HSE REGULATORY REQUIREMENTS MATRIX

[Ref. Section 5.3 (Legal & Other Requirements) of OGDCL's Integrated HSE System Manual]

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OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

At least once per annum, "actual status of compliance" with these regulations shall be ascertained by Location HSE In-Charge after verification from all Sections.

Name of Location: _____

Requirement	*Regulation, Law, Recommended Practice*	*Authority/ Stakeholders*	*Applicable*				*Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)*
			Seismic	*Drilling*	*Production*	*Offices Buildings*	
1. Operator to submit to Federal/ Provincial EPA an Environmental Impact Assessment (EIA) for commencing new activities in National Parks (Environment Protected Areas).	Pakistan Environmental Protection Agency (Review of IEE and EIA) Regulations, 2000	DG Federal/ Provincial EPA, Ministry of Climate Change	☑	☑	☑	--	
2. Operator to submit to Federal/ Provincial EPA an Initial Environmental Examination (IEE) for commencing new activities.	The Sindh Environmental Protection Act, 2014 The Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021 The Khyber Pakhtunkhwa Environmental Protection Act, 2014 The Khyber Pakhtunkhwa Environmental Assessment Rules, 2021. The Baluchistan Environmental Protection Act, 2012 The Punjab Environmental Protection Act, 2012		☑	☑	☑	☑	
3. Operator to ensure that no cutting of trees is allowed which is prohibited in certain areas.	Cutting Of Trees (Prohibition) Act, 1975	Forest Department, Provincial	☑	☑	☑	--	

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4.	Operator to ensure that no activity is undertaken in the proximity of a protected antiquity, provided under this Act.	Antiquities Act, 1975	Archaeology Department, Provincial	☑	☑	☑	--	
5.	Operator to ensure that no hunting of endangered species is allowed which is prohibited by this Act in certain areas.	Wildlife Birds And Animals Protection Act, 1912	Wildlife & Parks Department Punjab; Forestry, Environment And Wildlife Department KPK; Wildlife Department Punjab; Forest and Wildlife Department, Baluchistan	☑	☑	☑	--	
6.	Operator to ensure that no wildlife is disturbed in violation of this Act/ Rules by Operator personnel or others in concession areas.	West Pakistan Wildlife Protection Ordinance, 1959/ West Pakistan Wildlife Protection Rules, 1961		☑	☑	☑	--	
7.	Protection of factories and mines – (1) The Central Government or the Provincial Government may by order require the owner, manager or agent of any mine, or the occupier or Manager of any factory :- (a) to make, within such period as may be specified in the order, a "report in writing" stating the measures which he has taken or is taking or proposing to take to secure the due functioning of the mine or factory, and the safety of persons and property therein and in the vicinity thereof in the event of an outbreak of fire whether caused by accident or otherwise; (b) to take, with in such period as may be specified in the order, such measures as may be so specified, being measures that taking of which is in the opinion of the Central Government or the Provincial Government necessary for the purposes aforesaid.	The Civil Defense (Special Powers) Rules, 1951	Federal or Provincial Government	--	☑	☑	--	
8.	Central Government may authorize any person to enter and inspect any factory or mine for the purpose of ascertaining what measures have been or ought to be taken to secure the due functioning of the mine.			--	☑	☑	--	
9.	Unused commercial products to be avoided to be disposed and rather to be returned to the vendor or to be used at another location. All non-hazardous wastes should be segregated from hazardous wastes. Any mixture of non-hazardous and hazardous wastes to be disposed as hazardous waste, and must comply with existing	10.3.1 (a) Nonhazardous Waste of DGPC Guidelines for Operational SHE Management 1996	DGPC/DG EPA Federal/ Provincial	☑	☑	☑	--	

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hazardous materials storage, use and disposal requirements.							
10. Hazardous wastes must be stored, managed and disposed in a safe manner which will not cause harm to humans, animals, or environmental resources. Compliance to be made with the existing hazardous materials storage, use and disposal requirements.	10.3.2 (b) Hazardous Wastes of DGPC Guidelines for Operational SHE Management 1996	DGPC/DG EPA Federal/ Provincial	☑	☑	☑	--	
11. The associated gas should not be flared but to be used as "commercially for recycling" where economically and technically feasible. If no delivery of gas can be arranged, permission to be acquired to flare the gas until such time that delivery of gas can be arranged. Where sale, re-injection, processing or other use of associated gas is not economically feasible, DGPC in consultation with the Federal Environment Protection Agency may issue allowable permits to flare gas under controlled conditions.	8.3 Gaseous Waste of DGPC Guidelines for Operational SHE Management 1996	DGPC/DG EPA Federal/ Provincial	--	--	☑	--	
12. The polluter of environment (Location In-Charge) can be penalized/ punished under the Pakistan Penal Code, 1860.	Pakistan Penal Code, 1860	District Magistrate, Provincial	☑	☑	☑	--	
13. The polluter of environment (Location In-Charge) can be classified as a criminal under the Code.	Code of Criminal Procedure, 1898	District Magistrate, Provincial	☑	☑	☑	--	
14. Provision regarding maintaining GHG Emissions Inventories.	Pakistan Climate Change Act 2017/ National Climate Change Policy 2012	Chairman, Pakistan Climate Change Authority	☑	☑	☑	--	
15. Appointment of Manager (Location In-Charge's Name, Qualification, and Experience)	Reg-12, 13 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
16. Handing over Taking over Authorization in Manager's absence	Reg-14 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923 The Punjab	Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	

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	Occupational Safety and Health Act, 2019						
17. Appointment of HSE Officer (Name, Qualification, and Experience)	Reg-15 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923 The Punjab Occupational Safety and Health Act, 2019		☑	☑	☑	--	
18. Appointment of Medical Practitioner (Name, Qualification, and Experience)	Rule 10-A (3) of Consolidated Mine Rules,1952 of Mines Act 1923		☑	☑	☑	--	
19. Record of appointment of competent persons to secure thorough supervision of well or field	Reg-17 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		☑	☑	☑	--	
20. Record of regular safety inspection of machinery, equipment, apparatus, and fittings	Reg-18 & Appendix of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923 The Punjab Occupational Safety and Health Act, 2019		☑	☑	☑	--	
21. Accident Prevention Program Record			☑	☑	☑	--	
22. Accident/Illness Register – Forms			☑	☑	☑	--	

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23. Records; Follow-up on accidents			☑	☑	☑	--	
24. Laws available			☑	☑	☑	--	
25. Procedure for reporting accidents (whom, how)			☑	☑	☑	--	
26. Contingency Plans (Fire, H_2S etc.)			☑	☑	☑	--	
27. H_2S measurement			☑	☑	☑	--	
28. Safety Meetings Record			☑	☑	☑	--	
29. Work Permit (record kept or not, who issues)			☑	☑	☑	--	
30. Fire Drills – Frequency records:			☑	☑	☑	--	

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31. Training for Personnel (First-aid; H_2S, Fire) Records & Certification			☑	☑	☑	--	
32. Hazardous/Toxic Substances identified			☑	☑	☑	--	
33. Confined procedures in effect			☑	☑	☑	--	
34. Lockout/Tag out procedures in effect			☑	☑	☑	--	
35. Emergency Telephone Numbers posted			☑	☑	☑	--	
36. Maintenance of Register of Employees	Schedule-A (Rule 11) of Consolidated Mine Rules,1952 of Mines Act 1923		☑	☑	☑	--	
37. Over-Time	Schedule-F of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		☑	☑	☑	--	
38. Annual and other leaves	Rule-23 Consolidated Mine Rules,1952 of Mines Act 1923 Schedule-D (Rule 20) of		☑	☑	☑	--	

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39. Employment: (List showing Number & classification of persons permanently or temporarily employed)	Consolidated Mine Rules,1952 of Mines Act 1923		☑	☑	☑	--	
40. Working Hours & Rotation System (No. of shifts/day, No. of Hours/shift) (No. of Days-On, No. of Days-Off)			☑	☑	☑	--	
41. Leaves & Holidays (Annual, Sick Leaves, Festival Holidays, Others)			☑	☑	☑	--	
42. Clean & orderly			☑	☑	☑	--	
43. Properly grounded (Earthing last measured & verified)	General (Living Quarters) of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923 The Punjab Occupational Safety and Health Act, 2019	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources Chief Inspector of Mines, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	
44. Electrical wiring & conduits in good order (Date of last check)			☑	☑	☑	--	
45. Two means of exit provided			☑	☑	☑	--	
46. Smoke detectors provided			☑	☑	☑	--	

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47. Fire Extinguishers / Hose cabinets provided			☑	☑	☑	--	
48. Alarms (how initiated/ audible in all areas, last function test)			☑	☑	☑	--	
49. Ventilation, heating, air-conditioning			☑	☑	☑	--	
50. Emergency lighting			☑	☑	☑	--	
51. Adequate septic tanks			☑	☑	☑	--	
52. Door handles, entrances			☑	☑	☑	--	
53. General lighting in the area			☑	☑	☑	--	
54. Anti-snake measures: Food handling & storage, kitchen			☑	☑	☑	--	

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55. Laundry			☑	☑	☑	--	
56. Provision of blow-out prevention equipment: a) Annular preventer & double arm preventer, the latter to comprise blank rams & rams to close off around drill pipe, tubing or casing being used in the hole. b) Have a working pressure adequate for pressure expected to be encountered.	Reg-178 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
57. Two steel lines connected separately to the blow-out preventer assembly, one for bleeding off pressure & one for killing the well, which shall be-- a) Located below at least one set of blow-out preventer; b) Of a diameter of at least 50 mm; c) Of components having a working pressure equal to that of the blow-out preventers except that part of the bleed-off lines located downstream from the last control valve.	Reg-179 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
58. The bleed-off line shall be directed to a flare pit at least 90 meters from the drilling well, contain a gauge to measure well pressure & chokes which shall be so installed as to insure that-- a) There is a full-opening line from the well head to the pit; b) The chokes can be isolated without shutting in the well. c) When daily one choke is installed it is adjustable (rather than fixed).	Reg-180 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
59. Connection of kill line to the pump manifold.	Reg-181 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
60. All bleed-off lines & kill lines shall be securely tied down.	Reg-182 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines		--	☑	--	--	

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	Act 1923						
61. If a well is declared to be one of high blow-out hazard there shall be installed & maintained-- a) A manifold in the bleed-off line which permits the flow from the well to be diverted through a full opening line. b) A gauge in the bleed-off line to measure well pressure; c) A valve in the Kelly or drilling string; d) Stabbing valve that can be connected to the top of any drill pipe or tubing in the well; e) A device to provide, at the drillers position warnings of a change in the level of drilling fluid in the mud pit etc. & f) Heavy mud, in accordance with the pressure or fracture gradient of the open hole, to kill the well when so required.	Reg-183 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
62. -Blow-out preventers shall be provided with means of control located at a distance of 8 meters from the well casings. -Provision of shelter guard between the blow-out preventer controls & the well casing.	Reg-184-1 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
63. Installation of additional controls: -Such additional controls can in no way interfere with the function of the controls required in sub-regulation (1) of this regulation. -Controls shall be sheltered.	Reg-184-2 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
64. Provision & maintenance of a storage type pressure source of sufficient pressure & capacity to effect simultaneously full closure of annular & one arm preventer.	Reg-185 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
65. Blow-out prevention equipment shall be mechanically tested at least daily & defective equipment shall be made workable.	Reg-186 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	

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66. Blow-out prevention equipment shall be pressure tested for a period of ten minutes to at least 70 kg/sq cm prior to the drilling.	Reg-187 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
67. All tests shall be recorded. In pressure test, pressure applied & duration of pressure shall also be recorded.	Reg-188 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
68. OM is ensured that sufficient persons understand and are able to operate blow-out preventers.	Reg-189 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
69. Blow-out prevention equipment shall be tested under the supervision of an inspector (CIM).	Reg-190 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
70. An inspector (CIM) may require that the rig crew on shift shall perform a blow-out prevention drill in his presence.	Reg-191 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
71. The well shall be kept full of mud at all times during drilling & particularly when pulling out the drill pipes.	Reg-192 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	--	--	
72. Provision of First-Aid facilities (Dispensary has all equipment/facilities)	General [First-Aid] of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
73. Provision of ambulance (Ambulance fitness, maintenance, equipment etc.)		Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	

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74. Displaying of warning notices in hazardous area of 90 meters radius	Reg-340-1 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
75. Intrinsically safe apparatus in hazardous areas; Designated places for smoking	Reg-340-2 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
76. Arrangements to measure the concentration of inflammable & toxic gases or vapors in air	Reg-341 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
77. Intrinsically safe/ flame-proof electric fittings, equipment and apparatus within a radius of 15 meters	Reg-342 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
78. Electric grounding (earthing) of plant, machinery and other steel equipment/structure	Reg-343 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
79. Provision of flare pits and stack for the disposal of inflammable liquids, gases and vapors	Reg-348 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
80. Fire alarm – signals (predefined and approved)	Reg-350 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	

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81. Fire extinguishers all must be adequate, charged, in brackets, tagged and sealed, arrangement for re-fill	Reg-352 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
82. Layout diagram of emergency response & evacuation system displayed at significant areas	Reg-354 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
83. Weekly examination of firefighting equipment	Reg-355 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
84. Fire pump tested, output pressure-psi			--	☑	☑	--	
85. Local/remote start function			--	☑	☑	--	
86. Number of persons trained in fire fighting	Reg-356 (1-2)& 357 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
87. PPE for firefighters			--	☑	☑	--	
88. Fire blankets (available, number, location)			--	☑	☑	--	

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89. Weekly conductance of firefighting drills			--	☑	☑	--	
90. PPE Provision & Maintenance • Safety Helmets • Safety Shoes • Safety Goggles • Rubber Apron • Mask • Gloves • Breathing Apparatus • Safety Belts	Reg-358-373 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
91. Provision of flare stack at a well producing sour gas	Reg-236 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
92. Valves, burst plate or rupture disk of a vessel, separator, treater receiving sour gas from a well shall be connected with flare pit in case of oil and for gas shall be connected with flare stack	Reg-237 & 239 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
93. Height of flare stack shall be 12 meters and provided with pilot flame or ignition device; also to be guarded against wind.	Reg-238 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
94. Concentration of H_2S shall not exceed 20 ppm and shall be measured once in 24 hours and recorded in a book	Reg-240 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
95. Emergency Preparedness and Response Plan for H_2S, uncontrolled emission of gas and oil spills	Reg-242 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	

