is maintained and kept available at the installation.

(3) The person who has issued the permit shall explain the content of the hot work permit to the concerned welder and take his signature thereon to that effect before the commencement of hot work.

(4) No work such as welding or cutting or grinding shall be undertaken in hazardous area unless the area is duly examined and found gas free by a competent person authorised for the purpose and a report of every such examination shall be recorded and maintained.

(5) During any work of welding, cutting or grinding, the welder shall ensure that-

(a) all flammable material, oil grease, oil-soaked earth are removed from the area;

(b) no match, lighter, or smoking apparatus or any other source capable of igniting flammable gas is present at or around his place of work:

Provided that nothing in this clause shall be deemed to prohibit the use of any suitable apparatus for the purpose of lighting or re-lighting the welding torch;

(c) adequate precaution is taken to prevent fire being started by spark, slag or hot metal;

(d) adequate number of suitable type of fire extinguishers and other fire fighting arrangements are made and kept readily available for immediate use;

(e) when operation is carried out in confined space, adequate ventilation by mechanical means is constantly provided to prevent accumulation of flammable gas; and

(f) when operation is carried out on pipeline which contain flammable fluid, the pipe be disconnected or blinded, the line be positively isolated, drained or purged with inert gas or water before hot work is undertaken and adequate precaution taken against build-up of pressure in the line while hot work is in progress:

Provided that nothing in this clause shall be deemed to prohibit the use of hot-tapping machine on a running pipeline with prior written permission of the manager, deputy manager or an installation manager.

(6) The installation manager shall ensure that where hot work permit is issued, welding and cutting operations are carried out in accordance with the said permits.

99. Permit to work system for electrical installations.- The work on major electrical installations shall be carried out under "Permit to Work System" in accordance with the standard, that is, IS 5216 Part 1 of the Bureau of Indian Standards or its revised version.

100. Fire-fighting equipment.- (1) The manager of every mine shall ensure that fire-fighting facility provided under these regulations conforms to the Oil Industry Safety Directorate Standards, that is, OISD-STD-116, OISD-STD-117 and OISD-STD-189 or their revised versions.

(2) The owner, agent or manager of every mine shall provide the following fire fighting arrangements and equipment at every drilling and work-over rig, namely:-

(a) adequate water storage, pumping facility, hose and nozzle; and

(b) adequate number of appropriate portable fire extinguishers at the derrick floor, main engine area, electrical machinery, mud tank area, diesel storage area and other vulnerable places.

(3) The owner, agent or manager of every mine shall provide fire fighting arrangement and equipment at every production facility in accordance with the standards specified in sub-regulation (1).

(4) The owner, agent or manager of every mine shall provide a water ring main with adequate storage of water at site, pump feeding hydrants and water monitors at every petroleum storage tank.

(5) The owner, agent or manager of every mine shall-

(a) provide fixed-roof storage tanks with fixed foam connections;

(b) ensure that all installations, including well head area with Christmas tree, are easily accessible to facilitate external fire fighting assistance without any hindrance; and

(c) ensure that adequate number of fire tenders and equipment are kept readily available at convenient locations for use in emergency.

(6) A fire officer shall once in every three months examine every fire extinguisher and discharge and refill it as often as may be necessary to ensure that it is in proper working order.

(7) The fire officer shall record and maintain a report of every such examination or refilling under this regulation.

101. Use of fire-fighting equipment.- The owner, agent and manager of a mine shall ensure that every person employed at any drilling rig, work-over rig, production facility, well head installation, storage tank or on such other work where fire-fighting equipment may be required to be used, are trained in use of such equipment and regular fire drills are held for the purpose.

102. Emergency plan.- (1) The owner, agent and manager of every mine shall frame an emergency plan for implementation in the event of an emergency and submit a copy thereof to the Regional Inspector and District Magistrate.

(2) The emergency plan referred to in sub-regulation (1) shall be prepared after carrying out risk assessment of the activities in the mines with respect to -

(a) fire;

(b) blowout, explosion, ignition, influx of inflammable or noxious gas;

(c) bursting of equipment, pipeline or uncontrolled escape of petroleum;

(d) failure of structures;

(e) chemical spillage;

(f) natural calamities;

(g) medical evacuation; and

(h) any other emergencies.

(3) The emergency plan shall contain-

(a) the action to be taken in the event of any major accident including when and how the said action is to be taken;

(b) organisation plan clearly stating the line of command and the responsibilities of each person involved in case of emergency situation;

(c) equipment plan such as the make, type, capacity, location, field of operation, and operating procedure in respect of every equipment; and

(d) strategy plan specifying the number of steps to be taken in any particular case of emergency.

(4) The emergency plan shall clearly stipulate –

(a) alarm and communication system;

(b) system of notifying the authorities;

(c) the duties and responsibilities of each key personnel including measures to be adopted to avert or minimise the consequences of the emergency;

(d) when and how the equipment shall be used and when and how the action shall be carried out;

(e) help or information that would be available from associated and external agencies including Government agencies;

(f) guidelines for terminating the action; and

(g) plan for training of personnel and for mock-drills.

(5) The manager shall ensure that-

(a) all equipment on the installation provided for compliance with the emergency plan is maintained in a reliable state under efficient working order and in good condition without repair; and

(b) there is a written scheme prepared for the systematic examination of all emergency equipment by an independent competent person.

(6) The manager shall-

(a) specify the nature and frequency of examination that may be carried out, before first use of the equipment on the installation and also after any modification or repair; and

(b) review and modify the emergency plan periodically and in particular before any alteration is carried out and submit a copy thereof to the Regional Inspector.

CHAPTER- IX

MACHINERY, PLANT AND EQUIPMENT

103. Use of certain machinery and equipment.- The owner, agent and manager of every mine shall ensure that-

(a) the appliance, equipment, machinery or other material that are used or may be used in the mine are of sound construction and of a type and specification conforming to an Indian or international standard identified for the purpose:

Provided that such appliance, equipment, machinery or other material shall not be used in the mine unless the same has been tested and passed the test as per the standard and the manager has kept a record of the type, details of specification, reference of the particular standard, test criteria in accordance with the standard and status of testing, place of testing, copies of test report and any other relevant details; and

(b) the code of practice and standard operating procedure for appliance, equipment, machinery or other material are complied with.

104. Use of mobile cranes.- (1) The mobile crane shall not be used in mines for lifting loads beyond its rated capacity.

(2) The mobile cranes used in mines shall be provided with-

(a) a safe load indicator to give warning when overload occurs;

(b) a load radius indicator to indicate appropriate safe working load and radius which is clearly visible to the operator of the crane;

(c) motion limit device to limit hoisting, swinging and boom extending; and

(d) effective audio visual alarm which shall get activated automatically whenever the crane is reversed.

(3) The operator of the crane shall have a clear view of the load being handled and where it is not practicable to do so, suitable signaling system shall be provided for giving signals for safe operations.

(4) The slings, as per the standard, that is, IS 2762 of the Bureau of Indian Standards or its revised version shall only be used with the mobile crane.

(5) The owner, agent and manager of a mine shall permit only competent and trained operator of the crane to operate the mobile crane in the mines.

(6) The mobile crane shall be examined by a competent person at such interval and in accordance with such procedure as laid down by the manager or deputy manager and the result of such inspection shall be recorded by the person making the inspection.

105. Lifting appliance and gears.- (1) The manager shall ensure that lifting appliance and gear system intended to be used in the mine is properly maintained and operated for safety of the person.

(2) The competent person authorised to operate the lifting appliance and gear in a mine shall ensure that -

(a) the design, construction and installation of lifting appliance, gear and rope are in accordance with the standard specified by the Chief Inspector of Mines by a general or special order in writing; and

(b) the selection of appliance and gear are suitable for the purpose for which they are intended for use and shall also be load tested for its rated capacity.

(3) The owner, agent and manager of a mine shall ensure that job related training has been imparted to any person before he is engaged to operate the lifting appliances or gears in a mine.

106. Classification of hazardous area.- (1) The hazardous area in an oil mine shall be classified into different zones as specified in the Schedule.

(2) The manager shall ensure that –

(a) a plan referred to in clause (b) of sub-regulation (1) of regulation 9 and also the different classes of hazardous zones of the mine, as classified under sub-regulation (1), shown in distinct colour wash, is maintained;

(b) different classes of zones are distinctly marked at actual places in the field by suitable notice boards or other effective means; and

(c) every person employed in the mine is made aware of the dangers associated and precautions to be taken in case of different classified hazardous zones.

107. Use of electrical equipment in hazardous area.- (1) No person shall use electrical appliance, equipment or machinery including lighting apparatus in zone "0" hazardous area.

(2) The owner, agent and manager of every mine shall ensure that the electrical appliance, equipment, machinery or other material that are used or may be used in zone "1" or zone "2" hazardous area of the mine is of a type and specification conforming to an Indian standard or an international standard adopted by the Bureau of Indian Standards through harmonisation, specified by the Chief Inspector of Mines by a general order notified in the Official Gazette:

Provided that where no such standard exists, the Chief Inspector of Mines on merit, by a general order notified in the Official Gazette may accept an international standard:

Provided further that the Chief Inspector of Mines on merit, by a general order notified in the Official Gazette may accept any other international standard equivalent to the harmonised standard:

Provided also that such appliance, equipment, machinery or other material shall not be used in zone "1" and zone "2" hazardous area of the mine unless the same has been tested and passed the test as per the applicable standard and the manager has kept a record of the type, details of specification, reference of the particular standard, test criteria as per the standards and status of testing, place of testing, copies of test reports and any other relevant details.

108. General provisions about construction and maintenance of machinery.- The owner, agent and manager of a mine shall ensure that all parts and working gear whether fixed or moveable including the anchoring and apparatus used as or forming part of the equipment of a mine and all foundations in or to which any such appliance is anchored or fixed are of good construction, suitable material, adequate strength and free from visible defect and shall be properly maintained.

109. Maintenance system.- (1) The owner, agent and manager of a mine shall ensure that all machinery and equipment in the mine are maintained in an efficient working order and kept in good repair.

(2) The manager shall ensure that a procedure is established for the maintenance of machinery and equipment.

(3) The procedure referred to in sub-regulation (2) shall -

(a) specify the nature and frequency of examination; and

(b) provide for an examination to be carried out, where appropriate, before the machinery and equipment is first used on the installation and also after major modification or repair.

(4) The examination referred to in sub-regulation (3) shall mean critical scrutiny of machinery and equipment, in or out of service, using suitable techniques, including testing-

(a) to assess its suitability for the purpose for which these are to be used;

(b) to assess its actual condition; and

(c) to determine any remedial measures.

(5) The procedure established under this regulation shall include a plan for implementation of the remedial measures identified.

(6) All measuring gadgets, meters and relief valves shall be calibrated at intervals specified by the manufacturers.