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96. Provision of sufficient number of Breathing Apparatus in case of sour environment.	Reg-245 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
97. An alternate exit in case retaining wall is more than 1 meter high.	Reg-235 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
98. Distance of heater or treater shall not be less than 90 meters from well-head.	Reg-246 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
99. Sampling connections, if provided, shall be at a safe and convenient place and on the side opposite to the fire box.	Reg-247 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
100. Means of lighting a heater or treater, a pilot torch light.	Reg-250 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
101. Blanked off all lines to the vessel, all fires in the vicinity of installation to be put out when a heater or treater is to be opened for inspections/ repairs; and system purged of.	Reg-252 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
102. No work on any section of a treater or heater be undertaken until all sections are bled off gas & fluids.	Reg-253 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
103. Provision of flame arresters on all air intakes of burners.	Reg-254 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
104. Compressor's building to be of noncombustible material and adequately ventilated to avoid accumulation of hazardous gases.	Reg.255 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
105. Each floor of the compressor's building to be provided with two exits.	Reg.256 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
106. All electric equipment and fittings of compressor building to be flame proof.	Reg.257 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
107. Suction stream of compressor shall be provided with devices to avoid intrusions of liquids in the compressor.	Reg.258 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
108. Necessary provision to cutoff gas supply outside the compressor building.	Reg.259 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
109. Necessary provision to blow down the gas from compressor and piping to a safer place.	Reg.260 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
110. Provision of over speed protection device of every compressor prime mover.	Reg.261 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
111. Provision of relieving devices on every gas compressor and pipeline inside the building.	Reg.262 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
112. All emergency valves and controls shall be identified by conspicuous signs.	Reg.265 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
113. Each separator to be clearly marked with maximum working pressure and anchored to a concrete foundation or secured by guy lines.	Reg.266 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
114. Separators to be equipped with safety valves set not to exceed the maximum working pressure & burst heads set at pressure not to exceed 1.5 times the maximum working pressure.	Reg.267 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
115. Provision of pressure gauge & a clearly visible liquid level gauge, marked with maximum allowable fluid, & a dump valve.	Reg.268 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
116. Each separator to be provided with such arrangement to by-pass the inflow if so required.	Reg.269 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
117. Flare pits and stacks to be located at a site not less than 90 meters horizontally cross-wind or down-wind from the process units, tanks or any source of inflammable gases and vapors.	Reg.271 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
118. Arrangements to ignite the flare pit and stack.	Reg.272 – 275 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
119. Height of flare stack to be 9 meters from the surrounding topography.	Reg.276 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
120. Blow lines to flare stack to be securely anchored at the end and at all points where its direction changes.	Reg.277 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
121. Suitable arrangements to continuously separate liquids from the inflammable gas before its discharge to flare stack.	Reg.278 of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923		--	☑	☑	--	
122. Contents labeled: Labels understood "Fire hazard" "no smoking", "no hot work".	General [Fuel Safety] of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
123. Tanks vented: Vents open.			--	☑	☑	--	
124. Fire extinguishers provided: Within easy reach/suitable type.			--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
125. Fuel tanks safely located.			--	☑	☑	--	
126. Fuel transfer equipment: In good condition, static ground device, "deadman control nozzle"			--	☑	☑	--	
127. Fuel transfer procedures posted & enforced: Date of last procedure checked			--	☑	☑	--	
128. General housekeeping: No visible leaks			--	☑	☑	--	
129. Spill prevention equipment provided; curbs, drip pans, sumps, etc.: How is pollution prevented?			--	☑	☑	--	
130. Ladder secured & in good condition			--	☑	☑	--	
131. Pressurized tanks rated for pressure: Certification expiry date			--	☑	☑	--	
132. Overfill: If tank overfills, what happens to spill?			--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
133. Flammable liquids stored properly & labeled: Away from heat, oxygen bottles, oxidizing agents			--	☑	☑	--	
134. Fire extinguishers provided: Available nearby			--	☑	☑	--	
135. "No smoking" signs: Must be clearly visible			--	☑	☑	--	
136. Items prevented from falling: Toe plate, cages, otherwise secured			--	☑	☑	--	
137. Supplies stacked neatly on shelves			--	☑	☑	--	
138. Wiring & outlets in good order, lighting adequate			--	☑	☑	--	
139. Trash containers; covered container for oil saturated rags			--	☑	☑	--	
140. Walkways clean			--	☑	☑	--	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
141. Combustibles away from light fixtures: Kept separate & clearly labeled/hazard signs	General [Chemicals] of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
142. Pallets of sack material & mud properly stacked in an orderly fashion			--	☑	☑	--	
143. Torn sacks cleaned up; kept to a minimum			--	☑	☑	--	
144. Caustic soda & other hazardous chemical: Properly labeled, stored & handled			--	☑	☑	--	
145. No asbestos products ("flo-seal", etc.) on location			--	☑	☑	--	
146. Chemical warning signs			--	☑	☑	--	
147. Adequate ventilation			--	☑	☑	--	
148. Light work			--	☑	☑	--	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
149. Eye wash & personal protective equipment available & used	General [Storage] of Oil & Gas (Safety in Drilling and Production) 1974 Regulations of Mines Act 1923	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	--	☑	☑	--	
150. Forklift properly maintained & operated safely: Driver properly trained/ qualified			--	☑	☑	--	
151. Material Safety Data Sheets (MSDS): Readily available, copies with medics & HSE, and operational areas			--	☑	☑	--	
152. Paint & paint thinner containers covered			--	☑	☑	--	
153. Explosion proof lighting & ventilation provided for paint storage			--	☑	☑	--	
154. Safety cans available or transporting of paint thinner			--	☑	☑	--	
155. Spill prevention equipment provided, curbs, drip, pans, drains, sumps etc.			--	☑	☑	--	
156. Chemical warning signs			--	☑	☑	--	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
157. Eye wash and protective equipment			--	☑	☑	--	
158. Flammable liquid stored and labeled properly			--	☑	☑	--	
159. General housekeeping			--	☑	☑	--	
160. Quarterly basis, monitoring of Effluents for the given parameters and reporting to provincial EPA: <u>Priority Parameters For Monitoring of Effluents (Category-B Industrial Units Table A of Schedule IV)</u> (i) Flow (ii) pH = 6 – 9 (iii) Temperature Increase = < 3 C (iv) BOD5 = 80 mg/l (v) COD = 150 mg/l (vi) TSS = 200 mg/l (vii) TDS = 3500 mg/l (viii) Oil/Grease = 10 mg/l (ix) Phenol = 0.1 mg/l (x) Chloride = 1000 mg/l	Pakistan Environment Protection Act XXXIV, 1997, National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001, SRO 528(1)/2001 Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015 Sindh Environmental Quality Standards (Self-Monitoring &Reporting by Industry) Rules 2014	DG EPA Federal/ Provincial	☑	☑	☑	--	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
	Punjab Environmental Quality Standards for Municipal & Liquid Industrial Effluent, 2016						
161. Quarterly basis, monitoring of Emissions for the given parameters and reporting to provincial EPA: Priority Parameters For Monitoring of Emissions (Category-B Industrial Units Table B of Schedule IV) (i) CO = 800 mg/Nm^3 (ii) Hydrogen Sulphide = 10 mg/Nm^3 (iii) PM10 = 300 mg/Nm^3 (iv) SOx = 100 ug/Nm^3 (annual average); 400 ug/Nm^3 (max. 24-hrs interval); 100 tons per day (Based on one percent sulphur content in fuel oil.) (v) NOx = 130 nanogram per joule of heat input (vi) NOx = 400 mg/Nm3 (gas fired power plants) (vii) NOx = 600 mg/Nm3 (oil fired power plants)	Pakistan Environment Protection Act XXXIV, 1997, National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001, SRO 528(1)/2001 Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015 Sindh Environmental Quality Standards (Self-Monitoring &Reporting by Industry) Rules 2014 Punjab Environmental Quality Standards for Industrial Gaseous Emissions, 2016 Balochistan Environmental Quality Standards for Industrial	DG EPA Federal/ Provincial	☑	☑	☑	☑	

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	Gaseous emission (mg/Nm^3, unless otherwise defined).						
162. Annual basis, monitoring of Diesel Vehicle Exhausts: (i) CO = 4.0 g/kWh [ECE R-49] for Trucks and Buses + Large good vehicles + Older Vehicles (ii) HC = 1.1 g/kWh [ECE R-49] for Trucks and Buses (iii) HC = 7.0 g/kWh [ECE R-49] for Large good vehicles and Older Vehicles (iv) NOx = 7.0 g/kWh [ECE R-49 for Trucks and Buses (v) NOx = 1.1 g/kWh [ECE R-49] for Large good vehicles and Older Vehicles (vi) PM = 0.15 g/kWh [ECE R-49] for Trucks and Buses + Large good vehicles + Older Vehicles (vii) Noise 85 db(A) sound meter at 7.5 meters from the source	Pakistan Environment Protection Act XXXIV, 1997, National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001, SRO 742(1)/1993 & SRO 72(KE)/2009 Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015 Punjab Environmental Quality Standards for Motor vehicle Exhaust and Noise, 2016. Balochistan Environmental Protection (Motor Vehicles) Rules 2020.	DG EPA Federal/ Provincial	☑	☑	☑	☑	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
163. Annual basis, monitoring ambient air quality (due to flare/ vent):	National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001, SRO 1062(1)/2010 NEQS for Ambient Air. Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015. Punjab Environmental Quality Standards for Ambient Air, 2016. Balochistan Environmental Quality Standards for Ambient Air.	DG EPA Federal/ Provincial	--	--	☑	--	
164. Quarterly basis, monitoring noise levels:	Pakistan Environment Protection Act XXXIV, 1997, National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001,	DG EPA Federal/ Provincial	☑	☑	☑		

Sulphur Dioxide (SO_2)	Annual Average* = 80 ug/m^3 24 hours** = 120 ug/m^3	Ultraviolet Fluorescence method
Oxides of Nitrogen as (NO)	Annual Average* = 40 ug/m^3 24 hours** = 40 ug/m^3	Gas Phase Chemiluminescence
Oxides of Nitrogen as (NO_2)	Annual Average* = 40 ug/m^3 24 hours** = 80 ug/m^3	Gas Phase Chemiluminescence
O_3	1 hour = 130 ug/m^3	Non dispersive UV absorption method
Suspended Particulate Matter (SPM)	Annual Average* = 360ug/m^3 24 hours** = 500ug/m^3	High Volume Sampling, (Average flow rate not less than 1.1 m^3/minute)
Respirable Particulate Matter.PM_{10}	Annual Average* = 120ug/m^3 24 hours** = 150ug/m^3	B Ray absorption method
Respirable Particulate Matter. $PM_{2.5}$	Annual Average* = 25 to 40ug/m^3 24 hours** = 40ug/m^3	B Ray absorption Method
Lead (Pb)	Annual Average* = 1.0ug/m^3 24 hours** = 1.5 ug/m^3	ASS Method after sampling using EPM 2000 or equivalent Filter Paper
Carbon Monoxide (CO)	8hours** = 5 mg/m^3 1 hour** = 10 mg/m^3	Non Dispersive Infra Red (NDIR) method

* Annual arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.
** 24 hourly /8 hourly values should be met 98% of the time in a year. 2% of the time, it may exceed but not on two consecutive days.

Noise –dB(A) Leq* 55 (Day Time); 45 (Night Time)	Residential Camp Area
Noise –dB(A) Leq* 75 (Day Time); 65 (Night Time)	Engine Hall, Plant Premises

1. Day time hours: 6.00 a.m to 10.00 p.m.

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
2. Night time hours: 10.00 p.m. to 6.00 a.m. 3. Silence zone: Zone which are declared as such by the competent authority. An area comprising not less than 100 meters around hospitals, educational institutions and courts. 4. Mixed categories of areas may be declared as one of the four above-mentioned categories by the competent authority. *dB(A) Leq: Time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.	SRO 1064(1)/2010. Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015. Punjab Environmental Quality Standards for Noise, 2016. Balochistan Quality Standards for Noise 2020.						
165. Flammable Liquids Monitoring at Condensate Storage Tanks, Refueling Area, Condensate Loading Areas, Chemical Storage (Need basis/ Annually) (i) Methanethiol (Methyl Mercaptan) Odor Threshold: 0.002 ppm TWA: 10 ppm STEL: 15 ppm (ii) Benzene Odor Threshold: 1 ppm TWA: 1 ppm STEL: 5 ppm (iii) Toulene Odor Threshold: 1 ppm TWA: 100 ppm STEL: 150 ppm (iv) Xylene Odor Threshold: 1 ppm TWA: 150 ppm STEL: 150 ppm	OSHA	EPA	--	--	☑	--	

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<table>
<tr><th rowspan="2">Requirement</th><th rowspan="2">Regulation, Law, Recommended Practice</th><th rowspan="2">Authority/ Stakeholders</th><th colspan="4">Applicable</th><th rowspan="2">Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)</th></tr>
<tr><th>Seismic</th><th>Drilling</th><th>Production</th><th>Offices Buildings</th></tr>
<tr><td colspan="8">(v) Methanol (Methyl Hydroxide/ Monohydroxymethane)
TWA: 200 ppm
STEL: 250 ppm</td></tr>
<tr><td>166. Notify employees on initiation/ reassignment of employment amidst following atmospheric condition and provide continuous monitoring equipment, SCBA/ SAR, buddy system, wind sock, warning signs if levels exceed and provide Emergency Preparedness & Response Plan
(i) H2S
TWA: 10 ppm
STEL: 15 ppm
(ii) SO2
TWA: 2 ppm
STEL: 5 ppm</td><td>6.1- 6.4 Safety Procedure & ER of DGPC Guidelines for Operational SHE Management 1996</td><td>DGPC</td><td>--</td><td>☑</td><td>☑</td><td>--</td><td></td></tr>
<tr><td>167. National Standards for Drinking Water Quality
<table>
<tr><th>#</th><th>Properties/ Parameters</th><th>Proposed Standard Values For Pakistan</th></tr>
<tr><td colspan="3">Bacterial</td></tr>
<tr><td>1.</td><td>All water intended for drinking (E.Coli or Thermotolerant Coliform bacteria)</td><td>Must not be detectable in any 100 ml sample</td></tr>
<tr><td>2.</td><td>Treated water entering the distribution system (E.Coli or thermotolerant coliform and total coliform bacteria)</td><td>Must not be detectable in any 100 ml sample</td></tr>
<tr><td>3.</td><td>Treated water in the distribution system (E.coli or thermotolerant coliform and total coliform bacteria)</td><td>Must not be detectable in any 100 ml sample. In case of large supplies, where sufficient samples are examined, must not be present in 95% of the samples taken throughout any 12-month period.</td></tr>
<tr><td colspan="3">Physical</td></tr>
<tr><td>4.</td><td>Colour</td><td>≤ 15 TCU</td></tr>
<tr><td>5.</td><td>Taste</td><td>Non objectionable/ Acceptable</td></tr>
<tr><td>6.</td><td>Odour</td><td>Non objectionable/ Acceptable</td></tr>
<tr><td>7.</td><td>Turbidity</td><td>< 5 NTU</td></tr>
</table></td><td>Pakistan Environment Protection Act XXXIV, 1997, National Environmental Quality Standards (NEQS), NEQS (Self-Monitoring and Reporting by Industry) Rules 2001, SRO 1063(1)/2010

Sindh Environmental Industrial Waste Water, Effluents, Domestic, Sewerage, Industrial Air Emission and Ambient Airs, Noise For Vehicles, Air Emissions for Vehicles and Drinking Water Quality Standards 2015

Punjab Environmental Quality Standards for Drinking Water, 2016</td><td>DG EPA Federal/ Provincial</td><td>☑</td><td>☑</td><td>☑</td><td>☑</td><td></td></tr>
</table>

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					Seismic	Drilling	Production	Offices Buildings	
8.	Total Hardness as $caCO_3$	< 500 mg/l	Balochistan Environmental Quality Standards for Drinking Water.						
9.	TDS	< 1000							
10.	pH	6.5-8.5							
Radioactive									
11.	Alpha Emitters bq/L or pCi	0.1							
12.	Beta emitters	1							
Chemical									
	Essential Inorganics	*mg/Litre*							
13.	Aluminum (Al) mg/l	≤0.2							
14.	Antimony (Sb)	≤0.005							
15.	Arsenic (As)	≤0.05							
16.	Barium (Ba)	0.7							
17.	Boron (B)	0.3							
18.	Cadmium (Cd)	0.01							
19.	Chloride (C)	<250							
20.	Chromium (Cr)	≤0.05							
21.	Copper (Cu)	2							
Toxic									
	Toxic Inorganics	*mg/Litre*							
22.	Cyanide (CN)	≤0.05							
23.	Fluoride (F)*	≤1.5							
24.	Lead (Pb)	≤0.05							
25.	Manganese (Mn)	≤0.5							
26.	Mercury (Hg)	≤0.001							
27.	Nickel (Ni)	≤0.02							
28.	Nitrate (NO3)*	≤50							
29.	Nitrite (NO2)*	≤3							
30.	Selenium (Se)	0.01							
31.	Residual chlorine	0.2 – 0.5 at consumer end 0.5-1.5 at source							
32.	Zinc (Zn)	5.0							
.									
168. **Pollution Charge for Industry:** Determination of pollution charge. Responsibility for calculation, reporting and payment. Determination of pollution level.			The Pollution Charge for Industry (Calculation and Collection) Rules, 2001. The Balochistan Environmental Pollution Charge for Industry (Calculation and Collection) Rules, 2020.	DG EPA Federal/ Provincial	☑	☑	☑		

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
169. Licensing of Drivers of Motor Vehicles	The Provincial Motor Vehicles Ordinance, 1965. CHAPTER II Baluchistan, N.W.F.P., Punjab, Sindh Motor Vehicles Rules, 1969. Provincial Motor Vehicles (Amendment) Act, 2016 for ICT.	Licensing Authority SP Police of the District.	☑	☑	☑	☑	
170. Registration of Motor Vehicles	The Provincial Motor Vehicles Ordinance, 1965. CHAPTER III Baluchistan, N.W.F.P., Punjab, Sindh Motor Vehicles Rules, 1969. Provincial Motor Vehicles (Amendment) Act, 2016 for ICT.	Registering authority; Senior Excise & Taxation Officer or Excise and Taxation Officer of the District	☑	☑	☑	☑	
171. Construction, Equipment and Maintenance of Motor Vehicles	CHAPTER IV The Provincial Motor Vehicles Ordinance, 1965. Baluchistan, N.W.F.P., Punjab, Sindh Motor Vehicles Rules, 1969. Provincial Motor Vehicles (Amendment) Act, 2016	Traffic Control Authorities	☑	☑	☑	☑	

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
	for ICT.						
172. Fatal accident - Inform CIM immediately by phone or fax - Notice in Form-VIII within 48 hours - Place of accident shall not be disturbed for 3 clear days - Final accident report in Form-IX within 3 months	Sec. 20 (1)-a, Sec. 20(1)-b, Reg. 10 (1) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974	Chief Inspector of Mines, Ministry of Petroleum and Natural Resources	☑	☑	☑	--	
173. Serious accident - Inform CIM immediately by phone or fax - Notice in Form-VIII within 48 hours - Final accident report in Form-IXwithin 3 months	Sec. 3(k), Sec.20 (1)-a, Reg. 10(1) & 10(5) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
174. Minor accident - Notice on Form-VIII within 15 days - Final accident report in Form-IX within 3 months	Sec. 20 (2), Reg. 10(2) & 10(5) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
175. Dangerous occurrence - Inform CIM immediately by phone or fax - Notice in Form-VIII within 48 hours	Sec.20 (1)-b-c-d-e-f-g Reg. 10(1) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
176. Minor or Serious accident converts into fatal accident - Inform CIM immediately by phone or fax - Notice in Form-VIII within 48 hours giving reference to the earlier notice	Reg. 10(3) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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177. Minor accident converts into serious accident - Inform CIM immediately by phone or fax - Notice in Form-VIII within 48 hours giving reference to the earlier notice	Reg. 10(4) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
178. Detection of Occupational Disease; Notice in Form-X to CIM within 48 hours	Reg. 11 of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
179. Detection of Epidemic Disease; Notice in Form-X to CIM within 48 hours	Reg. 11 of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
180. End of the year Returns to CIM; Annual Returns in Form-I, II, III, IV & V to CIM on or before 21st February	Reg. 3(1) of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		☑	☑	☑	--	
181. Change in name or ownership of a well or field (within 07 days, CIM informed in writing)	Reg. 7 of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		--	☑	☑	--	
182. New appointment of agent or manager or change of address or contact numbers (within 07 days, CIM informed in writing)	Reg. 8 of Returns, Notices and Records, Oil and Gas (Safety in Drilling and Production) Regulations 1974		--	☑	☑	--	
183. Employment Record: Register of employees schedule A	Sec. 28(1), Rule-11 of Returns, Notices and Records, Consolidated Mine Rules,1952		☑	☑	☑	--	
184. Overtime Record: Register of overtime schedule F	Sec. 25-a(3), Rule-23 of Returns, Notices and Records, Consolidated Mine Rules,1952		☑	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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185. Annual leaves Record: Register of annual leaves-schedule G	Rule 23-A of Returns, Notices and Records, Consolidated Mine Rules,1952		☑	☑	☑	--	
186. Casual leaves Record: Register of causal leaves, sick leave, and festival holidays schedule F	Rule 23-A of Returns, Notices and Records, Consolidated Mine Rules,1952		☑	☑	☑	--	
187. Ensure systematic and effective identification of the existing and new hazards at the workplace on a regular basis	Section 3.Duties of Employer, The Punjab Occupational Safety and Health Act, 2019	Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	
188. Get the employees vaccinated and inoculated against occupational related deceases at such intervals as may be prescribed			☑	☑	☑	--	
189. Inform the employees in an understandable manner and in accessible written form, before any work commences, the hazards associated with their work, risks involved and the preventative and protective measures that need to be taken			☑	☑	☑	--	
190. Design, siting, structural features, installation, maintenance, repair and alteration of workplaces and means of access thereto and egress therefrom	Section 8.Safety and Health, The Punjab Occupational Safety and Health Act, 2019	Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	
191. Design, construction, use, maintenance, testing and inspection of machinery and equipment liable to present hazards and, as appropriate, their removal and transfer			☑	☑	☑	--	
192. Instructions, training and supervision in relation to employment on dangerous machine and fencing or casing of machinery, wet floors, open wiring, safety escapes, emergency exits, safe electric wiring and fitting etc.			☑	☑	☑	--	
193. (1). Each employee shall be provided with a hygiene card in which, during the month of January and July every year, entries shall be recorded after examination by a registered medical practitioner, appointed by the employer, to the effect that the employee is not suffering from any contagious, occupational or infectious disease. *The fee of such an examination shall be fixed by the Government and will be borne by the occupier or manager of the workplace.*	Section 11, The Punjab Occupational Safety and Health Act, 2019	Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	

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(2). If the employee is found to be suffering from any contagious, occupational or infectious disease, on an examination under sub-section (1), he shall not be permitted to work till he is declared fit by the medical practitioner appointed under subsection (1)							
194. An employer or a self-employed person shall not build, fit out, alter or use any site or building as a workplace, unless such plan, site or building is approved in such manner as may be prescribed	Section 12, The Punjab Occupational Safety and Health Act, 2019	Chief Inspector, Occupational Safety and Health Council, Govt. of the Punjab	☑	☑	☑	--	
195. Cooperation to control the spread of dangerous epidemic disease in Province of Sindh.	The Sindh Epidemic Diseases Act, 2014	Deputy Commissioner through Govt. of Sindh,	☑	☑	☑	☑	
196. <u>General duties of Employer (Location/ Area Manager)</u> Every employer shall inter-allia ensure that there exists effective method for: *a) systematically identifying existing standards to workers at work; and* *b) systematically identifying new hazards to workers at workplace and* *c) regularly assessing each hazard identified and determining whether or not it is a significant hazard.* Where there occurs any accident or harm, he shall take all practicable steps to ensure that the occurrence is so investigated as to determine whether it was caused by or arise from a significant hazard. Without prejudice to the generality of the duty of an employer under the preceding sub-sections the duty of the employer shall: *a) provide and apply of processes systems of work and tasks to be safe and without risks of injury to health.* *b) provide and maintain tools, machinery, equipment and appliances which are safe and without risks of injury to worker's health* *c) make arrangements to ensure the safety and absence of risk of injury to health of workers in connections with the use, handling, storage, disposal and transport of articles, materials and substances*	Section 4-6 of The Sindh Occupational Safety And Health Act 2017	Directorate of Labor Sindh	☑	☑	☑	--	

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d) make arrangements to control and prevent physical , chemical, biological, radiological, ergonomics, psychosocial or any other hazards affect the safety and health of workers and other persons at workplace. *e) provide such information, instructions, training and supervision as in necessary to ensure safety and health at work of all workers;* *f) maintain workplace or place of work in a condition which is safe, clean, orderly and without risks of injury to health and the provisions and maintenance of safe means of access to and egress from it;* *g) inform the workers in an understandable manner before any work commences, the hazards associated with their work risk involved and the preventive and protective measures that need to be taken;* *h) provide for the workers, where necessary (when hazards cannot be otherwise eliminated and controlled) adequate protective clothing and protective equipment of a type approved by Government to prevent every risk of injury and of adverse effects on health;* *i) maintain particulars of all accidents occurring at the workplace;* *j) provide measures, where necessary including adequate first aid arrangements to deal with emergencies dangerous occurrences accidents and industrial disasters.* *k) take all practical measures for the prevention of fires and for the provision of safety measures in the event of fire.*							
197. General duties of worker and volunteer It shall be the duty of every worker and volunteer while at workplace to ensure; *a) The safety and health of the other persons who may be affected by acts or omission at workplace of that worker and shall not willfully do anything to endanger himself or others;* *b) That the worker and volunteer cooperates with the employer or any other on whom a duty or requirement, in fulfilling such duty or requirement;* *c) That the worker and volunteer shall use any protective clothing and protective equipment provided to that worker;&*	Section 8 of The Sindh Occupational Safety And Health Act 2017		☑	☑	☑	--	

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d) That the worker and volunteer doses not willfully interfere with or willfully misuse any means, appliance, convenience or equipment or any other thing provided for securing the safety and health of person at the workplace. If an issue arises as to unsafe work, which poses an immediate threat to the safety or health of workers and volunteer, the matter shall be resolved through dispute resolution procedures. Where the threat cannot be controlled, the worker or volunteer affected thereby may cease work. Provided that where work is ceased for reasons explained above, the employer has the right to direct the concerned workers and volunteers to undertake temporary alternative work. A worker shall also report any occupational accident, occupational disease, dangerous occurrences or commuting accident in accordance with occupational safety and health policy applying at that place of work.							
198. <u>General duties of Supplier as regards articles and substances for use at work.</u> It shall be the duty of supplier who designs, manufactures, imports or supplies any article for use at workplace to take specified steps sufficient; *i) to ensure, so far as is reasonably practicable, that the article is so designated and constructed as to be safe and without risks to health when properly used.* *ii) to carry out or arrange for carrying out of such testing and examination as may be necessary for the performance of the duty imposed on him by the preceding paragraph.* *iii) to take such steps as are necessary to secure that there will be available in connection with the use of the article at work adequate information about the use for which it is designed and has been tested and about any condition necessary to ensure that when put to that use, it will be safe and without risk to health* *iv) to ensure so far as reasonably practicable that the substance is safe and without risk to health when properly*	Section 9 of The Sindh Occupational Safety And Health Act 2017		☑	☑	☑	--	

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used. It shall be the duty of supplier who designs manufactures or supplies any tools, machinery, equipment or substance for use at work to ensure: *i) that such tools, machinery, equipment or substance is safe and without risk of injury to health when correctly used with regard to safe practices* *ii) that persons to whom such tools, machinery, equipment or substance are supplied be proved with all information as regards handling, commissioning use and maintenance.* **Explanation:-**Supply of tools, machinery and equipment includes handling, assembling, installing, erecting and testing.							
199. Where an accident occurs at workplace, no person shall, unless authorized to do so by an Inspector, remove or in any way interfere with or disturb any wreckage, articles, substance or thing related to the incident except to the extent necessary.	Section 24 of The Sindh Occupational Safety And Health Act 2017		☑	☑	☑	--	

200. Effective & suitable provision shall be made for securing & maintaining in every work-room:
- Adequate ventilation by the circulation of fresh air; and
- Such temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health, and in particular:
  - The walls & roofs shall be of such material and so designed that such temperature shall not be exceeded but kept as low as practicable
  - Such adequate measures as are practicable shall be taken to protect the workers by separating the process which produces extremely such temperature from the work room by insulating the hot parts or by other effective means.
	Ventilation & temperature (Section 17) of Sindh Factories Act 2015	Directorate of Labor Sindh	☑	☑	☑	--	

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201. No stationary internal combustion engine shall be operated unless the exhaust is conducted into open air and the exhaust pipes are insulated to prevent scalding and radiation heat, and no internal combustion engine shall be operated in any room unless effective measures have been taken to prevent such accumulation of fumes.	Dust & fumes (Section 18) of Sindh Factories Act 2015		☑	☑	☑	--	
202. No work-room shall be over-crowded to an extent injurious to the health of the workers employed therein. There shall be provided for every worker employed in a work-room at least 500 ft^3 of space.	Overcrowding (Section 20) of Sindh Factories Act 2015		☑	☑	☑	--	
203. Lighting - Proper lighting in latrines, passages, stairs, hoists, factory ground and other parts - Lighting at regular working places not to be less than 6 feet candles (64.5 lux or lumens) at a level of 3 feet above the ground - Lighting in the interior posts where persons pass not to be less than 1 foot candle (10.76 lux or lumens) at floor level - Emergency lighting of special points in work-room and passages to function automatically in case of a failure of the ordinary electric system	Lighting (Sections 19 & 33-J) of Factory Act 1934 & Provincial Factory Rules Lighting (Section 21) of Sindh Factories Act 2015		☑	☑	☑	--	
204. Effective arrangements shall be made to provide and maintain at suitable points conveniently situated for all workers employed therein, a sufficient supply of wholesome drinking water. All such points shall legibly be marked as "Drinking Water" in a language understood by the majority of workers and no such point shall be situated within 20' of any washing place, urinal or latrine. 205. Wherein more than 250 workers are ordinarily employed, provision shall be made for the cooling of drinking water during the hot weather by effective means and for distribution thereof and arrangement shall also be made for the daily renewal of water if not laid on.	Drinking Water (Section 22) of Sindh Factories Act 2015		☑	☑	☑	--	
206. Sufficient latrines and urinals of prescribed types shall be provided conveniently situated and accessible to workers at all times while they are in the working areas; such latrines and urinals shall be adequately lighted and	Latrines and urinals (Section 23) of Sindh Factories Act 2015		☑	☑	☑	--	

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ventilated; all such latrines and urinals shall be maintained in a clean and sanitary condition at all times with suitable detergents or disinfectants or with both.							
207. Each worker shall be provided with a "hygiene card' in which during the month of January and July every year the entries shall be recorded after examination by appointed doctor to the effect that the worker is not suffering from any contagious or infectious disease. If a worker is found to be suffering from any contagious or infectious disease on an examination, he shall not be appointed on work till he is declared free of such a disease.	Precautions against contagious or infectious disease (Section 25) of Sindh Factories Act 2015		☑	☑	☑	--	
208. In every factory wherein not less than 500 workers are ordinarily employed, the occupier or manager shall employ such number of Welfare Officers, having such qualifications, to perform such duties and on such terms and conditions as may be prescribed.	Welfare Officer (Section 28) of Sindh Factories Act 2015		☑	☑	☑	--	
209. Gauge glasses to Boilers having pressure exceeds 100 lbs per sq. inch	Pressure Plants Sections 33) of Factory Act 1934 & Provincial Factory Rules		--	--	☑	--	
210. Register for examination of lifting machines	Crane and other lifting machinery (Sections 33) of Factory Act 1934 & Provincial Factory Rules		☑	☑	☑	☑	
211. Testing of crane and other hoisting machines with gear to be tested with a 25% excess proof load with safe working load of upto 20 tons			☑	☑	☑	☑	
212. Safety measures to prevent any person from falling into the Pits, Sumps & Opening in Floor	Pits, Sumps & Opening in Floor (Sections 33E) of Factory Act 1934 & Provincial Factory Rules		☑	☑	☑	--	

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213. Carrying of Loads -No adult male worker to carry load beyond 200 lbs. - Women over 17, max. weight 50 lbs. -Male between 15 & 17, max. weight 50 lbs. - Female between 15 & 17, max. weight 40 lbs. - Child below 15 years, max. weight 35 lbs.	Carrying of loads (Sections 33 f) of Factory Act 1934 & Provincial Factory Rules		☑	☑	☑	--	
214. Provision of effective screen and goggles for the protection of eyes	Protection of Eye (Sections 33-G) of Factory Act 1934 & Provincial Factory Rules		☑	☑	☑	--	
215. Provision of egress or manhole of 18" dia. for confined space with dangerous fumes	Precautions against dangerous fumes (Sections 33 K) of Factory Act 1934 & Provincial Factory Rules		--	☑	☑	--	
216. Pits to be used for storage or disposal of produced salt water should be lined with the capability of not causing pollution of surrounding agricultural land or pollution of surface or subsurface water. Evaporation ponds used for disposal of production water to be constructed to prevent vertical and horizontal seepage.	10.1.2 Produced Water Pits of DGPC Guidelines for Operational SHE Management 1996		--	☑	☑	--	
217. Installation Guidelines –Underground Injection Well Disposal: (i) Surface Casing to be set at least 200 feet below lowermost underground source of drinking water and cemented back to the surface (ii) Casing and cementing to take place as to prevent movement of fluids into or between underground sources of drinking water or agricultural sources of freshwater. (iii) Injection wells to be equipped with tubing set on a mechanical packer, no higher than 150 feet above the top of the disposal zone.	10.1.4 (b)-(d) Installation Guidelines – Underground Injection Well Disposal of DGPC Guidelines for Operational SHE Management 1996	DGPC/ EPA	--	☑	☑	--	

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218. Operating Guidelines –Underground Injection Well Disposal (i) Depth (meters) of the target zone of injection to be so that it has no current or potential future use as a reservoir for drinking water or agricultural use. (ii) Injection between the outermost casing protecting the aquifers and the well bore to be prohibited. (iii) Calculation of maximum injection pressure (psi) at the wellhead so as to assure that the pressure during injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to the aquifers which must be protected. (iv) Injection pressure not to cause the movement of injection or formation fluids into an underground source of drinking water.	10.1.5 (a)-(d) Operating Guidelines – Underground Injection Well Disposal of DGPC Guidelines for Operational SHE Management 1996		--	--	☑	--	
219. Observation of injection pressure, flow rate and cumulative volume at reasonable intervals no greater than thirty days: a. Weekly for produced fluid operations; b. Monthly for enhanced recovery operations; and c. Daily for injection of liquid hydrocarbons and injection for withdrawal of stored hydrocarbons.	10.1.6 (b) Monitoring Guidelines – Underground Injection Well Disposal of DGPC Guidelines for Operational SHE Management 1996		--	--	☑	--	
220. Discharge to Surface Water a. To ensure that the receiving water has adequate assimilation capacity. b. The produced water must be tested and must be below 500 ppm chlorides and 10 ppm oil and grease content to allow discharge. c. To prohibit from discharging produced water, where a sensitive resource is defined as: a coral community, mangrove, fish farm or intensive commercial fishing area, tourism recreation area, national park or area which is a known habitat for endangered, threatened or rare species. d. Quarterly reports of discharge volumes and quality of the discharge to be sent to Federal EPA and other	10.1.8 (a)-(d) Discharge to Surface Water – Underground Injection Well Disposal of DGPC Guidelines for Operational SHE Management 1996		--	--	☑	--	

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interested provincial government agencies on a quarterly basis.							
221. Annual Inspection of Boilers for renewal of Certificate	Section 8(3), 8(4) & Rule 25(a) of Boiler Act 1923 & Provincial Boiler Rules 1926 (Amended 1986)	Provincial Directorate of Industries & Mineral Development (Boiler Inspection Wing)	--	--	☑	☑	
222. Prohibition of Certain Discharges	Section 11 of Boiler Act 1923 & Provincial Boiler Rules 1926 (Amended 1986)		--	--	☑	--	
223. Permission for Handling of Hazardous Material	Section 14 of Boiler Act 1923 & Provincial Boiler Rules 1926 (Amended 1986)		--	--	☑	--	
224. Operator (or ensure Contractor) to obtain License form Inspector of Explosives for: a) storage/ possession and use of explosive (and detonator) and its accessories; and b) transportation of explosive (and detonator) and its accessories from licensed premises to specified place therein.	Explosive Rule 2010/ Explosives Act, 1884 (for Import And Storage Of Explosives Materials)	Inspector of Explosives, Provincial	☑	☑	☑	--	
225. To obtain the License for the Extraction of LPG	Liquefied Petroleum Gas (Production and Distribution) Rules, 2001 and the OGRA Ordinance 2002	Oil and Gas Regulatory Authority (OGRA)	--	--	☑	--	
226. A licensee shall locate, construct, maintain and operate his works connected with storage, filling and transportation of LPG in accordance with a license and shall comply with the provisions of the gas cylinder rules.	Section 26. Protection of Public of Petroleum Rules 1937/ Gas Cylinder Rules 1940	Inspector of Explosives, Provincial	--	--	☑	--	
227. A licensee shall mark with conspicuous signs on the place at which the storage tanks are located.	Section 28. Marking of Storage of Petroleum Rules 1937		☑	☑	☑	☑	
228. <u>Application for license.</u> An application for grant of license shall be filed with the Agency in Form-A of Schedule-II. 229. <u>Validity of license.</u> A license shall be valid for a period of one year from the date of issue.	Section 4& 13 of The Hazardous Substances Rules, 2014	Ministry of Environment	☑	☑	☑	--	