110. Internal combustion engines.- (1) The manager shall ensure that internal combustion engine of over thirty horse power is provided with means other than manual, for starting them:

Provided that nothing in this sub-regulation shall be deemed to prohibit manual starting in an emergency.

(2) Where compressed air is used for starting the engine, a non-return valve shall be provided in the compressed airline as close to the engine as practicable.

(3) The exhaust system of the engine shall be provided with suitable device to prevent discharge of open flame and sparks from the exhaust.

(4) Adequate precaution shall be taken to prevent accumulation of flammable vapour near the internal combustion engine.

(5) The electrical accessories of an internal combustion engine, if installed in hazardous area shall comply with the provisions of the regulation 107.

111. Apparatus under pressure.- (1) The manager shall ensure that the Oil Industry Safety Directorate Standard, that is, OISD–STD-128 or its revised version is followed for operation and maintenance of apparatus under pressure.

(2) All apparatus used as or forming part of the equipment of a mine which contains or produces air, gas, petroleum or steam at a pressure greater than atmospheric pressure shall be so constructed, installed and maintained as to obviate any risk of fire, bursting, explosion or collapse or the production of noxious gas.

(3) Every air receiver or container or separator used for storage of petroleum or gas or steam under pressure shall be fitted with a safety valve and pressure measuring device which shows pressure in excess of the atmospheric pressure.

(4) A competent person shall, before an air receiver or a container containing petroleum or gas or steam is cased in or put in commission-

(a) subject it to a hydraulic test at a pressure at least one and a half times of the maximum permissible working pressure and similar test shall be made after every renewal or repair and in any case at intervals of not more than five years or at such shorter intervals as may be required by the Regional Inspector; and

(b) record the result of every such test which shall be countersigned and dated by the manager, deputy manager or installation manager.

(5) The manager shall ensure that the discharge line of an apparatus under pressure is provided with a pressure relieving safety device.

(6) There shall be no valve or fitting between the pressure apparatus and its pressure relieving safety device or between the device and point of discharge, as would render the device ineffective.

(7) The pressure relieving safety device shall be set to open at a pressure not exceeding ten per cent above the maximum allowable working pressure.

(8) The pressure relieving safety device shall be tested and calibrated at least once in a year and record of such test shall be maintained at the mine.

(9) Every incoming gas line connected to any compressor shall be provided with a shut-off valve at a distance outside the compressor shed.

(10) No repair shall be undertaken in respect of any gas compressor and pipelines and fittings connected to it unless the control valve of the inlet and discharge lines are closed and securely locked.

112. Precautions regarding moving parts of machinery.- (1) In every mine, where winch is used, it shall be provided and used with a stopper, pawl or other reliable holder.

(2) Every flywheel and every other dangerous exposed part of any machinery used as or forming part of the equipment shall be adequately fenced by suitable guards of substantial construction to prevent

danger and such guards shall be kept in position while the parts of the machinery are in motion or in use but they may be removed for carrying out any examination, adjustment or repair if adequate precaution is taken.

(3) No person shall be allowed to repair, adjust, clean or lubricate machinery in motion where there is risk of injury.

(4) No person shall be allowed to shift or adjust a driving belt, chain or rope while the machinery is in motion unless a proper mechanical appliance is provided for the purpose.

(5) No person in close proximity to moving machinery shall wear or be permitted to wear loose outer clothing.

(6) No unauthorised person shall be permitted to enter in any engine room, including gas turbine, compressor, or other machine area, or in any way interfere with the machinery.

113. Engine rooms and exits.- (1) Every engine, motor, compressor, turbine and pump room, and every room in which highly flammable materials are stored shall be kept clean, and be provided with at least two exits.

(2) Every exit shall be clearly marked, properly maintained and kept free from obstruction.

114. Working and examination of machinery.- (1) No machinery shall be operated by any person, otherwise than by or under the constant supervision of a competent person.

(2) Every person in charge of a machinery, apparatus or appliance shall before commencing work ensure that it is in proper working order and if he observes any defect therein, he shall immediately report the fact to the installation manager or other competent person.

(3) Every person in-charge of an air-receiver shall ensure that no extra weight is added to the safety valves and that the permissible pressure of the air is not exceeded.

(4) A competent person or persons appointed for the purpose shall, once at least in every seven days, make an inspection of all machinery and plant in use, and shall record the result thereof.

(5) The electrical machinery and plant shall be under the charge of competent person holding a valid electrical supervisor's certificate of competency, covering mining installation issued under the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010.

CHAPTER - X

GENERAL SAFETY PROVISION

115. Code of practice.- (1) The manager shall, before introducing any machinery or new operation connected with the mine, frame and enforce code of practice, not being inconsistent with the Act or these regulations, for each such machinery or operation, as the case may be.

(2) The code of practice shall be framed with due regard to the type, size and capacity of the machinery or operation in use and prevailing local conditions and a copy of the same shall be submitted to the Regional Inspector, who may at any time, by an order in writing**,** require such modifications in the code as he may specify therein:

Provided that in a mine where such machinery or operation is already in use, the aforesaid code of practice shall be framed and enforced within ninety days from the date of coming into force of these regulations.

(3) The code of practice, inter-alia, shall provide for–

(a) safe operating procedures for the machinery or operation to which it relates to;

(b) examination and testing of the machinery before first use after installation, re-installation, modification, alteration or repair;

(c) schedule and nature of examination and testing of the machine, including its sub-assemblies, so as to ensure its safe operation; and

(d) the manner in which the record of examination shall be kept.