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230. <u>Packing and labeling.</u> (1) A container of a hazardous substance shall be of such size, material and design as to ensure that – *(a) it can be stored, transported and used without leakage and safely;* *(b) the hazardous substance therein does not deteriorate in a manner as to render it more likely to cause, directly or in combination with other substances, an adverse environmental effect.* (2) The following information shall be printed conspicuously, legibly and indelibly on every container of a hazardous substance:- *(a) name of the hazardous substance;* *(b) name, address and license number of the licensee;* *(c) net contents (volume or weight);* *(d) date of manufacture and date of expiry, if any;* *(e) a warning statement comprising –* (i) the word "DANGER!" in red on a contrasting background; (ii) a picture of a skull and cross-bones; (iii) pertinent instructions for use, storage and handling and safety precautions relating thereto. *(f) instructions regarding return or disposal of the empty container:* Provided that if the hazardous substance has an inner container as well as an outer container, the information shall be printed on both containers: Provided further that if it is impracticable to print the aforesaid information on the container itself due to its size, material or design, the same shall be printed on a label or tag which shall be conspicuously affixed or attached to the container in such manner as to render it difficult to remove. The empty chemical containers or drums may not be used for other purposes. *(g) basic instructions mentioning immediate steps to be taken in case of any accident or emergency, preferably in local language.*	Section 9 of The Hazardous Substances Rules, 2014		☑	☑	☑	--	

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231. Conditions for premises. (1) The premises in which a hazardous substance is generated, collected, consigned, treated, disposed of, stored or handled shall - *(a) comply with the conditions specified in Schedule-IV;* *(b) be fitted with a notice on the outer door or gate bearing the following information:-* (i) the words "DANGER ! HAZARDOUSSUBSTANCE!" in red, on a contrasting background; and (ii) a prominent picture of a skull and cross-bones. (2) In case of import of hazardous substances, proponent shall provide approval from Climate Change Division (International Convention Wing) Government of Pakistan.	Section 10 of The Hazardous Substances Rules, 2014		☑	☑	☑	--	
232. General safety precautions. (1) A licensee shall ensure that the following safety precautions are conveyed to persons to whom the hazardous substances are sold or delivered:- *(a) carefully read and follow the instructions and safety precautions printed on the container; (Urdu or local language translation of the same may be preferably given to the local buyers);* *(b) when opening the container, wear protective clothing and equipment including helmet or cloth cap, safety spectacles or goggles, respirator or mask, rubber or plastic gloves, and work boots, as may be required;* *(c) avoid contact of the hazardous substance with exposed skin or eyes, and if such contact occurs, wash the exposed area immediately and consult a doctor;* *(d) avoid contaminating clothing, gloves and footwear with the hazardous substance, and if such contamination occurs, remove the clothing, gloves and footwear immediately and wash the same thoroughly before reuse;* *(e) do not eat, drink or smoke in the vicinity of hazardous substances.*	Section 11 of The Hazardous Substances Rules, 2014		☑	☑	☑	--	
233. Safety precautions for workers.	Section 12 of The Hazardous Substances		☑	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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A licensee shall ensure that the following safety precautions are taken in respect of workers employed by him for handling hazardous substances: *(a) No worker aged below eighteen years or over sixty years shall be employed for any job involving physical handling of hazardous substances.* *(b) All workers shall be thoroughly trained in safety precautions for handling hazardous substances and shall be supervised by qualified supervisors.* *(c) Protective clothing and equipment comprising helmet or cloth cap, safety spectacles or goggles, respirators or masks, rubber or plastic gloves and work-boots shall be available for all workers who may be exposed to any hazardous substance, and no worker shall be permitted on job unless and until he is wearing such protective clothing and equipment.* *(d) Adequate supply of water shall be made available to the workers for personal washing as well as for washing their protective clothing and equipment.* *(e) Protective clothing and equipment of the workers shall be washed and cleaned as often as may be required to ensure their efficacy.* *(f) No worker shall be permitted to eat, drink or smoke till he has removed his protective clothing and equipment, washed his hands and face, and left the place of work.* *(g) All fire-fighting, emergency and safety equipment shall be frequently checked and properly maintained.* *(h) First-aid medical facility equipped with required antidotes shall be available in the premises, supervised by trained staff.* *(i) Medical check-up of all workers shall be carried out at the time of employment and at least once a year thereafter.* *(j) A record of every worker shall be maintained containing, amongst other details, his name and address, his medical check-up history, and the hazardous substances handled by him.*	Rules, 2014						
234. Notification of major accident.	Section 18 of The Hazardous Substances		☑	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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(1) Where a major accident occurs on the premises of a licensee, the licensee shall immediately notify the Agency concerned and shall submit within twenty four hours and weekly thereafter, a report in Schedule-V. (2) On receipt of the report, the Agency shall require the licensee to carry out a detailed environmental audit of the major accident and initiate necessary action, in accordance with the approved safety plan or otherwise to control the major accident, mitigate its adverse environmental effect and prevent it from recurring.	Rules, 2014						
235. <u>Waste management plan.</u> (1) The waste management plan, if required to be submitted by an applicant under EPA Act, shall - *(a) provide for the generation, collection, transport and disposal of the hazardous waste in a manner which shall protect against an adverse environmental effect;* *(b) ensure that the hazardous waste is not mixed with nonhazardous waste, unless the applicant can prove that such mixing will better protect against an adverse environmental effect.* (2) The waste management plan shall be reviewed every year by the licensee to take into consideration the development of new technologies and management practices which can better protect against an adverse environmental effect, and if required revised waste management plan and fresh environmental impact assessment shall be submitted with the application for renewal of license. (3) If the waste management plan provides for export of the hazardous waste, such export shall only be allowed if it is in accordance with a bilateral, multilateral or regional agreement or arrangement that conforms to the requirements of Article 11 of the Convention on the Control of Trans-boundary Movements of Hazardous Waste and Their Disposal, Basel, 1989.	Section 19 of The Hazardous Substances Rules, 2014		☑	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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(4) The licensee shall inform the Agency on a yearly basis about - *(a) the quantity and characteristics of hazardous waste generated in the previous year; and* *(b) progress regarding implementation of the waste management plan.*							
236. Operator to ensure general compliance with all standards stipulated in the Pakistan Nuclear Regulatory Authority ordinance, 2001 and the rules promulgated thereunder, if NORM (naturally occurring radioactive materials) is encountered in petroleum storage vessels during petroleum production operations.	Pakistan Nuclear Regulatory Authority (PNRA) Ordinance, 2001	Pakistan Atomic Energy Commission (PAEC)	--	☑	☑	--	
237. Follow the procedure for obtaining the pertinent License(s) from the Pakistan Atomic Energy Commission.	Pakistan Nuclear Safety And Radiation Protection Regulations, 1990		--	☑	☑	--	
238. Weld integrity inspections through Certified Radiography Tests; Compliance dose limits are followed.	PNRA Guidelines		--	☑	☑	--	
239. <u>Management of NORM Waste</u> (2) In case the NORM waste contains activity concentrations higher than the specified values, prior approval of the Authority shall be required for the disposal of such NORM waste. Disposal methods for NORM waste shall be safe and practical that provides adequate protection to both human health and the environment. Such methods shall be designed to prevent contamination of natural resources such as underground water, soil, etc. (3) Purposeful dilution to render NORM exempt shall not be performed. (4) No person shall release NORM residue for unrestricted use unless it has activity concentration less than specified in Schedule IV (Levels for Exemption/Clearance of Radionuclide of Natural Origin) or the activity concentration does not exceed specific values derived so as to meet a dose criterion of the order of 1mSv in a year,	Regulations on Radioactive Waste Management 2019	Chairman, Pakistan Nuclear Regulatory Authority (PNRA)	--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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which is commensurate with typical doses due to natural background levels of radiation. (5) Records of disposal, including manifests, shall be maintained and made available as and when required by the Authority.							
240. Act provides that the employer is bound to pay compensation to a worker where personal injury has resulted in the course of the work.	Workers Compensation Act, 1923	Ministry of Labor & Manpower	☑	☑	☑	☑	
241. Precautions to be adopted by consumers, owner electrical contractor, electrical workmen, licensees and other suppliers of energy: No electrical installation work, including additions, alterations, repairs adjustments to existing installation, except such replacement of lamps, and fans, fuses, switches and other component parts of the installations as in no way alters its capacity or character shall be carried out upon the premises or on behalf of any consumer or owner for the purposes of the supply of energy to such consumer or owner, except by an electrical contractor licensed by the Provincial Government in this behalf and under the direct supervision of a person holding certificate of competency issued by the Provincial Government.	Rule 48 of Electricity Rules 1937; Electricity Act 1910	Electric Inspector, Provincial	--	☑	☑	--	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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242. Construction, Insulation and earthling of electric supply-licensed apparatus: (i) All electrical supply-lines and apparatus shall be sufficient in power and size and of sufficient mechanical strength for the work they may be required to undergo and, so far as is practicable, shall be so constructed, installed, protected, worked and maintained as to prevent danger. (ii) All insulating material shall be chosen with special regard to the circumstances of its proposed use. It shall be of mechanical strength sufficient for its purpose, and, so far as practicable, shall be of such a character or so protected as fully to maintain its insulating properties under working conditions temperature and moisture. (iii) No live parts shall be so exposed as to be capable of being touched by persons not intended to have access to them, (iv) Every part of a system shall be kept efficiently insulated from earth, accept that: a) the neutral point of a poly phase system may be earthed at one pint only; b) the mid-voltage points of any system, other that a concentric system may be earthed at one point only.	Rule 49 of Electricity Rules 1937; Electricity Act 1910	Electric Inspector, Provincial	--	☑	☑	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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243. Identification of earth and earthed neutral conductor and position of switches and cut-outs therein: (i) An indication of a permanent nature shall be provided to the earthed or earthed neutral conductor, or the conductor which is to be connected thereto, to enable such conductor to be distinguished from any live conductor. (ii) No cut-out, link or switch arranged to operate simultaneously on the earthed conductor and live conductor shall be inserted or remain inserted in any earthed conductor of a two-wire system or in any earthed neutral conductor of multi wire two-wire system or in any earthed neutral conductor of a multi wire system or in any conductor thereto with the following exceptions: a) A link for testing purposes, or b) A switch for use in controlling a generator or transformer, or c) A switch or link in the connection between the earthed conductor or the earthed neutral conductor and earthed at a generating station or sub-station for use in testing and emergencies only.	Rule 51 of Electricity Rules 1937; Electricity Act 1910		--	☑	☑	☑	
244. Metal casings on any electric supply-line or apparatus: All metal casings or metallic covering containing or protecting any electric supply-line or apparatus shall be connected with earth and shall be so joined and connected across all junction-boxes and other openings as to make good mechanical and electrical connection throughout their whole length.	Rule 54 of Electricity Rules 1937; Electricity Act 1910		--	☑	☑	☑	
245. Distinction of Circuits of different pressures: The owner of every generating station, sub-station, junction-box, or pillar in which there are any circuits or apparatus intended for operating a different pressures, shall ensure that the respective circuits are readily distinguishable from one another.	Rule 56 of Electricity Rules 1937; Electricity Act 1910		--	☑	☑	☑	

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246. Connection with earth of frames of generators etc.: The frame of every generator, stationery motor, and so far as is practicable, portable motor, and the metallic parts (not intended as conductors) of all transformers and regulating or controlling apparatus connected with the supply, shall be earthed by two separate and distinct connections with earth.	Rule 57 of Electricity Rules 1937; Electricity Act 1910		--	☑	☑	☑	
247. Lifting of Gas Cylinders: (i) Suitable cradles, slings, clamps or other effective means to be used when lifting cylinders with a hoist or crane (ii) Valves, shrouds and caps not to be used for lifting cylinders unless they have been designed and manufactured for this purpose (iii) Gas cylinders not to be raised or lowered on the forks of lift trucks unless adequate precautions are taken to prevent them from falling.			--	☑	☑	--	
248. Transport of Gas Cylinders: (i) Fitting of suitable protective valve caps and covers to cylinders, when necessary, before transporting to help prevent moisture and dirt from gathering in the valve of the cylinder, in addition to providing protection during transport. (ii) Gas cylinders to be securely stowed to prevent them from moving or falling. (normally in the vertical position, unless instructions for transport state otherwise)Regulators and hoses to be disconnected from cylinders whenever practicable. (iii) Gas cylinders not to be projected beyond the sides or end of a vehicle (eg fork-lift trucks) (iv) Gas cylinders to be clearly marked to show their contents (including their UN Number) and the danger signs associated with their contents (v) The transport of gas cylinders to be made subject to carriage requirements. For example, that: a) the vehicle is suitable for the purpose; b) the vehicle is suitably marked to show that it is carrying dangerous goods;	Gas Cylinder Rules 1940, Department of Explosives, Ministry of Industries and Production	Inspector of Explosives, Provincial	--	☑	☑	--	
			--	☑	☑	--	

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c) the driver is suitably trained; and d) the driver carries the appropriate documentation about the nature of the gases being carried.							
249. Storage of Gas Cylinders: (i) Gas cylinders not to be stored for excessive periods of time. (ii) Stocks of gas cylinders to be rotated to ensure first-in-is-first-used. (iii) Gas cylinders to be stored in a dry, safe place on a flat surface in the open air. If this is not reasonably practicable, store in an adequately ventilated building or part of a building specifically reserved for this purpose. (iv) Gas cylinders containing flammable gas should not be stored in part of a building used for other purposes. (v) Protect gas cylinders from external heat sources that may adversely affect their mechanical integrity. (vi) Gas cylinders should be stored away from sources of ignition and other flammable materials. (vii) Avoid storing gas cylinders so that they stand or lie in water. (viii) Ensure the valve is kept shut on empty cylinders to prevent contaminants getting in. (ix) Store gas cylinders securely when they are not in use. They should be properly restrained, unless designed to be freestanding. (x) Gas cylinders must be clearly marked to show what they contain and the hazards associated with their contents. (xi) Store cylinders where they are not vulnerable to hazards caused by impact, e.g. from vehicles such as fork-lift trucks.			--	☑	☑	--	

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250. **Standby and Fire Watch Personnel** i. Authority Having Jurisdiction (AHJ) shall have the authority to require standby fire personnel or an approved fire watch when potentially hazardous conditions or a reduction in a life safety feature exist due to the type of performance, display, exhibit, occupancy, contest, or activity; an impairment to a fire protection feature; or the number of persons present. ii. The owner, agent or lessee shall employ one or more qualified persons, as required and approved, to be on duty.	Section 1.7.17 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
251. **Plan Review** i. Where required by AHJ for new construction, modification, or rehabilitation, construction documents, design calculations and shop drawings shall be submitted, reviewed, and approved prior to the start of such work within the stipulated time frame as provided in Section 1.14. ii. The applicant shall be responsible to ensure that the following conditions are met: (1) The construction documents include all of the fire protection requirements. (2) The shop drawings are correct and in compliance with the applicable codes and standards. (3) The contractor maintains an approved set of construction documents on site.	Section 1.14 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
252. **Fire Design Failure** Any failure of the fire design shall be a joint responsibility of consultant, architect, contractor, owner, and head of AHJ unless otherwise specific responsibility is fixed through investigations.	Section 1.16.6 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
253. **Fundamental Requirements** **Multiple Safeguards:** 4.2.1.1 The design of every building or structure intended for human occupancy shall be such that reliance for property protection and safety to life does not depend solely on any single safeguard. 4.2.1.2 Additional safeguard(s) shall be provided for	Section 4.2 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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property protection and life safety in the event that any single safeguard is ineffective due to inappropriate human actions, building failure, or system failure. **Appropriateness of Safeguards:** Every building or structure shall be provided with means of egress and other safeguards of the kinds, numbers, locations, and capacities appropriate to the individual building or structure, with due regard to the following: (1) Characteristics of the occupancy (2) Capabilities of the occupants (3) Number of persons exposed (4) Fire protection available (5) Capabilities of response personnel (6) Height and type of construction of the building or structure (7) Other factors necessary to provide occupants with a reasonable degree of safety (8) Other factors necessary to protect the building and contents from damage. **Means of Egress:** **Unobstructed Egress:** 4.2.3.1.1 In every occupied building or structure, means of egress from all parts of the building shall be maintained free and unobstructed. 4.2.3.1.2 No lock or fastening shall be permitted that prevents free escape from the inside of any building other than in health care occupancies and detention and correctional occupancies where staff are continually on duty and effective provisions are made to remove occupants in case of fire or other emergency. 4.2.3.1.3 Means of egress shall be accessible to the extent necessary to ensure reasonable safety for occupants having impaired mobility. **Awareness of Egress System:** Every exit shall be clearly visible, or the route to reach every exit shall be conspicuously indicated. 4.2.3.2.2 Each means of egress, in its entirety, shall be arranged or marked so that the way to a place of safety is indicated in a clear manner.							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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Lighting: Illumination of means of egress shall be provided. **Occupant Notification:** In every building or structure of such size, arrangement, or occupancy that a fire itself could not provide adequate occupant warning, fire alarm systems shall be provided where necessary to warn occupants of the existence of fire. **System Design/Installation:** Any fire protection system, building service equipment, feature of protection, or safeguard provided to achieve the goals of these Provisions shall be designed, installed, and approved in accordance with applicable codes and standards.							
254. **General Requirements** **Fire Certificate:** The owner shall obtain fire certificate from AHJ after every three years. **Construction, Repair, and Improvement Operations:** Buildings or portions of buildings shall be permitted to be occupied during construction, repair, alterations, or additions only where required means of egress and required fire protection features are in place. **Escape Facilities:** 4.3.4.2.1 In buildings under construction, adequate escape facilities shall be maintained at all times for the use of construction workers. 4.3.4.2.2 Escape facilities shall consist of doors, walkways, stairs, ramps, fire escapes, ladders arranged in accordance with the general principles of the Code. **Changes of Occupancy:** 4.3.5.1 In any building or structure, whether or not a physical alteration is needed, a change from one occupancy classification to another shall be permitted only where such a structure, building, or portion thereof conforms with the requirements of these Provisions that apply to new construction for the proposed new use.	Section 4.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
255. **Building Owner/Occupant Responsibilities** The owner, operator, or occupant of a building that is deemed unsafe by AHJ shall abate, through corrective action approved by AHJ, the condition causing the building	Section 6.2.4 & 6.2.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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to be unsafe either by repair, rehabilitation, or other corrective action approved by AHJ. The owner, operator, or occupant, or any person in control of a building or premises shall keep records of all maintenance, inspections, and testing of fire protection systems, fire alarm systems, smoke control systems, emergency evacuation and relocation drills, emergency action plans, emergency power, elevators, and other equipment as required by AHJ.							
256. **Building Evacuation** Persons shall not fail to leave a building when notified to do so or when directed by AHJ as a result of a known or perceived fire emergency. Persons shall not fail to leave a building when a fire alarm system is activated, unless otherwise provided for in an approved building fire evacuation plan or during routine testing or maintenance.	Section 6.4 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
257. **Fire Drills** **Where Required:** Emergency egress and relocation drills conforming to these Provisions shall be conducted. Drills shall be designed in cooperation with the local authorities. **Simulated Conditions:** Drills shall be held at expected and unexpected times and under varying conditions to simulate the unusual conditions that can occur in an actual fire emergency. **Relocation Area:** Drill participants shall relocate to a predetermined location and remain at such location until a recall or dismissal signal is given. A written record of each drill shall be completed by the person responsible for conducting the drill and maintained in an approved manner.	Section 6.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
258. **Tampering with Fire Safety Equipment** Persons shall not render any portable or fixed fire extinguishing system or device or any fire-warning system or device inoperative or inaccessible.	Section 6.7 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
259. **Emergency Action Plans** **Plan Requirements** Emergency plans shall include the following:	Section 6.8 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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(1) Procedures for reporting of emergencies (2) Occupant and staff response to emergencies (3) Evacuation, relocation and shelter-in-place procedures appropriate to the building, its occupancy, emergencies, and hazards (4) Appropriateness of the use of elevators (5) Design and conduct of fire drills (6) Type and coverage of building fire protection systems (7) Formation of emergency response teams (8) Other items required by AHJ. Emergency action plans shall be submitted to AHJ for review when required by AHJ. Emergency action plans shall be reviewed and updated as required by AHJ.							
260. **Smoking** Where smoking is considered a fire hazard, AHJ shall be authorized to order the owner in writing to post "No Smoking" signs on conspicuous locations. In areas where smoking is permitted, noncombustible ashtrays shall be provided.	Section 6.9 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
261. **Open Flames, Candles Open Fires, and Incinerators** Permits shall not be required for cooking and recreational fires unless specified otherwise.	Section 6.10 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
262. **Fire Protection Markings** Shaft ways and stairway shall be marked for safety of fire fighters. Every outside opening accessible to the fire department that opens directly on any hoist way or shaftway communicating between two or more floors in a building shall be plainly marked with a sign. Shaft way signs shall be in red letters at least 6 in. (152 mm) high on a white background stating "SHAFTWAY." Such warning signs shall be placed so as to be readily discernible from the outside of the building. New enclosed stairs serving three or more stories and existing enclosed stairs serving five or more stories shall have clear marking stating floor level, exit direction, terminus of top and bottom, and be visible and easily readable.	Section 6.11 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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263. **Combustible Exterior Vegetation** Cut or uncut weeds, grass, vines, and other vegetation shall be removed when determined by AHJ to be a fire hazard. When AHJ determines that total removal of growth is impractical due to size or environmental factors, approved fuel breaks shall be installed and maintained. Designated areas shall be cleared of combustible vegetation to establish the fuel breaks.	Section 6.12 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
264. **Outside Storage** Outside storage of combustible materials shall not be located within 10 ft (3 m) of a property line. The separation distance shall be allowed to be reduced to 3 ft (0.9 m) for storage not exceeding 6 ft (1.8 m) in height. Combustible material shall not be stored beneath a building or structure unless specifically constructed or protected for this purpose. Combustible storage in the open shall not exceed 20 ft (6.1 m) in height.	Section 6.14 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
265. **Storage of Combustible Materials** **Permits:** Permits, where required, shall comply with provisions. **Ceiling Clearance:** Storage shall be maintained 2 ft (0.61 m) or more from the ceiling in non-sprinklers areas of buildings. Shelving, and any storage thereon, directly below the sprinklers shall not extend above a plane located 18 in. (457 mm) below the ceiling sprinkler deflectors. Where other standards specify greater clearance to storage minimums, they shall be followed. **Means of Egress**: Combustible material shall not be stored in exits. **Equipment Rooms:** Combustible material shall not be stored in boiler rooms, mechanical rooms, network rooms or electrical equipment rooms. Materials and supplies for the operation and maintenance of the equipment in the room shall be permitted. **Attic, Under-Floor, and Concealed Spaces:** No combustible material shall be stores in Attic, Under-Floor,	Section 6.15 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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Requirement	*Regulation, Law, Recommended Practice*	*Authority/ Stakeholders*	*Applicable*				*Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)*
			Seismic	*Drilling*	*Production*	*Offices Buildings*	
and Concealed Spaces. **Fueled Equipment:** Fueled equipment, including but not limited to motorcycles, mopeds, lawn-care equipment, and portable cooking equipment, shall not be stored, operated, or repaired within a building except under one of the following conditions: (1) The building or room has been constructed for such use in accordance with the building code. (2) The use is allowed by other clauses of these Provisions.							
266. **Electrical Fire Safety** **General:** Section shall apply to permanent and temporary electrical appliances, equipment, fixtures, and wiring. Existing installations shall be permitted to be continued in use provided non conformity does not present an imminent hazard. **Permanent Wiring, Fixtures and Equipment:** All new electrical wiring, fixtures, appliances and equipment shall be installed in accordance with NFPA 70 or any approved code/standard. Unless determined to present an imminent danger, existing electrical wiring, fixtures, appliances, and equipment hall be permitted to be maintained in accordance with the accepted standards. Permanent wiring abandoned in place shall be tagged or otherwise identified at its termination and junction points as "Abandoned in Place" or removed from all accessible areas and insulated from contact with other live electrical wiring or devices. **Multiplug Adapters:** Multiplug adapters, such as multiplug extension cords, cube adapters, strip plugs, and other devices, shall be listed/approved and used in accordance with their listing. Multiplug adapters shall not be used as a substitute for permanent wiring or receptacles. **Relocatable Power Taps:** Relocatable power taps shall be of the polarized or grounded type with over current protection and shall be	Section 7.1 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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listed/approved. The relocatable power taps shall be directly connected to a permanently installed receptacle. Relocatable power tap cords shall not extend through walls, ceilings, or floors; under doors or floor coverings; or be subject to environmental or physical damage. **Extension Cords:** Extension cords shall be plugged directly into an approved receptacle, power tap, or multiplug adapter and shall, except for approved multiplug extension cords, serve only one portable appliance. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. The extension cords shall be maintained in good condition without splices, deterioration, or damage. Extension cords shall be grounded when servicing grounded portable appliances. Extension cords and flexible cords shall not be affixed to structures; extend through walls, ceilings, or floors, or under doors or floor coverings; or be subject to environmental or physical damage. Extension cords shall not be used as a substitute for permanent wiring. **Building Disconnect:** **Identification of Disconnecting Means:** Each disconnecting means shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident. The marking shall be of sufficient durability to withstand the environment involved. **Covers:** All panel board and switch boards, pull boxes, junction boxes, switches, receptacles, and conduit bodies shall be provided with covers compatible with the box or conduit body construction and suitable for the conditions of use.							
267. **Heating, Ventilation, and Air-Conditioning** **Air-Conditioning, Heating, Ventilating Ductwork, and Related Equipment:** Air conditioning, heating, ventilating duct work, and related equipment shall be in accordance	Section 7.2 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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with NFPA 90A/NFPA 90B or any other approved code/standard. Existing installations shall be permitted to be continued in service provided these do not present imminent danger to life. **Ventilating or Heat-Producing Equipment:** Air-conditioning and ventilating systems shall be so installed and maintained as to minimize the danger of spread of fire, smoke or fumes from one floor to other or from outside to any occupied building or structure. Air-conditioning and ventilating systems circulating air to more than one floor or fire area shall be provided with dampers designed to close automatically in case of fire and thereby preventing spread of fire or smoke and shall be in accordance with the any approved code/standard. Such a system shall also be provided with automatic controls to stop fans in case of fire, unless arranged to remove smoke from a fire, in which case these shall be designed to remain in operation. Air-conditioning system serving large places of assembly (over 500 persons), shall be provided with effective means for preventing circulation of smoke through the system in the case of a fire in air filters or from other sources drawn into the system, and shall have smoke sensitive devices for actuation in accordance with the accepted standards. From fire safety point of view, separate air handling units for various floors shall be provided so as to avoid the hazards arising from spread of fire and smoke through the air conditioning ducts. The requirements of air-conditioning ducts shall be in accordance with good practice. Pipe and duct insulation and covering, duct linings, vapor retarded spacing, adhesive, fasteners, tapes and supplementary material added to duct plenums, panels and duct silencers used in duct system shall have, in the form in which they are used, a maximum flame index of 25 without evidence of continued progressive combustion and a maximum smoke developed index of 50.							
268. **Elevators, Escalators, and Conveyors** **Fire Fighters' Emergency Operations:** All new elevators shall conform to the Fire Fighters Emergency Operations	Section 7.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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requirements. **Elevator Machine Rooms:** Elevator machine rooms that contain solid-state equipment for elevators, other than existing elevators, having a travel distance exceeding 50 ft (15 m) above the level of exit discharge or exceeding 30 ft (9.1 m) below the level of exit discharges hall be provided with independent ventilation or air-conditioning systems to maintain temperature during fire fighters' emergency operations for elevator operation. The operating temperature shall be established by the elevator equipment manufacturer's specifications. When standby power is connected to the elevator, the machine room ventilation or air-conditioning shall be connected to standby power. **Elevator Testing:** Elevators shall be subject to periodic inspections and tests Openings to Exit Enclosures. Conveyors, elevators, dumb waiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure. **Standardized Fire Service Elevator Keys:** Buildings with elevators equipped with Phase I emergency call, Phase II emergency in-car operation, or a fire service access elevator shall be equipped to operate with a standardized fire service key. **Existing Buildings:** Existing buildings shall be incompliance with the provisions mentioned in this chapter after a period as stipulated elsewhere in these Provisions.							
269. **Utilities** Equipment using fuel gas and related gas piping should be in accordance with NFPA 54/or NFPA58 or any approved code/standard. Existing installations shall be permitted to be continued in service, subject to approval by AHJ. Above ground gas meters, regulators, and piping exposed to vehicular damage shall be protected.	Section 7.4 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
270. **Heating Appliances** **General:** The installation, maintenance and operation of stationary liquid fuel–burning appliances, including but not limited to	Section 7.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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industrial-, commercial-, and residential-type steam, hot water, or warm air heating appliances; domestic-type range burners; space heaters; and portable liquid fuel– burning equipment shall be in accordance with NFPA 31 or any approved code/standard. All heating appliances shall be listed/approved. **Acceptable Liquid Fuels:** The type and grade of liquid fuel used in a liquid fuel–burning appliance shall be that liquid fuel for which the appliance is listed/ approved or is stipulated by the manufacturer. Crankcase oil or used oil shall not be used as fuel. **Portable Electric/Gas Heater:** AHJ shall be permitted to prohibit use of portable electric/gas heaters in occupancies or situations where such use or operation would present an undue danger to life or property. Portable electric/gas heaters shall be designed and located so that they cannot be easily overturned. All portable electric heaters shall be listed/ approved. **Vents:** All chimneys, smokestacks, or similar devices for conveying smoke or hot gases to the outer air and the stoves, furnaces, incinerators, boilers, or any other heat- producing devices or appliances shall be installed and maintained.							
271. **Waste Chutes, Incinerators, and Laundry Chutes Enclosure** Waste chutes and laundry chutes shall be separately enclosed by walls or partitions. Chute intake openings shall be protected The doors of chutes shall open only to a room that is designed and used exclusively for accessing the chute opening. Chute service opening rooms shall be separated from other spaces.	Section 7.6 of Building Code of Pakistan, Fire Safety Provisions 2016.	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
272. **Stationary Generators and Standby Power Systems Stationary Combustion Engines and Gas Turbines Installation:**	Section 7.7 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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Stationary generator sets shall be installed in accordance with NFPA 37 and NFPA 70 or any approved code/standard. **Portable Generators:** Portable generators shall be operated, refueled and maintained outside the building or in a protected area. Portable generators shall be permitted to be operated or refueled in a building or room that has been constructed for such use in accordance with the building code. Fueling from a container shall be permitted when the engine is shut down and engine surface temperature is below the auto ignition temperature of the fuel. Portable generators shall be positioned so that the exhaust is directed as follows: (1) At least 5 ft (1.5 m) in any direction away from any openings or air intakes (2) Away from the building AHJ shall be permitted to prohibit use of portable generators in occupancies or situations where such use or operation will present an undue danger to life or property. **Emergency and Legally Required Standby Power Systems:** New stationary generators for emergency use or for legally required standby power required by these Provisions, the building code, or other codes and standards shall be installed in accordance with NFPA 110 or any approved code/standard.							
273. **Smoke Control** Newly installed smoke-control systems shall be inspected by AHJ and tested in accordance with the criteria established in the approved design documents, NFPA 204 and NFPA 92 or any approved code/standard. Smoke-control systems shall have an approved maintenance and testing program to ensure operational integrity in accordance with this section. Components of such systems shall be operated, maintained, and tested in accordance with their operation and maintenance manuals. Testing. Operational testing of the smoke-control system	Section 7.8 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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shall be in accordance with NFPA 92 or any approved code/standard, and shall include all equipment related to the system including, but not limited to, initiating devices, fans, dampers, controls, doors, and windows. Test records shall be maintained on the premises and must indicate the date of such testing, the qualified service personnel, and any corrective measures needed or taken. All smoke-control systems and devices shall be maintained in a reliable operating condition and shall be replaced or repaired where defective.							
274. **Smoke Venting** Smoke venting facilities for safe use of exits in windowless buildings, underground structures, and assembly buildings shall be automatic in action with manual controls in addition. Natural draft smoke venting shall utilize roof vents or vents in walls at or near the ceiling level; such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices. Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies. It is recommended that smoke exhaust equipment should have a minimum capacity of 12 air changes per hour. Where mechanical venting is employed, it shall be fire safe.	Section 7.9 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
275. **Emergency Command Center** The emergency command center shall be separated from the remainder of the building by a fire barrier having a fire resistance rating of not less than 1 hour. The emergency command center room shall be a minimum of 96 ft2 (8.9 m2) with a minimum dimension of 8 ft (2.4 m). The following shall be provided in the emergency command center: (1) The fire department communication unit	Section 7.10 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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(2) Schematic building plans indicating the typical floor plan and detailing the building core means of egress, fire protection systems, fire-fighting equipment, and fire department access (4) Work table (5) If applicable, hazardous material management plans for the building. Where otherwise required, the following devices or functions shall be provided within the emergency command center: (1) The emergency voice/alarm communication system unit (2) Fire detection and alarm system annunciator unit (3) Annunciator visually indicating the location of the elevators and whether they are operational (4) Status indicators and controls for air-handling systems (5) Controls for unlocking stairway doors simultaneously (6) Sprinkler valve and water flow detector display panels (7) Emergency and standby power status indicators (8) Fire pump status indicators (9) Generator supervision devices and manual start and transfer features (10) Public address system, where specifically required by other sections of these Provisions (11) Controls required for smoke control **Emergency Command Center Acceptance Testing:** Devices, equipment, components, and sequences shall be individually tested in accordance with appropriate standards and manufacturers' documented instructions.							
276. **Fire Safety Construction Features** Existing buildings shall be evaluated for fire safety in accordance with the provisions of this regulation. Where practical difficulty exists in implementing the provisions of this chapter in existing buildings, additional fire safety measures for life safety, over and above the minimum specified elsewhere in these Provisions for various occupancies, shall be provided.	Section 8.1 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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277. **Construction** Where required by these Provisions, a type of building construction shall comply with NFPA 220 or any approved code/standard. Fire Safety Construction Features for new and existing occupancies shall comply with this code. **Fire Resistance Rating Requirement for Structural Elements:** The fire resistance ratings of structural elements and building assemblies shall be determined in accordance with the prescriptive requirements in NFPA 5000, or in accordance with NFPA 101 or any other approved code/standard or other approved test or analytical methods. **Fire Pump Room:** Fire pump room shall have 2 hours fire rated compartment in non-sprinkler buildings. **Underground Buildings:** All structural members up to and including the floor of the lowest level of discharge of underground buildings more than 7m below or more than two level below the lowest level of exit discharge shall be at least 2 hours fire rated construction. No part of a basement storey shall be used for the bulk storage of highly inflammable liquids or substances of an explosive nature.	Section 8.2 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
278. **Fire Doors, Fire Windows, and Other Opening Protective:** The installation and maintenance of fire door assemblies and fire window assemblies used to protect openings in walls, floors, and ceilings against the spread of fire and smoke within, into, or out of buildings shall comply with NFPA 80 or any other approved code/standard. Unless otherwise specified, fire doors shall be self-closing or automatic-closing. Fire door assemblies shall achieve a fire resistance rating not less than the assembly being penetrated.	Section 8.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
279. **Interior Finish** Interior finish in buildings and structures shall meet the requirements of sections of NFPA 101 or any other approved code/standard.	Section 8.4 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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Existing wall and ceiling finishes shall be exempt from the flame spread index and smoke developed index criteria except if used in exits. Existing floor finishes shall be exempt from the flame spread index and smoke developed index criteria except if used in exits. **Bulletin Boards, Posters, and Paper:** Bulletin boards, posters, and paper attached directly to the wall shall not exceed 20percent of the aggregate wall area to which they are applied.							
280. **Contents and Furnishings** Mattresses, upholstered furniture, draperies, curtains, and other similar loosely hanging furnishings and decorations of an explosive or highly flammable character shall not be used.	Section 8.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
281. **Fire Barriers** Construction assemblies required to be fire resistance–rated floors or roofs, or a combination of floors or roofs and ceilings, fire doors, fire windows, shall be fire barriers having a fire resistance rating set which ever greater. Fire protection-rated glazing shall be permitted in fire barriers having a required fire resistance rating of 1 hour or less and shall be of an approved type. **Fire-stop Systems and Devices Required:** Penetrations for cables, cable trays, conduits, pipes, tubes, combustion vents and exhaust vents, wires, and similar items to accommodate electrical, mechanical, plumbing, and communications systems that pass through a wall, floor, or floor/ceiling assembly constructed as a fire barrier shall be protected by a fire-stop system or device. The fire-stop system or device shall be tested in accordance with ASTM E 814 or ANSI/UL 1479 or any other approved code/standard. **F Ratings:** Fire-stop systems and devices shall have a minimum1-hour F rating, but not less than the required fire resistance rating of the fire barrier penetrated. **T Ratings:** Penetrations in fire resistance–rated horizontal assemblies shall be required to have a T rating of at least 1 hour, but not less than the fire resistance rating of the	Section 8.6 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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horizontal assembly. **Maintenance of Fire-Resistive Construction:** Fire-resistive construction, including fire barriers, fire walls, exterior walls, and roof coverings, shall be regularly inspected and shall be properly repaired, restored, or replaced where damaged, altered, breached, penetrated, removed, or improperly installed. Where required, fire-rated gypsum wallboard walls or ceilings that are damaged to the extent that through openings exist, the damaged gypsum wallboard shall be replaced or returned to the required level of fire resistance. Where readily accessible, required fire-resistance rated assemblies in high-rise buildings shall be visually inspected for integrity at least once every 5 years.						
282. **Smoke Partitions** Where required elsewhere in these Provisions, smoke partitions shall be provided to limit the transfer of smoke. **Continuity:** The following shall apply to smoke partitions: (1) They shall extend from the floor to the underside of the floor or roof deck above, through any concealed spaces, such as those above suspended ceilings, and through interstitial structural and mechanical spaces. (2) They shall be permitted to extend from the floor to the underside of a monolithic or suspended ceiling system where the following conditions are met: (a) The ceiling system forms a continuous membrane. (b) A smoke-tight joint is provided between the top of the smoke partition and the bottom of the suspended ceiling. (c) The space above the ceiling is not used as a plenum. (3) Smoke partitions enclosing hazardous areas shall be permitted to terminate at the underside of a monolithic or suspended ceiling system where the following conditions are met: (a) The ceiling system forms a continuous membrane. (b) A smoke-tight joint is provided between the top of the smoke partition and the bottom of the suspended ceiling. (c) Where the space above the ceiling is used as a plenum, return grilles from the hazardous area into the	Section 8.7 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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plenums are not permitted. **Smoke Dampers:** Air-transfer openings in smoke partitions shall be provided with approved smoke dampers designed and tested in accordance with the requirements of any approved code/standard. **Smoke Detectors:** Dampers in air-transfer openings shall close upon detection of smoke by approved smoke detectors.							
283. **Smoke Barriers** Where required smoke barriers shall be provided to subdivide building spaces for the purpose of restricting the movement of smoke. **Continuity:** Smoke barriers shall be continuous from an outside wall to an outside wall, from a floor to a floor, or from a smoke barrier to a smoke barrier, or by use of a combination thereof. Smoke barriers shall be continuous through all concealed spaces, such as those found above a ceiling, including interstitial spaces. **Opening Protective, Penetrations and Joints:** Doors in smoke barriers shall close the opening, leaving only the minimum clearance necessary for proper operation, and shall be without louvers or grilles. The clearance under the bottom of the doors shall be a maximum of 3⁄4 in. (19 mm). Latching hardware shall be required on doors in smoke barriers. Doors in smoke barriers shall be self-closing or automatic closing. Where a smoke barrier is penetrated by a duct or air-transfer opening, a smoke damper designed and tested in accordance with any of the approved code/standard, shall be installed. Access to the dampers shall be provided for inspection, testing, and maintenance. Access points to fire and smoke dampers in new construction shall be permanently identified by labeling FIRE/SMOKE DAMPER, SMOKE DAMPER and FIRE	Section 8.8 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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DAMPER. Smoke dampers in ducts penetrating smoke barriers shall close upon detection of smoke byapproved smoke detectors. Penetrations for cables, cable trays, conduits, pipes, tubes, vents, wires, and similaritems to accommodate electrical, mechanical, plumbing, and communication systems thatpass through a wall, floor, or floor/ceiling assembly constructed as a smoke barrier, orthrough the ceiling membrane of the roof/ceiling of a smoke barrier assembly, shall beprotected by a system or material capable of restricting the transfer of smoke. Joints made within or at the perimeter of smoke barriers or between smokes barriersshall be protected with a joint system that is capable of limiting the transfer of smoke.							
284. **Fire Protection Systems** AHJ shall have the authority to require that construction documents for all fire protection systems be submitted for review and approval and a permit be issued prior to the installation, rehabilitation, or modification. The property owner, occupant, lessee and administrator shall be responsible for the proper testing and maintenance of the equipment and systems. Obstructions shall not be placed or kept near fire hydrants, fire department inlet connections, or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately visible and accessible. A minimum 36 in. (91 mm) of clear space shall be maintained to permit access to and operation of fire protection equipment, fire department inlet connections, or fire protection system control valves. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment. An approved clear and unobstructed path shall be provided and maintained for access to the fire department inlet connections. Detailed records documenting all systems and equipment testing and maintenance shall be kept by the property	Section 9.1 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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owner and shall be made available upon request for review by AHJ. Existing systems shall comply with the clauses of these Provisions. All fire protection systems and devices shall be maintained in a reliable operating condition and shall be replaced or repaired where defective or recalled. When a fire protection system is out of service for more than 4 hours in a 24-hour period, a fire watch will be provided for all portions left unprotected by the fire protection system shutdown until the fire protection system has been returned to service. For occupancies of an especially hazardous nature or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is unduly difficult, or where the size or configuration of the building or contents limits normal fire suppression efforts, AHJ shall have the authority to require additional safeguards consisting of additional fire safety equipment, more than one type of fire safety equipment, or special systems suitable for the protection of the hazard involved. 9.1.10 AHJ shall have the authority to require locking fire department connection (FDC) plugs or caps on all water based fire protection systems.							
285. **Standpipe Systems** **General:** The design and installation of standpipe systems shall be in accordance with NFPA-14 or any approved code/standard. **Where Required:** New buildings shall be equipped with a Class I standpipe system installed in accordance with the provisions where any of the following conditions exist: (1) More than three stories above grade where the building is protected by an approved automatic sprinkler system. (2) More than two stories above grade where the building is not protected by an approved automatic sprinkler system. (3) More than 50 ft (15 m) above grade and containing	Section 9.2 of Building Code of Pakistan, Fire Safety Provisions 2016.	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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Requirement	*Regulation, Law, Recommended Practice*	*Authority/ Stakeholders*	*Applicable*				*Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)*
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intermediate stories or balconies (4) More than one storey below grade (5) More than 20 ft (6.1 m) below grade High-rise buildings shall be protected throughout by a Class I standpipe system. In new assembly occupancies, regular stages over 1000 ft2 (93 m2) in area and all legitimate stages shall be equipped with 1-1⁄2 in. (38 mm) hose lines for first aid firefighting at each side of the stage. In existing assembly occupancies, stages over 1000 ft2 (93 m2) in area shall be equipped with 1-1⁄2 in. (38 mm) hose lines for first aid firefighting at each side of the stage. Hose connections shall be in accordance with NFPA 13 and NFPA 14 or any approved code/standard. **New and Existing Detention and Correctional Facilities:** Class III standpipe and hose systems shall be provided for all non-sprinkler buildings. **Inspection, Testing, and Maintenance:** A standpipe system installed in accordance with these Provisions shall be properly maintained to provide at least the same level of performance and protection as designed. A standpipe system installed in accordance with these Provisions shall be inspected, tested, and maintained in accordance with NFPA 25 or any approved code/standard. **Existing Systems:** Where an existing standpipe system, including yard piping and fire department connection, is modified, the new piping shall be independently tested in accordance with Section 11.4.1 of NFPA 14 or any approved code/standard. Modifications that cannot be isolated, such as new valves or the point of connection for new piping, shall not require testing in excess of system static pressure.							
286. **Automatic Sprinklers** Automatic sprinklers shall be installed and maintained in full operating condition in the occupancies specified in these Provisions. Installations shall be in accordance with NFPA 13/NFPA 13R/NFPA 13D or any approved code/standard.	Section 9.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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Existing systems shall comply with these Provisions. Sprinkler piping serving not more than six sprinklers for any hazardous area shall be permitted to be connected directly to a domestic water supply system. Sprinkler piping serving hazardous areas as described in shall be provided with an indicating shutoff valve, supervised and installed in an accessible, visible location between the sprinklers and the connection to the domestic water supply. In areas protected by automatic sprinklers, automatic heat-detection devices required by other sections of these Provisions shall not be required. **Supervision:** **Supervisory Signals:** Where supervised automatic sprinkler systems are required by another section of these Provisions, supervisory attachments shall be installed and monitored for integrity in accordance with NFPA 72 or any approved code/standard and a distinctive supervisory signal shall be provided to indicate a condition that would impair the satisfactory operation of the sprinkler system. Supervisory signals shall sound and shall be displayed either at a location within the protected building that is constantly attended by qualified personnel or at an approved, remotely located receiving facility. Temperature classification. The following practices shall be observed to provide sprinklers of other than ordinary-temperature classification unless other temperatures are determined or unless high temperature sprinklers are used throughout,: (1) Sprinklers in the high-temperature zone shall be of the high-temperature classification, and sprinklers in the intermediate-temperature zone shall be of the intermediate-temperature classification. (2) Sprinklers located within 12 in. (305 mm) to one side or 30 in. (762 mm) above an uncovered steam main, heating coil, or radiator shall be of the intermediate temperature classification. (3) Sprinklers within 7 ft (2.1 m) of a low-pressure blow off							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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valve that discharges free in a large room shall be of the high-temperature classification. (4) Sprinklers under glass or plastic skylights exposed to the direct rays of the sun shall be of the intermediate temperature classification. (5) Sprinklers in an unventilated, concealed space, under an un-insulated roof, or in an unventilated attic shall be of the intermediate-temperature classification. (6) Sprinklers in unventilated show windows having high-powered electric lights near the ceiling shall be of the intermediate-temperature classification. (7) Sprinklers protecting commercial-type cooking equipment and ventilation systems shall be of the high- or extra high temperature classification as determined by use of a temperature measuring device. (8) Sprinklers in walk-in type coolers and freezers with automatic defrosting shall be of the intermediate temperature classification or higher. **High-Rise Buildings:** New high-rise buildings shall be protected throughout by an approved automatic sprinkler system in accordance with NFPA 13 or any approved code/standard. Existing high-rise buildings more than 100 ft (30 m) high shall be protected throughout by an approved automatic sprinkler system in accordance with NFPA 13 or any approved code/standard. **Inspection, Testing and Maintenance:** A sprinkler system installed in accordance with these Provisions shall be properly maintained to provide the same level of performance and protection as designed. The owner shall be responsible for maintaining the system and keeping it in good working condition. A sprinkler system installed in accordance with these Provisions shall be inspected, tested, and maintained in accordance with NFPA 25 or any other approved code/standard. Ceiling Tiles and Ceiling Assemblies. Where automatic sprinklers are installed, ceilings necessary for the proper actuation of the fire protection device in accordance with							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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NFPA 13 or any approved code/standard shall be maintained. **Responsibility for Inspection, Testing, Maintenance, and Impairment**: The property owner or designated representative shall be responsible for properly maintaining a water-based fire protection system. **Accessibility:** The property owner or designated representative shall provide ready accessibility to components of water-based fire protection systems that require inspection, testing, and maintenance. **Notification of System Shutdown or Testing:** The property owner or designated representative shall notify AHJ, the fire department, if required, and the alarm-receiving facility before testing or shutting down a system or its supply. 9.3.3.4.1.4.1 The notification of system shutdown or test shall include the purpose for the shutdown, the system or component involved, the estimated time of shutdown or test, and the expected duration of the shutdown or test. 9.3.3.4.1.4.2 AHJ, the fire department, and the alarm receiving facility shall be notified when the system, supply, or component is returned to service or when the test is complete. **Information Sign:** A permanently marked metal or rigid plastic information sign shall be placed at the system control riser supplying an antifreeze loop, dry system, reaction system, or auxiliary system control valve. **Sprinkler Systems:** Stock of Spare Sprinklers. A stock of spare sprinklers shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.							
287. **Fire Pumps** Fire Pumps shall be limited to types of centrifugal single stage and multi-stage of horizontal and vertical shaft design and positive displacements of horizontal and	Section 9.4 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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vertical shaft design. Fire Pumps shall be designed and installed as per NFPA 20 or any approved code/standard, and installed and tested and maintained as per NFPA 25 or any approved code/standard. Pumps other than specified pumps having different design features shall be permitted to be installed where such pumps are listed/approved by an accredited tested laboratory. **Fire Pump Unit Performance:** The fire pump unit, consisting of a pump, driver and controller, shall perform in compliance with NFPA 20 standard or any approved code/standard as an entire unit when installed or when components have been replaced. A single entity should be designated as having unit responsibility for the pump, driver and controller, transfer switch equipment and accessories. Unit responsibility should be the responsibility of the installer. When individual components have been replaced, the contractor installing the replaced components must verify that entire unit function as intended. The complete fire pump unit shall be feed acceptance tested for proper performance in accordance with the provision 14.2 of NFPA 20 or any approved code/standard. Certified shop test curves showing head and brake horse power of the pump shall be furnished by the manufacturer to the purchaser. **Liquid Supplies Reliability:** The adequacy and dependability of the water source are the primary importance and shall be fully determined with due allowances for its reliability in the future. **Sources:** Any source of water that is adequate in quality, quantity and pressure shall be permitted to provide water supply for a fire pump. Where the water supply from a public service main is not adequate in quality, quantity or pressure, an alternative water source shall be provided. The adequacy of water supply shall be determined and evaluated prior to the specification and installation of fire							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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pump. For liquids other than water, the liquid source for the pump shall be adequate to supply the maximum required flow rate for the simultaneous demands for the required duration and the required number of discharges. **Stored supply:** A stored supply plus reliable automatic refill shall be sufficient to meet the demand placed upon it for the design duration. A stored water supply for any fire protection system should be designed and installed in accordance with NFPA 22 or any approved code/standard. **Head and Flow:** The pump must demonstrate its capability to deliver 150 percent of the rated flow at head not less than 65% of the rated head and shut off head or churn should not be more than 140 percent. **Pump Drivers and Controllers:** Fire pump shall be dedicated to and listed/approved for the fire protection service. Acceptable drivers for pumps at a single installation shall be electric motors, diesel engines, steam turbines or a combination thereof. A pump shall not equipped with more than one driver. Each fire pump shall have its own dedicated driver. Each drive shall have its own dedicated controller. The driver should be selected to provide the required power to operate the pump at rated speed and maximum pump head under any flow conditions. The pump capacities should be based on the calculated system demand. Pressure boost or output of the pump should be determined by the pressure available from the attached water supply. The available power supply for electric pumps must be suitable for the fire pump controller. This information must be made available to the pump manufacturer or manufacturer's representative for the analysis. The data package consisting of pump, driver, controller and accessories must be submitted to AHJ before the supply of fire pump to the site. **Pump Operation:**							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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In the event of fire pump operation, qualified personnel shall respond to the fire pump location to determine that the fire pump is operating in a satisfactory manner. **System Designer:** The system designer shall be identified on the system design documents. Acceptable minimum evidence of qualifications or certification shall be provided when requested by AHJ. Qualified personnel shall include, but not be limited to, one or more of the following: (1) Personnel who are factory trained and certified for fire pump system design of the specific type and brand of system being designed. (2) Personnel who are certified by a nationally recognized fire protection certification organization acceptable to AHJ (3) Personnel who are registered, licensed, or certified by a state or local authority. Additional evidence of qualification or certification shall be permitted to be required by AHJ. **System Installer:** Installation personnel shall be qualified or shall be supervised by persons who are qualified in the installation, inspection, and testing of fire protection systems. Minimum evidence of qualifications or certification shall be provided when requested by AHJ. Qualified personnel shall include, but not be limited to, one or more of the following: (1) Personnel who are factory trained and certified for fire pump system designed of the specific type and brand of system being designed. (2) Personnel who are certified by a nationally recognized fire protection certification organization acceptable to AHJ. (3) Personnel who are registered, licensed, or certified by a state or local authority. **Service Personnel Qualifications and Experience:** Service personnel shall be qualified and experienced in the inspection, testing, and maintenance of fire protection systems. **Equipment Protection:**							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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The fire pump, driver, controller, water supply, and power supply shall be protected against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism, and other adverse conditions. **Indoor Fire Pump Units:** Fire pump units serving high-rise buildings shall be protected from surrounding occupancies by a minimum of 2-hour fire-rated construction or physically separated from the protected building by a minimum of 50 ft (15.3 m). Indoor fire pump rooms in non-high-rise buildings or in separate fire pump buildings shall be physically separated or protected by fire-rated construction. The rooms containing fire pumps shall be free from storage, equipment, and penetrations not essential to the operation of the pump and related components. Equipment related to domestic water distribution shall be permitted to be located within the same room as the fire pump equipment. **Outdoor Fire Pump Units:** Fire pump units that are outdoors shall be located at least 50 ft (15.3 m) away from any buildings and other fire exposures exposing the building. Outdoor installations shall be required to be provided with protection against possible interruption. **Equipment Access:** Fire pump rooms not directly accessible from the outside shall be accessible through an enclosed passageway from an enclosed stairway or exterior exit. The enclosed passageway shall have a fire resistance rating not less than the fire resistance rating of the fire pump room. **Emergency Lighting:** Emergency lighting shall be provided. Emergency lights shall not be connected to an engine-starting battery. **Ventilation:** Provision shall be made for ventilation of a pump room or pump house.							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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Drainage: Floors shall be pitched for adequate drainage of escaping water away from critical equipment such as the pump, driver, controller, and so forth. The pump room or pump house shall be provided with a floor drain that will discharge to a frost-free location. **Diesel Engine Driver System Operation:** **Weekly Run:** Engines shall be designed and installed so that they can be started no less than once a fortnightly and run for no less than 30 minutes to attain normal running temperature. **Battery Maintenance:** Storage batteries shall be designed and installed so that they can be kept charged at all times. Storage batteries shall be designed and installed so that they can be tested frequently to determine the condition of the battery cells and the amount of charge in the battery. The automatic feature of a battery charger shall not be a substitute for proper maintenance of battery and charger. The battery and charger shall be designed and installed so that periodic inspection of both battery and charger is physically possible. This inspection shall determine that the charger is operating correctly, the water level in the battery is correct, and the battery is holding its proper charge. **Fuel Supply Maintenance:** The fuel storage tanks shall be designed and installed so that they can be kept as full as practical at all times but never below 66 percent (two-thirds) of tank capacity. The tanks shall be designed and installed so that they can always be filled by means that will ensure removal of all water and foreign material. **Pump Room Electrical Wiring:** All electric wiring to the fire pump motor(s), including control (multiple pumps) interworking, normal power supply, alternate power supply where provided, and jockey pump, shall be completed and checked by the electrical contractor prior to the initial startup and acceptance test. **Certified Pump Curve:**							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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A copy of the manufacturer's certified pump test characteristic curve shall be available for comparison of the results of the field acceptance test. **Periodic Inspection, Testing and Maintenance:** Fire pumps shall be inspected, tested, and maintained in accordance with NFPA 25 or any approved code/standard.							
288. **Water Supply** Private fire service mains shall be installed in accordance with NFPA 13 and NFPA 24 or any approved code/standard. The installation of devices to protect the public water supply from contamination shall comply with the provisions of NFPA 13, NFPA 13D, NFPA 13R and NFPA 24 or any approved code/standard. Backflow prevention devices shall be inspected, tested, and maintained in accordance with the requirements of NFPA 25 or any approved code/standard. **Inspection, Testing, and Maintenance:** A private fire service main installed in accordance with these Provisions shall be properly maintained to provide at least the same level of performance and protection as designed. The owner or designated representative shall be responsible for maintaining the system and keeping it in good working condition.	Section 9.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
289. **Portable Fire Extinguishers:** The selection, installation, inspection, maintenance, recharging, and testing of portable fire extinguishers shall be in accordance with NFPA 10 or approved any code/standard. The requirements shall not apply to permanently installed systems for fire extinguishment, even where portions of such systems are portable (such as hose and nozzles attached to a fixed supply of extinguishing agent). **Labeling:** Portable fire extinguishers used shall be approved/ labeled. Each fire extinguisher shall be marked with the following: (1) Identification of the labeling organization (2) Product category indicating the type of extinguisher	Section 9.6 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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(3) Extinguisher classification (4) Performance and fire test standards that the extinguisher meets or exceeds (5) Date of expiry **Identification of Contents:** A fire extinguisher shall have a label, tag, or stencil attached to it providing the following information: (1) The content's product name as it appears on the manufacturer's Material Safety Data Sheet (MSDS) (2) Manufacturer's or service agency's name, mailing address, and phone number. **Selection of Portable Fire Extinguishers:** The selection of fire extinguishers for a given situation shall be determined by the applicable requirements of Sections 5.2 through 5.6 of NFPA 10 or any approved code/standard and the following factors shall be considered: (1) Type of fire most likely to occur (2) Size of fire most likely to occur (3) Hazards in the area where the fire is most likely to occur (4) Energized electrical equipment in the vicinity of the fire (5) Ambient temperature conditions (6) Other factors Portable fire extinguishers shall be installed as a first line of defense to cope with fires of limited size. The selection of extinguishers shall be independent of whether the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment. **Classification of Hazards:** **Classifying Occupancy Hazard:** **Light Hazard:** Light hazard occupancies consist of fire hazards having normally expected quantities of Class A combustible furnishings, and/or the total quantity of Class B flammables typically expected to be present is less than 1 gal (3.8 L) in any room or area. **Ordinary Hazard:** Ordinary hazard occupancies consist of fire hazards that only occasionally contain Class A combustible materials beyond normal anticipated							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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furnishings, and/or the total quantity of Class B flammables typically expected to be present is from 1 gal to 5 gal (3.8 L to 18.9 L) in any room or area. **Extra Hazard:** Extra hazard occupancies consist of fire hazards involved with the storage, packaging, handling, or manufacture of Class A combustibles, and/or the total quantity of Class B flammables expected to be present is more than 5 gal (18.9 L) in any room or area. **Installation of Portable Fire Extinguishers:** **Extinguisher Readiness:** Portable fire extinguishers shall be maintained in a fully charged and operable condition and shall be kept in their designated places at all times when they are not being used. **Placement:** Fire extinguishers shall be conspicuously located where they are readily accessible and immediately available in the event of fire. Fire extinguishers shall be located along normal paths of travel, including exits from areas. **Visual Obstructions:** Fire extinguishers shall not be obstructed or obscured from view. In large rooms and in certain locations where visual obstructions cannot be completely avoided, means shall be provided to indicate the extinguisher location. Where signs are used to indicate fire extinguisher location, the signs shall comply with the following: (1) They shall be located in close proximity to the extinguisher. (2) They shall be visible from the normal path of travel. Wheeled fire extinguishers shall be located in designated locations. Fire extinguishers installed in vehicles or under other conditions where they are subject to dislodgement shall be installed in approved strap-type brackets specifically designed for this application. Fire extinguishers installed under conditions where they are subject to physical damage (e.g., from impact, vibration, the environment) shall be protected against							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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damage. **Installation Height:** Fire extinguishers having a gross weight not exceeding 40 lb (18.14 kg) shall be installed so that the top of the fire extinguisher is not more than 5 ft (1.53 m) above the floor. Fire extinguishers having a gross weight greater than 40 lb (18.14 kg) (except wheeled types) shall be installed so that the top of the fire extinguisher is not more than 3-1⁄2 ft (1.07 m) above the floor. In no case shall the clearance between the bottom of the hand portable fire extinguisher and the floor be less than 4 in. (102 mm). **Label Visibility:** Extinguishers' operating instructions shall be located on the front of the extinguisher and shall be clearly visible. Hazardous materials identification systems (HMIS) labels, 6-year maintenance labels, hydrostatic test labels, or other labels shall not be located or placed on the front of the extinguisher. (These restrictions shall not apply to original manufacturer's labels, labels that specifically relate to the extinguisher's operation or fire classification, or inventory control labels specific to that extinguisher.) **Cabinets:** Cabinets housing fire extinguishers shall not be locked, except where fire extinguishers are subject to malicious use and cabinets include a means of emergency access. The location of fire extinguishers shall be marked conspicuously. Fire extinguishers mounted in cabinets or wall recesses shall be placed so that the fire extinguisher's operating instructions face outward. Where fire extinguishers are installed in closed cabinets that are exposed to elevated temperatures, the cabinets shall be provided with screened openings and drains. Fire extinguishers shall not be exposed to temperatures outside of the listed/approved temperature range shown on the fire extinguisher label. **Electronic Monitoring and Alarm System:** The connection to the electronic monitoring device shall							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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be continuously supervised for integrity. The power source for the electronic monitoring device shall be supervised for continuity of power. **Inspection, Maintenance and Recharging Responsibility:** The owner or designated agent or occupant of a property in which fire extinguishers are located shall be responsible for inspection, maintenance, and recharging. **Tags or Labels:** Tags or labels intended for recording inspections, maintenance, or recharging shall be affixed so as not to obstruct the fire extinguisher use, fire extinguisher classification, or manufacturer's labels. **Hydrostatic Testing.** For hydrostatic testing of portable fire extinguishers, refer Chapter 8 of NFPA 10 or any approved code/standard. **Condemning Extinguishers:** **Fails Test or Examination:** When a fire extinguisher cylinder, shell, or cartridge fails a hydrostatic pressure test or fails to pass a visual examination, it shall be condemned and destroyed by the owner or the owner's agent. When a cylinder is required to be condemned, the tester shall notify the owner in writing that the cylinder is condemned and that it cannot be reused. A condemned cylinder shall not be repaired.							
290. **Detection, Alarm, and Communications Systems** Where building fire alarm systems or automatic fire detectors are required, they shall be provided and installed in accordance with NFPA 70 and NFPA 72 or any approved code/standard. **Building Fire Alarm Systems:** Protected premises fire alarm systems that serve the general fire alarm needs of a building or buildings shall include one or more of the following systems or functions: (1) Manual fire alarm signal initiation (2) Automatic fire alarm and supervisory signal initiation (3) Monitoring of abnormal conditions in fire suppression systems	Section 9.7 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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(4) Activation of fire suppression systems (5) Activation of emergency control functions (6) Activation of fire alarm notification appliances (7) In-building fire emergency voice/alarm communications (8) Guard's tour supervisory service (9) Process monitoring supervisory systems (10) Activation of off-premises signals (11) Combination systems **Smoke Alarms:** Where required by another section of these Provisions, single-station and multiple station smoke alarms shall be in accordance with NFPA 72 or any approved code/standard. Smoke alarms shall be permitted to be connected to the building fire alarm system for the purpose of annunciation in accordance with NFPA 72 or any approved code/standard. **Fire Safety Functions:** Fire safety functions shall be installed in accordance with the requirements of NFPA 72 or any approved code/standard. Where required by another section of these Provisions, the following functions shall be actuated: (1) Release of hold-open devices for doors or other opening protective (2) Stairwell or elevator shaft pressurization (3) Smoke management or smoke control systems (4) Unlocking of doors (5) Elevator recall and shutdown (6) HVAC shutdown **Documentation:** Record Drawings (As-Built) Record of Completion **Automatic Fire Detection and Alarm Service:** Automatic fire detectors shall be located, maintained, and tested in accordance with NFPA 22 or any approved code/standard. Automatic Fire Detectors							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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			Seismic	*Drilling*	*Production*	*Offices Buildings*	
Duct Detector Installation Requirements for Smoke and Heat Detectors							
291. **Means of Egress** Means of egress in new and existing buildings shall comply with the Provisions and referenced sections of NFPA 101 or any approved code/standard.	Section 10.1 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
292. **Separation of Means of Egress** **Exit Access Corridors:** Corridors used as exit access and serving an area having an occupant load exceeding 30 shall be separated from other parts of the building by walls having not less than a 1-hour fire resistance unless otherwise permitted by the following: (1) This requirement shall not apply to existing buildings, provided that the occupancy classification does not change.	Section 10.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
293. **Impediments to Egress** Any device or alarm installed to restrict the improper use of a means of egress shall be designed and installed so that it cannot, even in case of failure, impede or prevent emergency use of such means of egress.	Section 10.7 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
294. **Means of Egress Reliability** **Maintenance:** Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency. **Furnishings and Decorations in Means of Egress:** 10.8.2.1 No furnishings, decorations, or other objects shall obstruct exits or their access thereto, egress therefrom, or visibility thereof. 10.8.2.2 No obstruction by railings, barriers, or gates shall divide the means of egress into sections appurtenant to individual rooms, apartments, or other occupied spaces. 10.8.2.3 Mirrors shall not be placed on exit door leaves.	Section 10.8 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
295. **Means of Egress Components** **Door Openings:** Section 7.2.1 of NFPA 101 or any approved code/standard shall be followed. **Elevator Landing and Lobby Exit Access:** Each elevator landing and lobby shall have access to at least one exit.	Section 10.9 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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The elevator landing and lobby exit access shall not require the use of a key, a tool, special knowledge, or special effort. Doors separating the elevator lobby from the exit access shall be permitted to be electronically locked. **Exit Passageways:** Exit corridors and passageways shall be of width not less than the aggregate required width of exit doorways leading from them in the direction of travel to the exterior. Where stairways discharge through corridors and passageways, the height of corridors and passageways shall be not less than 2.4 m (8 ft). All means of exit including staircases, lifts, lobbies and corridors shall be adequately ventilated. **Enclosure:** An exit passageway shall be separated from other parts of the building as specified. **Stair Discharge:** An exit passageway that serves as a discharge from a stair enclosure shall have not less than the same fire resistance rating and opening protective fire protection rating as those required for the stair enclosure. **Width:** The width of an exit passageway shall be sized to accommodate the aggregate required capacity of all exits that discharge through it.							
296. **Capacity of Means of Egress** The total capacity of the means of egress for any story, balcony, tier, or other occupied space shall be sufficient for the occupant load determined in accordance with regulatory provisions. **Occupant Load:** The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area by the occupant load factor specified in regulatory provisions. Exits Serving More than One Story. Egress Capacity from a Point of Convergence. Egress Capacity from Balconies and Mezzanines. Egress Capacity for Corridor Egress Capacity for single exit access. Egress Capacity for more than one exit access.	Section 10.10 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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Measurement of Width of Means of Egress Minimum Width The width of any means of egress shall not be less than 36 in. (915 mm) where another part of this chapter does not specify a minimum width. The width of exit access serving not more than six people, and having a length not exceeding 50 ft (15 m) shall be not less than 28 in. (455 mm). In existing buildings, the width of exit access shall be permitted to be not less than 28 in. (710 mm).							
297. **Number of Means of Egress** 10.11.1 The number of means of egress shall be sufficient to accommodate the occupant load determined in accordance with Table 10.10.2.1 and complying with the travel distance requirements given in Table 10.11.1. 10.11.2 In new and existing occupancies, the number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two. The occupant load of each story considered individually shall be required to be used in computing the number of means of egress at each story, provided that the required number of means of egress is not decreased in the direction of egress travel.	Section 10.11 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
298. **Arrangement of Means of Egress** Exits shall be located and exit access shall be arranged so that exits are readily accessible at all times. **Travel Distance to Exits:** The travel distance to an exit from the dead end of a corridor shall not exceed half the distance specified, except in assembly occupancies in which case it shall not exceed 6 m (20 ft).	Section 10.12 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
299. **Discharge from Exits** **Exit Termination:** Exits shall terminate directly, at public way or at an exterior exit discharge. **Arrangement and marking of Exit discharge:** Doors, stairs, ramps, corridors, exit passage ways, bridges, balconies, escalators, moving walks, and other components of an exit discharge shall be conspicuously marked and travel directions shall be clearly indicated.	Section 10.13 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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300. **Illumination of Means of Egress, Emergency and Escape Lighting** Emergency lighting shall be powered from a source independent of that supplying the normal lighting. Escape lighting shall be capable of: (1) Indicating clearly and unambiguously the escape routes (2) Providing adequate illumination along such routes to allow safe movement of persons towards and through the exits (3) Ensuring that fire alarm call points and fire-fighting equipment provided along the escape routes can be readily located. The horizontal luminance at floor level on the center line of an escape route shall be not less than 10 lux. In addition, for escape routes up to 2 m (6.5 ft.) wide, 50 percent of the route width shall be lit to a minimum of 5 lux. The emergency lighting shall be provided to be put on within 1s of the failure of the normal lighting supply. **Illumination of Means of Exit:** The staircase and corridor lighting shall be on separate circuits and shall be independently connected so that it could be operated by one switch installation on the ground floor easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any. It shall be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crisis. **Power Source:** Where emergency lighting facilities are required for individual occupancies, the signs, other than approved self-luminous signs and listed/approved/approved photo luminescent signs shall be illuminated by the emergency lighting facilities. **Periodic testing of emergency lighting equipment and emergency lighting systems shall be tested as follows:** (1) Functional testing shall be conducted monthly with a minimum of 3 weeks and a maximum of 5 weeks between	Section 10.14 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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tests, for not less than 30 seconds. (2) Functional testing shall be conducted annually for a minimum of 1.5 hours if the emergency lighting system is battery powered. (3) Written records of visual inspections and tests shall be kept by the owner for inspection by AHJ.							
301. **Marking of Means of Egress** **Exits:** Exits shall be marked by an approved sign that is readily visible from any direction of exit access. Horizontal components of the egress path within an exit enclosure shall be marked by approved exit or directional exit signs where the continuation of the egress path is not obvious. **Exit Stair Door Signage:** Signage shall be provided to meet the following criteria: (1) Signage shall be located at each exit door requiring an exit sign. (2) Signage shall read as follows: EXIT (3) Signage shall comply with any of the code/standard acceptable to AHJ. **Exit Access:** Access to exits shall be marked by approved, readily visible signs in all cases where the exit or way to reach the exit is not readily apparent to the occupants. New sign placement shall be such that no point in an exit access corridor is in excess of the rated viewing distance or 100 ft (30 m), whichever is less, from the nearest sign. Directional exit signs shall be provided within horizontal components of the egress path within exit enclosures. **No Exit:** Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows: **NO EXIT**.	Section 10.15 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
302. **Internal Staircases** Internal stairs shall be constructed of non-combustible materials throughout. Internal stairs shall be constructed as a self-contained unit with an external wall of the building constituting at least one of its sides and shall be completely enclosed.	Section 10.16 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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A staircase shall not be arranged round a lift shaft. No gas piping or electrical panels shall be allowed in the stairway. Ducting in stairway shall be permitted if it is of 1 h fire resistance rating. Number of people in between floor landings in staircase shall not be less than the population on each floor for the purpose of design of staircase. The design of staircase shall also take into account the following: **(1)** No living space, store or other fire risk shall open directly into the staircase or staircases. (2) External exit door of staircase enclosure at ground level shall open directly to the open spaces or through a large lobby, if necessary. (3) The main and external staircases shall be continuous from ground floor to the terrace level. (4) No electrical shafts, A/C ducts or gas pipes, etc. shall pass through or open in the staircases. (5) Lifts shall not open in staircase. (6) No combustible material shall be used for decoration and wall paneling in the staircase. (7) Beams, columns and other building features shall not reduce the head room and width of the staircase. (8) The exit sign with arrow indicating the way to the escape route shall be provided at a suitable height from the floor level on the wall and shall be illuminated by electric light connected to corridor circuits. (9) All exit way marking signs shall be flush with the wall and so designed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipment. (10) All landings of floor shall have floor indicating boards prominently indicating the number of floor. The floor indication board shall be placed on the wall immediately facing the flight of stairs and nearest to the landing. It shall be of size not less than 0.5×0.5 m (20x20 in.). (11) Individual floors shall be prominently indicated on the wall facing the staircases. (12) In case of single staircase, it shall terminate at the ground floor level and the access to the basement shall be							