(4) The owner, agent or manager of every mine shall hand over copies of such code of practice to concerned officials and ensure effective enforcement thereof.

(5) A copy of the code of practice referred to in sub-regulation (1) shall always be kept in the office of the mine.

116. Housekeeping.- (1) The loose materials, which are not required for use, shall not be placed or left so as to dangerously obstruct the workplace and passage-way.

(2) All projecting nails and ends of railings shall be bent or covered with protection to prevent injury.

(3) The scrap, waste and rubbish shall not be allowed to accumulate in work places, access or egress.

(4) Workplace and passage-way that are slippery owing to oil, mud or other causes shall be cleaned up and made safe.

(5) The portable equipment shall be returned after use to its designated storage place.

(6) The equipment, tools and small objects shall not be left lying about where they could cause an accident either by falling or causing person to trip.

117. General lighting.- (1) The manager shall ensure provision of adequate general lighting arrangements during working hours at the following places, namely:-

(a) where the natural lighting is insufficient;

(b) derrick floor;

(c) driller's stand and control panel;

(d) monkey board;

(e) every engine and pump house;

(f) derrick sub-structure near blowout preventer controls;

(g) every place where persons are to work; and

(h) every means of escape, access or egress.

(2) The lighting provided in a mine shall as far as possible be so arranged as to prevent glare or eye strain.

118. Electric lighting.- (1) Every electrical lighting apparatus used in hazardous area of a mine shall be of such type and specifications conforming to an Indian standard or an international standard adopted by the Bureau of Indian Standards through harmonisation, specified by the Chief Inspector of Mines by a general order notified in the Official Gazette:

Provided that where no such standard exists, the Chief Inspector of Mines may on merit, accept an international standard specified by him by a general order notified in the Official Gazette:

Provided further that the Chief Inspector of Mines may accept any other international standard equivalent to the harmonised standard specified by him by a general order notified in the Official Gazette:

Provided also that such apparatus shall not be used in hazardous area of the mine unless the same has been tested and passed the tests as per the applicable standards and the manager has kept a record of the type, details of specification, reference of the particular standard, test criteria in accordance with the standards and status of testing, place of testing, copies of test report and any other relevant details.

(2) The lighting system installed in the mine shall comply with the provisions of the Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010.

119. Standards of lighting.- The owner, agent or manager of every mine shall ensure that the standard of lighting in any specified area or place in a mine is in accordance with the Oil Industry Safety Directorate Recommended Practices, that is, OISD-RP -149 or its revised version.

120. Emergency lighting.- In every mine adequate number of self contained portable hand lamps of the standard specified by the Chief Inspector of Mines, by a general or special order in writing, shall be kept available for immediate use in emergency.

121. Supply and use of protective footwear.-(1) No person shall go into work or be allowed to go into work in a mine unless he wears a protective footwear of a type and specification conforming to an Indian standard or an international standard adopted by the Bureau of Indian Standards through harmonisation, specified by the Chief Inspector of Mines by a general order notified in the Official Gazette:

Provided that where no such standard exists, the Chief Inspector of Mines may on merit specify an international standard, by a general order notified in the Official Gazette:

Provided further that the Chief Inspector of Mines may, on merit, by a general order notified in the Official Gazette, specify any other international standard equivalent to the harmonised standard:

Provided also that such footwear shall not be used in the mine unless the same has been tested and passed the test as per the applicable standard and the manager has kept a record of the type, details of specification, reference of the particular standard, test criteria as per the standard and status of testing, place of testing, copies of test report and any other relevant details.

(2) The owner, agent and manager of a mine shall ensure supply of protective footwear referred to in sub-regulation (1) at interval not exceeding one year or such other intervals as the Chief Inspector of Mines may specify by a general or special order in writing:

Provided that where such foot wear is damaged during its legitimate use, it shall be immediately replaced free of cost.

(3) The owner, agent or manager of a mine shall provide protective footwear free of charge.

122. Supply and use of protective helmet.- (1) No person shall go into, or work, or be allowed to go into work in a drilling rig or work-over rig or rig building or rig dismantling or at such other place of work where there is a hazard from flying or falling objects unless he wears a helmet of a type and specification conforming to an Indian standard or an international standard adopted by the Bureau of Indian Standards through harmonisation, specified by the Chief Inspector of Mines by a general order notified in the Official Gazette:

Provided that where no such standard exists, the Chief Inspector of Mines may on merit specify an international standard by general order notified in the Official Gazette:

Provided further that the Chief Inspector of Mines may on merit specify any other international standard equivalent to the harmonised standard by general order notified in the Official Gazette:

Provided also that such helmets shall not be used in the mine unless the same has been tested and passed the test as per the applicable standards and the manager has kept a record of the type, details of specification, reference of the particular standards, test criteria as per the standards and status of testing, place of testing, copies of test report and any other relevant details.

(2) The owner, agent and manager of a mine shall ensure supply of helmet referred to in sub-regulation (1) at intervals not exceeding three years and shall at all times maintain a sufficient stock of helmets in order to ensure immediate supply as and when need for the same arise:

Provided that when a helmet is damaged during its legitimate use, it shall be immediately replaced.

(3) The owner, agent or manager of mine shall provide protective helmet free of charge.