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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by a separate staircase. The second staircase may lead to basement levels provided the same is separate at ground level by ventilated lobby with discharge points to two different ends through enclosures.							
303. **Pressurization of Staircases (Protected Escape Routes)** The pressurization of staircases shall be adopted for high rise buildings and building having mixed occupancy or multiplexes having covered area more than 500 m^2 (5380 ft^2). The difference in pressurization levels between staircase and lobbies (or corridors) shall not be greater than 5 Pa (0.1 psf). Pressurization system shall be of two types: (1) Single-stage, designed for operation only in the event of an emergency; and (2) Two-stage, where normally a level of pressurization is maintained in the protected escape routes and an increased level of pressurization can be brought into operation in an emergency.	Section 10.17 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
304. **External Stairs** An external staircase shall be provided for high rise buildings. External stairs shall always be kept in sound operable conditions. All external stairs shall be directly connected to the ground. Entrance to the external stairs shall be separate and remote from the internal staircase. Care shall be taken to ensure that no wall opening or window opens on to or close to an external stairs. The route to the external stairs shall be free of obstructions at all times. The external stairs shall be constructed of non- combustible materials, and any doorway leading to it shall have the required fire resistance. No external staircase, used as a fire escape, shall be inclined at an angle greater than 45° from the horizontal.	Section 10.18 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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External stairs shall have straight flight not less than 1.25 m (4.10 ft) wide with 250 mm (10 in.) treads and risers not more than 190 mm (7.5 in.). The number of risers shall be limited to 15 per flight. Handrails shall be of a height not less than 1 m (3.25 ft) and not exceeding 1.2 m (4 ft). The use of spiral staircase shall be limited to a building not exceeding 9 m (29.5 ft) in height. A spiral stair case shall be not less than 1.5 m (5 ft) in diameter and shall be designed to give adequate headroom. Unprotected steel frame staircase shall not be accepted as means of egress. Steel staircase in an enclosed fire rated compartment of 2 h shall be accepted as means of escape.						
305. **Fire Department Access:** Fire department access and roads shall be provided and maintained in accordance with regulatory provisions. 12.2.2 Access to structures or areas access box(es). An access box(es) shall be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type. 12.2.2.2 Access to gated subdivisions or developments. AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system. **Open Spaces:** The open spaces around or inside a building shall conform to the requirements of the relevant provisions. The following additional provisions of means of access to the building shall be ensured a) The width of the main street on which the building abuts shall not be less than 12 m (39 ft) and one end of this street shall join another street not less than 12 m (39 ft) in width. b) The road shall not terminate in a dead end; except in the case of residential building, up to a height of 30 m. c) The compulsory open spaces around the building shall not be used for parking.	Section 12.2 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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d) Adequate passageway and clearances required for fire fighting vehicles to enter the premises shall be provided at the main entrance; the width of such entrance shall be not less than 4.5 m (14.5 ft). If an arch or covered gate is constructed, it shall have a clear head-room of not less than 5 m (16 ft). **Fire Department Access Roads:** Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated. When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, AHJ shall be authorized to require additional fire protection features. **Access to Building:** A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. When buildings are protected throughout with an approved automatic sprinkler system, the distance in Section 12.2.4.2.2 shall be permitted to be increased to 450 ft (137 m).							
306. **Water Supplies** An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with Section 12.4. Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated	Section 12.3 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

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tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.							
307. **Fire Hydrants** **Fire Hydrant Locations and Distribution:** Fire hydrants shall be provided in accordance with Section 12.5 for all new buildings, or buildings relocated into the jurisdiction unless otherwise permitted by Sections 12.5.1.1 or 12.5.1.2. Fire hydrants shall not be required where the water distribution system is not capable of providing a fire flow of greater than 500 gpm (1893 L/min) at a residual pressure of 20 psi (139.9 kPa). **Buildings Other than Detached One and Two-Family Dwellings:** Fire hydrants shall be provided for buildings other than detached one- and two-family dwellings in accordance with both of the following: (1) The maximum distance to a fire hydrant from the closest point on the building shall not exceed 400 ft (122 m). (2) The maximum distance between fire hydrants shall not exceed 500 ft (152 m). **Clear Space Around Hydrants:** A 36 in. (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. A clear space of not less than 60 in. (1524 mm) shall be provided in front of each hydrant connection having a diameter greater than 2.5 in. (64 mm). **Protection:** Where required by AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way. **Hydrants Out of Service:** Where water supplies or fire hydrants are out of service for maintenance or repairs, a visible indicator shall be used to indicate that the hydrant is out of service. **Marking of Hydrants:** Fire hydrants shall be marked with an approved reflector affixed to the roadway surface. Fire hydrants shall be marked with an approved flag or	Section 12.5 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	