123. Protective equipment.- (1) Every person engaged in the operation and every other person who may be exposed to the risk of injury, poisoning or disease arising from the operations shall be provided with-

(a) depending upon the risk, suitable protective equipment including respiratory protective equipment, eye protectors, gloves, overalls and aprons; and

(b) suitable protective outer clothing for use in rain and extreme weather conditions.

(2)The owner, agent and manager of a mine shall ensure supply of the protective equipment under sub-regulation (1) free of charge.

(3) Every person provided with protective equipment shall use the same while at work.

124. Protection against noise.- (1) The owner, agent or manager shall take steps to reduce the noise level and to reduce the exposure of work persons to noise.

(2) No person shall be allowed to work without appropriate ear protection in an area if he is exposed to an equivalent continuous noise level exceeding 90 dB(A).

(3) No person shall enter or be allowed to enter an area in which the sound level is 140 dB(A) or more.

(4) The Chief Inspector of Mines may, from time to time, by notification in the Official Gazette, specify the permissible noise exposure in any area or place in a mine.

125. Communication.- (1) The owner, agent or manager of the mine shall provide and maintain efficient means of communication and an alternative means of signalling in good working order between manned installations including the office of the manager and other places of work and wherever possible, provide the communication by radio telephone.

(2) The equipment for external communication shall be chosen on the basis of operational needs, type of activity and defined situations of hazard and accident.

(3) The communication equipment and associated power supply shall be designed and protected so as to remain functional in situations of hazard or accident.

(4) Where electrical signalling is used-

(a) adequate precautions shall be taken to prevent signal and telephone wires coming into contact with other cables and apparatus;

(b) the voltage used in any one circuit shall not exceed thirty volts;

(c) contact-makers shall be so constructed as to prevent accidental closing of the circuit; and

(d) bare conductors, where used, shall be installed in suitable insulators.

126. Safety while working at height.- Where any person is working at more than one metre and eighty centimetre height and where there is likelihood of fall hazard, the owner, agent or manager of mine shall provide a safety belt with full body harness as per the standard, that is, IS 3521 of the Bureau of Indian Standards or its revised version which shall be attached by means of a lifeline to a fixed anchor.

127. Precautions against dust, toxic gases and ionizing radiations.- (1) The owner, agent and manager of a mine shall ensure the prevention and control of emission of dust, toxic gas, fume and ionising radiation at source as far as reasonably practicable.

(2) A competent person shall instruct every person liable to be exposed to dust, toxic gas, fume and ionising radiation about the safe working method and technique.

(3) The permissible limit of exposure to dust, toxic gas, fume and ionising radiation shall be as per the applicable regulatory requirements.

128. Safety warning signs.- (1) The storage area and container of toxic, corrosive, flammable, poisonous and radioactive material shall be properly labelled and appropriately stored according to material safety data sheet content.

(2) The warning sign shall be posted to denote any hazardous situation.

(3) The warning sign shall be posted in area where the use of personal protective equipment is required.

(4) The identification sign shall be clearly posted to locate emergency equipment and direction of escape route.

(5) The manager shall ensure that the pipelines carrying steam or fluid at high pressure are clearly identified.

129. Protection against pollution of environment.- (1) The owner, agent and manage of every mine shall comply with the standards and guidelines of the Environment (Protection) Rules, 1986 for discharging liquid effluent and gaseous emission, and for disposal of solid waste, drill cutting and drilling fluid applicable for oil drilling and gas extraction industry.

(2) Any oil discharged from a well during its completion, testing and repair shall be collected in suitably constructed and adequately fenced disposal pits or tanks suitably located.

(3) No disposal pit shall be constructed within forty-five metre of any railway, public road or of any public works or of other permanent structure not belonging to the owner.

(4) The untreated sewage, formation water, oil, drilling fluid, waste, chemical substances or refuse from a well, tank or other production installation shall not be permitted,-

(a) to create hazard to public health and safety;

(b) to run into or contaminate any fresh water structure or body of water or to remain in a place from which it might contaminate any fresh water or body of water; and

(c) to run over or damage any land, highway or public road.

(5) No fluid shall be discharged into sea or fresh water structure or any body of water, unless it is treated and samples of fluid at regular interval are obtained and analysed and the result of such analysis is maintained by the person collecting the sample and analysing the same.

(6) No scrap, surplus or unused material shall be permitted to be dumped or disposed off in the sea or in the vicinity of any installation.

(7) (a) The gas produced at any installation shall not be discharged to the atmosphere unless burnt in accordance with clause (b); and

(b) the gas to be burnt, referred to in clause (a) shall be discharged from a flare line in the following manners, namely:-

(i) flare-stack height shall be in accordance with the standards referred under sub-regulation (1);

(ii) the flare-line shall be adequately anchored and provided with suitable means to prevent extinction of the flame; and

(iii) when the gas-flow is intermittent, the flare-line shall be provided with a remote controlled electrical ignition device or any other suitable device to ensure continuous ignition of any gases.

130. Fencing.- The owner, agent or manage of a mine shall-

(a) provide the protected area surrounding every drilling or work-over rig with fence of not less than one metre and eighty centimetre in height;

(b) provide permanent installation with protective wall of not less than one metre and eighty centimeter in height;

(c) ensure that the well on land is securely fenced and gates are locked;

(d) take precaution to prevent any unauthorised person from access to any place which has been duly fenced; and

(e) ensure that every fence is examined once in every fourteen days by a competent person and a report of every such inspection is maintained at the site by the person who made the examination.

131. Safety Management Plan.- (1) The owner, agent and manager of every mine shall prepare and implement safety management plan in respect of all operations of the mine in line with the health, safety and environment policy duly approved by the competent authority of the organization and the same shall be made in such a manner that-

(a) the requirements of the Act and of these regulations, bye-laws and orders made thereunder are complied with in relation to any activity or in connection therewith;

(b) the Safety Management Plan shall be prepared in English and in Hindi, if English is not understood by the relevant employees;

(c) an organizational structure is in place with the aim of ensuring safety and health performance;

(d) the risk to safety and health are evaluated and measures are taken to reduce the risk to persons and damage to machinery or equipment likely to be affected;

(e) appropriate control is in place to ensure promotion of safety and health;

(f) it provides for-

(i) safety manuals, rules and regulations;

(ii) standard operating procedures for all critical activities;

(iii) the identification of hazards and assessment of risks and measures to eliminate the identified hazards risks;

(iv) inspection, testing and maintenance of the equipment and machinery;

(v) the detail procedures for operational activities, pre-start up safety review mechanisms, work permit system, statutory trainings, mechanical integrity program, inspection and testing, incident investigation, off-the job safety, safety records, health hazard data;

(vi) management of change related to process and equipment as per Oil Industry Safety Directorate Guidelines, that is, OISD-GDN-178;

(vii) written action plan to implement employees' participation through safety committees;

(viii) emergency preparedness and response plan;

(ix) adequate communication and safety displays ;

(x) any other matter that is necessary to ensure safety and occupational health of the personnel working in the mine;

(xi) bridging document for contractual works;

(xii) inspection, monitoring, audit, review, training and continual sustainable improvement as per applicable Indian or international standards and practices; and

(xiii) any bother activity or operation which the Chief Inspector of Mines may specify in writing.

(2) The owner, agent and manager of mine shall ensure that a copy of safety management plan is made available at all the installations of the mine.

(3) A copy of the safety management plan referred to in sub-regulation (2) shall be submitted to Chief Inspector of Mines and Regional Inspector of mines within one hundred and eighty days from the date of coming into force of these regulations.

(4) The owner, agent or manager of a mine shall arrange to carry out internal safety audits for every installation of the mine by duly appointed team at intervals specified for the purpose in the safety management plan:

Provided that first safety audit for every such installation shall be completed within one year of coming into force of these regulations.

(5) The owner, agent or manager of mine shall maintain the reports of every audit carried out under sub-regulation (4).

CHAPTER - XI

MISCELLANEOUS

132. Contractors, designer and service providers.- While hiring contractor, designer and service provider, the owner and the agent of the mine shall ensure that the contractors and the service providers as the case may be, are qualified to carry out the requirements under the Act, or the rules, regulations, bye laws or orders made thereunder, and that such contractor, designer and service provider comply with the requirements or duties assigned to them at the mine.

133. General safety.- No person shall negligently or willfully do anything likely to endanger life or limb in the mine or negligently or willfully omit to do anything necessary for the safety of the mine or of the persons employed therein.

134. Safety and health education and instructions.- Safety and health education and instruction programmes shall be organised regularly in every mine to make the workers safety conscious and instill an awareness of occupational safety and health at every level.

135. Place of accident not to be disturbed.- (1) Whenever there occurs in a mine an accident causing loss of life or serious bodily injury to any person, the place of accident shall not be disturbed or altered before the arrival or without the consent of the Chief Inspector of Mines or the Inspector to whom notice of the accident is required to be given under subsection (1) of section 23 unless such disturbance or alteration is necessary to prevent any further accident, to remove bodies of the deceased or to rescue any person from danger, or unless discontinuance of work at the place of accident would seriously impede the working of the mine:

Provided that where the Chief Inspector of Mines or the concerned Inspector fails to inspect the place of accident within seventy-two hours of the time of the accident, work may be resumed at the place of accident.

(2) No person shall disturb or alter due to any reason whatsoever, the place of accident involving a fatal or serious accident, unless a sketch of the site illustrating the accident and all relevant details has been prepared in duplicate and such sketch has been duly signed by the manager or assistant manager, safety officer and the workmen's inspector or, where there is no workmen's inspector, by a work person nominated by the workers in this behalf, and such sketch shall also be supported by the photographs of the place of accident:

Provided that if the place of accident is disturbed or altered to prevent further accident or to rescue persons from danger before the sketch could be prepared, the same shall be prepared immediately thereafter, giving all relevant details as existed before the place was disturbed or altered.

(3) One of the authenticated sketches shall be delivered or sent to the concerned Inspector.

136. Pointing out of contraventions detected during inspections.- (1) If the Chief Inspector of Mines or an Inspector during his inspection of any mine, finds or comes to know of any contravention of any provisions of the Act or the regulations, rules, bye-laws or orders made thereunder, he shall either himself intimate or cause the same to be intimated to the owner, agent or manager of the mine, of such contravention for their rectification.

(2) The owner, agent or manager of the mine shall, within three days of the receipt of intimation under sub-regulation (1), display the contents thereof on the notice board of the mine for a period of at least fifteen days.

(3) The owner, agent or manager of the mine shall, within a period not exceeding fifteen days from the date of receipt of the intimation under sub-regulation (1), intimate to the Regional Inspector the action taken to remedy each of the contraventions and the manner in which such contraventions have been remedied.

(4) The agent or manager or in their absence the next senior most official of the mine shall accompany the Chief Inspector of Mines or Inspector during his inspection and note down immediately the contraventions pointed out by him on the spot.

(5) The owner, agent or manager of the mine, shall as soon as possible, intimate to the Chief Inspector of Mines or the Inspector who made the inspection, details of action taken to remedy the contraventions, intimated under sub-regulation(1).

137. Chief Inspector of Mines to exercise power of Regional Inspector.- Any power granted under these regulations to the Regional Inspector may be exercised by the Chief Inspector of Mines or any other Inspector authorised in writing in that behalf by the Chief Inspector of Mines.

138. Signing of Returns, Notices and Correspondence.- All returns and notices required under or correspondence made in connection with the provisions of the Act and of the regulations or orders made thereunder shall be signed by the owner, agent or manager of the mine:

Provided that in case of submission of the returns, notices and correspondences in electronic form, the owner, agent and manager of the mine shall ensure that the same is digitally signed and not liable to alteration or tampering and secured in such a manner as to facilitate retrieval by the owner, agent, manager of the mine and the Chief Inspector of Mines or an Inspector:

Provided further that the owner, agent or manager may, by a power of attorney, delegate these functions to any other specified person:

Provided also that in respect of notice of accident, the manager may delegate this function by written authorisation to any deputy manager or installation manager.

139. Reports, records and registers.- The owner, agent and manager of the mine shall ensure that the reports, records and registers required to be maintained under these regulations are maintained in interleaved bound paged registers for the respective purposes and signed by the concerned competent person or official, as the case may be, and countersigned by the manager:

Provided that in case of maintenance of reports, records and registers in electronic form, the owner, agent and manager of the mine shall ensure that the same is digitally signed and not liable to alteration or tampering and secured in such a manner as to facilitate retrieval by owner, agent, manager of the mine and the Chief Inspector or an Inspector of Mines:

Provided further that the manager may authorise a deputy manager or installation manger to countersign any reports, records or register on his behalf, except in cases where the manager is specifically required under these regulations to countersign a report or record or register.

140. Permissions, etc. granted by the manager.- Every manager on taking over charge of a mine shall review all permissions granted in writing under these regulations by his predecessor; and if he finds them to his satisfaction, he shall confirm the same by countersigning the permissions individually or issue fresh ones or cancel them, as the case may be.

141. Publication of orders, forms and instructions.- The orders, forms and instructions under these regulations shall be published in the Official Gazette and by other suitable means as specified by the Chief Inspector of Mines.

142. Power to relax.-Where in the opinion of the Chief Inspector of Mines, the conditions pertaining to a mine are such as to render compliance with any conditions contained in these regulations which are not reasonably practicable, he may by order in writing, and subject to such conditions as he may, specify therein grant exemption from the said provisions.

143. Appeal to Chief Inspector of Mines.- Any person aggrieved by an order of a Regional Inspector may prefer to appeal to the Chief Inspector of Mines, who may confirm, modify or cancel the order and every such appeal shall be preferred within fifteen days of the receipt of the order by the appellant.

144. Appeal to Committee.- (1) Any person aggrieved by an order of the Chief Inspector of Mines may prefer an appeal within twenty days of the receipt of the order to the Committee constituted under section 12 of the Act.

(2) The owner, agent and manager of the mine shall comply with the order of the Chief Inspector of Mines against which appeal is preferred under sub-regulation (1):

Provided that the Committee may, on application by the appellant, suspend the operation of the order appealed against, pending disposal of the appeal.

SCHEDULE

[See regulation 106]

CLASSIFICATION OF HAZARDOUS AREA IN OIL MINE

- Zone "0": This is an area in which hazardous atmosphere is continuously present.
- Zone "1": Any area in which hazardous atmosphere is likely to occur under normal operating conditions.
- Zone "2": An area in which hazardous atmosphere is likely to be present under abnormal operating conditions.

A. DRILLING and WORK-OVER OPERATIONS:-

(1) Well – head area:

(i) When the derrick is not enclosed and the sub-structure is open to ventilation, the area in all directions from the base of rotary table extending up to 3.0 metre shall be zone "2" hazardous area. Any cellars, trenches and pits below the ground level shall be zone "1" hazardous area; the area lying up to 3.0 metre in horizontal direction from the edge of any cellars, trenches on pit and 0.5 metre vertically above the cellars, trenches on pit shall be zone "2" hazardous area.

(ii) When the derrick floor and substructure are enclosed, the enclosed substructure below the derrick floor, including collars, pits or sumps below the ground level, shall be zone "1" hazardous area; the enclosed area above the derrick floor shall be zone "2" hazardous area.

(2) Mud Tank and Channel:

The free space above the level of mud in tank and channel shall be zone "1" hazardous area; the area in a radius of 3.0 metre in all direction from the edge of mud tank and channel shall be zone "2" hazardous area.

(3) Shale Shaker:

(i) The area within a radius of 1.5 metre in all directions from the shale shaker in open air shall be zone "1" hazardous area. The area beyond 1.5 metre and up to 3.0 metre in all directions from the shale shaker shall be zone "2" hazardous area.

(ii) When the shale shaker is located in an enclosure, the enclosed area shall be zone "1" hazardous area to the extent of the enclosure. The area outside the shale shaker and up to 1.5 metre in all directions from the shale shaker shall be zone "2" hazardous area.

(4) Degasser:

The area within a radius of 1.5 metre from the open end of the vent extending in all directions shall be zone "1"; the area beyond 1.5 metre and up to 3 metre in all directions from the open end of vent shall be zone "2" hazardous area.

(5) Degasser and Desilter:

The area within a radius of 1.5 metre in all direction from the Desander and Desilter location in open air shall be zone "2" hazardous area.

(6) Effluent Pit and Open sump:

The free space above the level of flammable liquid within the effluent pit on sump shall be zone "1" hazardous area; the free space lying up to 3.0 metre in hazardous direction form the edge of any effluent pit or sump and 5.0 metre vertically above the effluent pit or open sump shall be zone "2" hazardous area.

B. OIL WELLS:

(1) Flowing Well:

A well area below the ground level shall be zone "1" hazardous area; the area lying up to 3.0 metre in horizontal direction from the edge of any cellars, trenches or pit and 0.5metre vertically above the callers trenches on sump shall be zone "2" hazardous area.

(2) Artificially Lifted Well:

(i) The area in wells equipped with sucker-rod pump to 3.0 metre above the ground level up to 3.0 metre horizontal in all directions from the well head shall be zone – "2" hazardous area. In case of cellar, an area below the ground level shall be zone "1" hazardous area; the area lying up to 3.0 metre in horizontal direction from the edge of any cellars and 0.5 metre vertically above the cellars shall be zone "2" hazardous area.

(ii) The area in wells equipped with submersible electric motor driven pump or hydraulic sub-surface pump or gas lift wells shall be same as specified in clause B(1) when the well is provided with cellar or sump.

(3) Well Under Production Test:

The area within a radius of 8.0 metre from an open discharge of petroleum bearing fluid from a well under production test shall be zone "1" hazardous area. The area beyond zone 1 hazardous area for a future distance of 8 metre in all directions shall be zone "2" hazardous area.

(4) Well Servicing Operations:

The area within a radius of 10.0 metre in all direction from a well-pulling and other such well servicing shall be zone "2" hazardous area:

Provided that where cellar or sump is present, the area within the cellar or sump shall be zone "1" hazardous area and the area up to 3.0 metre in horizontal direction from the edge of any cellars or sump and 0.5 metre vertically above the cellar or sump shall be zone "2" hazardous area.

(5) Gas Vent:

The area within a radius of 1.5 metre from open end of the vent extending in all direction shall be zone "1" hazardous area and area lying within a radius beyond zone "1" hazardous area up to 3.0 metre of the vent shall be zone "2" hazardous area.

C. OIL and GAS PROCESSING AND STORAGE EQUIPMENT:

(1) Oil – gas separation vessels, fire vessels, Dehydrator, stabilizer hydrocarbon recovery unit:

(i) the area within a radius of 3.0 metre from any oil-gas separation vessel, fired vessel, dehydrator, stabiliser and hydrocarbon recovery unit shall be zone "2" hazardous area;

(ii) any trench or pit below the ground level shall be zone "1" hazardous area and the area lying up to 3.0 metre in horizontal direction from the edge of any trench or pit and 0.5 metre vertically above the trench or pit shall be zone "2" hazardous area.

(2) Gas Vent:

The area within a radius of 1.5 metre from open end of the vent extending in all direction shall be zone "1" hazardous area and area lying within a radius beyond zone "1" hazardous area up to 3.0 metre of the vent shall be zone "2" hazardous area.

(3) Relief Valve:

The area within a radius of not less than 3.0 metre from discharge of a relief valve, extending in all direction shall be zone "2" hazardous area subject to the conditions that there shall be no electrical equipment in direct path of discharge from relief valve.

(4) Pig Trap:

The area within a radius of 1.5 metre of pig launching or receiving trap extending in all direction shall be zone "1" hazardous area. The area lying beyond zone "1" hazardous area

and up to a radius of 3.0 metre in all directions pig launching/ receiving trap shall be zone "2" hazardous area.

(5) Pump Or Gas Compressor:

(i) Where a pump handling flammable liquid or a gas compressor located in open air or under well ventilated shed without wells, the area lying up to 3.0 metre in all directions from the pump or compressor shall be zone "2" hazardous area.

(ii) Where a pump or a compressor is located in an adequately ventilated building, the entire interior of such building including an area within 1.5 metre of the vent shall be zone "2" hazardous area.

(iii) Pits, sumps, trenches below the ground level shall be zone "1" hazardous area and the area lying up to 3.0 metre in horizontal direction from the edge of any trench or pit and 0.5 metre vertically above the pits, sumps or trenches shall be zone "2" hazardous area.

(6) Storage Tanks:

(i) In case of floating roof tank, the space above the floating roof and inside the enclosures up to top level of the enclosure wall shall be zone "1" hazardous area; the area beyond zone "1" hazardous area and up to a radius of 4.5 metre in all directions from tank shall and shell top shall be zone "2" hazardous area. In case of a dyke, zone "2" hazardous area shall extend vertically up to the height of the dyke and horizontally up to the physical boundary of the dyke.

(ii) In case of fixed roof tank, the area inside the tank and within a radius of 1.5 metre from all opening including breather valve, dip hatch, thief hatch and safety valve shall be zone "1" hazardous area; the area zone "1" beyond hazardous area and up to a radius of 3.0 metre in all directions from tank shall and rood of the tank be zone "2" hazardous area. In case of a dyke, the sump in the dyke shall be zone "1" hazardous area and an area extending vertically up to a height of the dyke horizontally to the physical boundary of the dyke shall be zone "2" hazardous area.

D. GENERAL:-

Wherever sampling clock or bleed off valve is fitted, the area up to 1.5 metre in all directions from the release point shall be zone "2" hazardous area.

[F. No. S-66012/1/2008-ISH-II (IV)]

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