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other device affixed to or proximate to the fire hydrant. Fire hydrants shall be color coded or otherwise marked with an approved system indicating the available flow capacity.							
308. **Combustible Waste and Refuse** **General:** Persons owning or having control of any property shall not allow any combustible waste material to accumulate in any area or in any manner that creates a fire hazard to life or property. Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions. Fire extinguishing capabilities approved by AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth-moving equipment shall be provided at waste disposal sites. Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. **No Smoking:** No smoking or open flame shall be permitted in any area where combustible wastes are handled or stored or within 50 ft (15 m) of any uncovered pile of such waste. "No Smoking" signs shall be posted. Vehicles or conveyances used to transport combustible waste or refuse. Vehicles or conveyances used to transport combustible waste or refuse over public thorough fares shall have all cargo space covered and maintained tight enough to ensure against ignition from external fire sources and the scattering of burning and combustible debris that can come in contact with ignition sources. Trucks or automobiles, other than mechanical handling equipment and approved industrial trucks shall not enter any fiber storage room or building but shall be permitted to be used at loading platforms.	Section 13.1 of Building Code of Pakistan, Fire Safety Provisions, 2016	Inspector of Authority Having Jurisdiction (AHJ)	--	--	--	☑	
309. **Combustible Waste and Refuse / Rubbish Containers**	Section 13.2 of Building Code of Pakistan, Fire	Inspector of Authority Having Jurisdiction	--	--	--	☑	

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General: Rubbish containers kept outside of rooms or vaults shall not exceed 40.5 ft^3 (1.15 m3) capacity. Containers exceeding a capacity of 5-1⁄3 ft^3 [40 gal (0.15 m3)] shall be provided with lids. Such containers and lids as described shall be constructed of non-combustible materials or nonmetallic materials. **Nonmetallic Containers:** Nonmetallic rubbish containers exceeding a capacity of 5-1⁄3 ft^3 [40 gal (0.15 m^3)] shall be manufactured of materials having a peak rate of heat release not exceeding 300 kW/m^2 at a flux of 50 kW/m^2. **Removal:** Combustible rubbish stored in containers outside of noncombustible vaults or rooms shall be removed from buildings each working day. Rubbish Within Dumpsters. Dumpsters and containers with an individual capacity of 1.5 yd^3 [40.5 ft^3 (1.15 m^3)] or more shall not be stored in buildings or placed within 10 ft (3 m) of combustible walls, openings, or combustible roof eave lines. Approved metal receptacles with self-closing covers shall be provided for the storage or disposal of oil-soaked waste or clothes.	Safety Provisions, 2016	(AHJ)					
310. **Inspection of electrical installations (transformer and lightening arrester) / compliance of electricity rules**	Electricity Rules 1937 Under Clause 2(C) of The Government Notification No. SO(P)I &p/4-2/2002 dated 17.09.2002	Electrical Inspector, Govt. of Punjab, /Provincial Energy Department	--	--	☑	☑	
311. **Inspection of boiler installed in HVAC plant**	Directorate of Industries (Boiler Inspection Wing), Government of Pakistan. Authorization certificate under Section 8(5) of boiler act.	Chief Inspector of Boiler; Directorate of Industries (Boiler Inspection Wing), Government of Pakistan	--	--	☑	☑	
312. **Inspection of lifts installed at OGDCL HO premises**	Energy audit of OGDCL HO building has been carried out by M/s. ENERCON in year-2013 and recommended safety inspection of lifts		--	--	--	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

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	installed at HO premises.						
313. **Completion Certificate of OGDCL house building NOC: No building or structure or part thereof shall be occupied or used without obtaining completion Certificate (Permission to Occupy) from the Authority, within 03 Months after the expiry of initial construction period.**	The building and Zoning Regulations 2005/ Bye-Laws of CDA	CDA/ District Development Authority/MC	--	--	--	☑	
314. **Data and Telecom Services**	Utilization of NTC Facilities [NTISB & Cabinet Division Letter]	Cabinet Division/NTISB	☑	☑	☑	☑	
315. **Data and information security**	Utilization of NTC Facilities [Cabinet Division Letter]	Cabinet Division/ Pakistan Telecom Authority	☑	☑	☑	☑	
316. **Disaster recovery hosting site**	Utilization of NTC Facilities, PTA Data & IS Regulations [Cabinet Division Letter/PTA Data & IS Regulations]	Cabinet Division/ Pakistan Telecom Authority	☑	☑	☑	☑	
317. **Use of VPN software by Govt. Sector**	Pakistan Telecommunication Act, 1996; Regulation [Letter from PTA]	Pakistan Telecom Authority	☑	☑	☑	☑	
318. **Information security procedures & policies (ISMS manual approved by OGDCL BOD)**	Critical Telecom Data &Infrastructure Security Regulations 2020 [ISMS Manual & PTA Data & IS Regulations 2020]	Pakistan Telecom Authority	☑	☑	☑	☑	
319. **IP whitelisting for video conferencing**	Pakistan Telecommunication Act, 1996: White Listing of IP Addresses Regulations, 2019 [PTA whitelisting document]	Pakistan Telecom Authority	☑	☑	☑	☑	
320. **Constitution of IT-steering committee**	Critical Telecom Data & Infrastructure Security Regulations 2020 [PTA	Pakistan Telecom Authority	☑	☑	☑	☑	

OIL AND GAS DEVELOPMENT COMPANY LIMITED

HSE REGULATORY REQUIREMENTS MATRIX

At least once per annum, "actual status of compliance" with these regulations shall be ascertained by Location HSE In-Charge after verification from all Sections.

Name of Location: _____

Requirement	*Regulation, Law, Recommended Practice*	*Authority/ Stakeholders*	*Applicable*				*Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)*
			Seismic	*Drilling*	*Production*	*Offices Buildings*	
	Data & IS regulations 2020]						
321. **Rated-3 data center design**	TIA-942 Certification [Certificate of Conformance by TIA-942]		☑	☑	☑	☑	
322. **Security weapons and personnel**	Instruction from LEA (Punjab & KP) [Copy of Headquarter-11 Corps ,Letter# 2031/7/GS-ZLEA23:Para-5(d)]	LEA Federal/ Provincial	☑	☑	☑	☑	
323. **Bullet proof vehicle used for expatriates**	Instruction/SOPs of LEA as province &Federal Govt,[Copy of Headquarter-11 Corps, Letter# 2031/7/GS-ZLEA23:Para-5(4/c)]	LEA Provincial/Federal	☑	☑	☑	☑	
324. **Hiring of forces law/LES**	Instruction/SOPs of LEA as province &Federal Govt.[DCO office: 1933/HC(G)/169]	LEA Provincial/ Federal	☑	☑	☑	☑	
325. **Jammers**	Instruction from LEA (Punjab & KP) [Copy of Headquarter-11 Corps, Letter# 2031/7/GS-ZLEA23:Para-5(d)]	LEA Federal/ Provincial	☑	☑	☑	☑	
326. **Radio sets**	Instruction from LEA (Punjab & KP) [Copy of Headquarter-11 Corps. Letter# 2031/7/GS-ZLEA23:Para-3(c)]	Licensed by PTA / LEA Federal/ Provincial	☑	☑	☑	☑	
327. **CCTV cameras with backup**	Instruction from LEA (Punjab & KP) [DCO office: 1933/HC(G)/169 & Copy of Headquarter-11 Corps. Letter# 2031/7/GS-ZLEA23:Para-3(E)]	LEA Federal/ Provincial	☑	☑	☑	☑	

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Name of Location: _____

Requirement	*Regulation, Law, Recommended Practice*	*Authority/ Stakeholders*	*Applicable*				*Status of compliance with regulations/ Comments (or Action taken in case of non-compliance)*
			Seismic	*Drilling*	*Production*	*Offices Buildings*	
328. **Walkthrough gate**	Instruction/SOPs of LEA as province &Federal Govt. [DCO office: 1933/HC(G)/169]	LEA Federal/ Provincial	☑	☑	☑	☑	
329. **X-ray Baggage Scanners (License for Radiation Facility)**	PNRA Ordinance No. III & PNRA Regulations	PNRA (Regional Nuclear Safety Directorate	☑	☑	☑	☑	
330. **Medical waste management:** Waste Management Planning Waste segregation Infectious waste collection and transportation Infectious waste storage Infectious waste disposal: Burial, burning or incineration	Hospital Waste Management Rules, 2005 Sindh Hospital Waste Management Rules, 2014 Punjab Hospital Waste Management Rules, 2014 Khyber Pakhtunkhwa (KP) Hospital Waste Management Rules, 2018 (Draft) Balochistan Hospital Waste Management Rules, 2020.	Federal /Provincial EPA	☑	☑	☑	☑	

Signature
Compliance "Checked" by Location HSE Rep.
Date:

Signature
"Endorsed" by Location In-Charge for due compliance
Date: