

2017

Checklists for Environmental, Occupational Health and Safety Requirements

Ministry of Industry
Industrial Development Authority (IDA)

Head Office:
42 El-Salam Axis – Fifth Settlement – New Cairo

Table of Contents

Index (1)

1- Checklists of General Technical Requirements Governing Common Industrial Factors in the Egyptian Industry	(2)
1.1 Checklists of General Technical Requirements not Governing a Specific Industrial Factor	(2)
1.2. Checklists of General Technical Requirements Governing Heat Stress	(11)
1.3. Checklists of General Technical Requirements Governing Workplace Pollutants	(18)
1.4. Checklists of General Technical Requirements Governing Workplace Ventilation	(19)
1.5. Checklists of General Technical Requirements Governing Noise	(21)
1.6. Checklists of General Technical Requirements Governing Lighting Intensity	(23)
1.7. Checklists of General Technical Requirements Governing Vibrations	(24)
2- Checklists of General Technical Requirements Governing Common Industrial Sections or Equipment in the Egyptian Industry	(26)
3- Checklists of General Technical Requirements Governing Uncommon Industrial Factors in the Egyptian Industry	(28)
3.1. Checklists of General Technical Requirements Governing Humidity Stress	(28)
3.2. Checklists of General Technical Requirements Governing Ionizing Radiation	(34)
3.3. Checklists of General Technical Requirements Governing Laser Radiation	(37)
3.4. Checklists of General Technical Requirements Governing Ultraviolet Radiation Handling	(38)
3.5. Checklists of General Technical Requirements Governing Non-Ionizing Radiation	(40)
4- Checklists of Specific Technical Requirements Governing Outdoor Air Pollutants in Certain Industries, Production Units, Furnaces, or Incinerators	(41)
5- Checklists of Specific Technical Requirements Governing the Prescribed Structural Ratios for Each Industrial Activity	(46)

Technical Requirements Checklists

In general, technical requirements checklists are divided into:

1. Checklists of General Technical Requirements Governing Common Industrial Factors in Egyptian Industry.
2. Checklists of General Technical Requirements Governing Common Industrial Sections or Equipment in Egyptian Industry.
3. Checklists of General Technical Requirements Governing Uncommon Industrial Factors in Egyptian Industry.
4. Checklists of Specific Technical Requirements Governing Outdoor Air Pollutants in Certain Industries, Production Units, Furnaces, or Incinerators.
5. Checklists of Specific Technical Requirements Governing Floor Area Ratio (FAR) for Each Industrial Activity.

1. Checklists of General Technical Requirements Governing Common Industrial Factors in the Egyptian Industry

1-1 General technical requirements checklists not Governing a specific industrial factor:

1-1-1 General Location of the Industrial Facility and Its Position Relative to the Surroundings

S.N	Inspection Description	Yes	No	Comments
1	Does industrial activity of facility seeking licensing comply with approved industrial zoning plan issued by Industrial Development Authority (IDA) in Egypt?			
2	Is industrial facility, to be licensed, located near any of usual natural hazard sources in Egypt?			
3	If industrial facility, to be licensed, is located near any of usual natural hazard sources in Egypt, is it at sufficient distance from this natural hazard source in accordance with mandatory regulations, if any, or according to good practices recommended by IDA in Egypt?			

S.N	Inspection Description	Yes	No	Comments
4	Was relative location of industrial facility, to be licensed, taken into account in relation to nature of its impact or environmental footprint (both in quality and quantity), prevailing wind direction at site, and relative location of industrial facility to neighboring industrial facilities?			

1.1.2 Emissions of the Industrial Facility into the Atmosphere

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility, to be licensed, comply with maximum limits for ambient air pollutants specified in Table 1?			
2	If there are power generation units or boilers in any section of industrial facility, to be licensed, are maximum emission limits from these units, as specified in Table 2, being adhered to?			
3	If there are power generation units or boilers in any section of industrial facility, to be licensed, is total concentration of heavy elements in their emissions not exceeding 5 mg/m ³ ?			
4	If there are power generation units or boilers in any section of industrial facility, to be licensed, and any solid wastes not listed in Table 2 are used, is concentration of dioxins and furans in emissions kept below 0.1 ng/m ³ ?			
5	If there are diesel engines in any section of industrial facility, to be licensed, are maximum emission limits specified in Table 3 being adhered to?			
6	If industrial facility, to be licensed, is required to conduct continuous monitoring and sampling of its pollutant emissions, are resulting pollution loads kept within limits specified in environmental study and approval of facility?			
7	Has IDA required that site of industrial facility, to be licensed, be surrounded by fence or green belts?			
8	If IDA required industrial facility site to be surrounded by fence or green belts, has this requirement been implemented?			

S.N	Inspection Description	Yes	No	Comments
9	Does industrial facility, to be licensed, fall under categories mandated to install Continuous Emission Monitoring Systems (CEMS) for stack emissions? These categories include: power generation plants (capacity > 50 MW), petroleum refineries, iron and steel plants, ferroalloy plants, fertilizer plants, acid production units, cement factories, ceramic and sanitary ware factories, glass production facilities using raw materials (capacity > 200 tons/day), and copper, lead, or zinc smelting/extraction plants.			
10	If industrial facility, to be licensed, is one of the industrial facilities required to install CEMS for emissions from its exhausts, has it complied with this requirement?			
11	If emission loads from exhausts of the industrial facility, to be licensed, exceed threshold limits specified in Table 4, has facility complied with requirement to install CEMS for its emissions?			
12	If emission loads from exhausts of the industrial facility, to be licensed, exceed threshold limits specified in Table 4, and facility has complied with installation of CEMS for its emissions exhausts, are mandatory reference parameters continuously monitored? These mandatory reference parameters to be continuously monitored are limited to following: exhaust temperature, flow rate, pressure, and oxygen content.			
13	If emission loads from exhausts of the industrial facility, to be licensed, exceed threshold limits specified in Table 4, and facility has complied with installation of CEMS for its exhausts, is facility adhering to periodic calibration rules for these systems, with calibration certificates maintained in environmental record of industrial facility, to be licensed?			
14	If the industrial facility is responsible for at least 10% of nitrogen oxide emissions in its surrounding area, is it complying with measurement of hydrogen chloride in its emissions exhausts?			

S.N	Inspection Description	Yes	No	Comments
15	If any Ozone-Depleting Substances (ODS) listed in Table 5 are present in any section of industrial facility to be licensed, is compliance ensured by subjecting them to control, whether substance is pure or part of mixture in any proportion?			

1.1.3 Industrial Facility Effluents

S.N	Inspection Description	Yes	No	Comments
1	Is sanitary wastewater separated from industrial effluents within industrial facility to be licensed?			
2	Are all wastewater inspection chambers within industrial facility to be licensed equipped with environmental monitoring and measurement devices?			
3	Does industrial facility to be licensed comply with prohibition of discharging any flammable or combustible materials, such as fuel oil or others—if present—into public sewer networks?			
4	Are liquid wastes of industrial facility to be licensed free from petroleum ether, calcium carbide, and organic solvents?			
5	Are liquid wastes of industrial facility to be licensed free from any substance that may pose risk to workers maintaining sewer network?			
6	Are liquid wastes of industrial facility to be licensed free from any substance that may damage public sewer infrastructure?			
7	Are liquid wastes of industrial facility to be licensed free from any substance that may interfere with treatment operations?			
8	Are liquid wastes of industrial facility to be licensed free from any substance that may cause environmental			

S.N	Inspection Description	Yes	No	Comments
	pollution when excess treated water is discharged from public wastewater systems?			
9	Are liquid industrial wastes of industrial facility to be licensed free from any pesticides or radioactive materials?			
10	Is compliance ensured with all standards specified in Tables 6 and 7 as conditions for industrial facility to be licensed to discharge into public sewer networks?			
11	Is detailed study of wastes of industrial facility to be licensed conducted?			

S.N	Inspection Description	Yes	No	Comments
12	Does industrial facility to be licensed, if discharging into public sewer networks and producing waste similar to bakeries, mills, or factories, have sedimentation chambers installed to intercept solid matter?			
13	Does industrial facility to be licensed, if discharging into public sewer networks and producing waste similar to bakeries, mills, or factories, have grease traps installed to intercept prohibited materials such as oils or fats?			
14	Does industrial facility to be licensed, where sedimentation chambers or grease traps are required, have such units constructed in accordance with relevant Ministry of Environment (MoE) regulations?			
15	Does industrial facility to be licensed, where sedimentation chambers or grease traps are required, operate such units in compliance with relevant MoE regulations?			
16	Does industrial facility to be licensed, where sedimentation chambers or grease traps are required, have such units lined with cement mortar?			
17	Does industrial facility to be licensed, where sedimentation chambers or grease traps are required, have such units lined with acid-resistant material or substances capable of withstanding industrial facility waste?			
18	Does industrial facility to be licensed, if discharging into marine environment, ensure compliance with all marine discharge standards specified in Tables 8, 9, and 10?			
19	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that discharge points be located at least 500 meters from shoreline?			
20	Does industrial facility to be licensed, if discharging into marine environment, comply with prohibition of discharge within fishing zones, bathing areas, or nature reserves?			
21	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that			

S.N	Inspection Description	Yes	No	Comments
	cooling water be sourced from same body of water into which it is discharged?			
22	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that cooling circuit be completely isolated from all other effluent streams?			

S.N	Inspection Description	Yes	No	Comments
23	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that temperature rise of discharged cooling water does not exceed 10°C above intake water temperature?			
24	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that temperature of discharged cooling water does not exceed 38°C?			
25	Does industrial facility to be licensed, if discharging into marine environment, comply with requirement that oil and grease concentration in discharged cooling water does not exceed 15 ppm?			

1.1.4 Industrial Facility Utilities

S.N	Inspection Description	Yes	No	Comments
1	Is industrial facility to be licensed located in area where necessary utility services are available?			
2	If industrial facility to be licensed is located in area where necessary utility services are available, indicate services available on site: Water – Sanitary Sewage – Industrial Wastewater – Electricity – Gas – Communications – Sanitation – Other Utilities (Specify in adjacent field)			
3	Does industrial facility to be licensed provide public sanitation facilities and sufficient water for all uses, ensuring maintenance, cleanliness, and compliance with worker requirements?			
4	Does industrial facility to be licensed comply with all procedures and requirements Governing health education, awareness, training, and guidance?			
5	Does industrial facility to be licensed comply with all procedures and requirements Governing medical care, first aid, and associated preventive measures?			

S.N	Inspection Description	Yes	No	Comments
6	Does industrial facility to be licensed comply with all biosafety procedures, requirements, and related emergency plan?			
7	Are work sites within industrial facility to be licensed equipped with appropriate sanitation tools and means suitable for workers and nature of work?			

S.N	Inspection Description	Yes	No	Comments
8	Does industrial facility to be licensed, where workers are required to change clothes at shift start or end, provide Gowning Area for clothing storage and change, or other suitable means?			
9	Does industrial facility to be licensed ensure that Gowning Area or other suitable means are subject to regular and proper maintenance?			
10	Are there departments within industrial facility to be licensed where eating is prohibited, specifically involving: use, handling, storage, or generation of hazardous substances (dust, smoke, fumes, vapors, etc.); harmful radiation; or risk of contamination to exposed body parts (hands/head) or work clothing?			
11	If industrial facility to be licensed contains sections where eating is prohibited, is such prohibition effectively enforced?			
12	If industrial facility to be licensed contains sections where eating is prohibited, are suitable and sufficient designated eating areas provided?			
13	Does industrial facility to be licensed comply with all technical requirements and precautions regarding power generators, transformers, transmission networks, and safety systems?			
14	Does industrial facility to be licensed comply with all technical requirements and precautions regarding walkways, including safety measures and cleanliness?			
15	Does industrial facility to be licensed comply with all technical requirements and precautions regarding walking and working surfaces, including safety measures and cleanliness?			
16	Does industrial facility to be licensed comply with all technical requirements and precautions regarding elevated surfaces, including safety measures, access, and egress?			

S.N	Inspection Description	Yes	No	Comments
17	Does industrial facility to be licensed comply with all technical requirements and precautions regarding floor openings and associated safety measures?			
18	Does industrial facility to be licensed comply with all technical requirements and precautions regarding fixed ladders and associated safety measures?			
19	Does industrial facility to be licensed comply with all technical requirements and precautions regarding portable ladders, including safety measures and usage rules?			
20	Does industrial facility to be licensed comply with all technical requirements and precautions regarding exits, gates, safety measures, and usage rules?			
21	Does industrial facility to be licensed comply with all technical requirements and precautions regarding design and construction of exit doors, including safety measures and usage rules?			

1.1.5 Checklists for General Organizational Procedures to Ensure Industrial Facility Safety

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed ensure proper arrangement of various components to maximize safety?			
2	Does industrial facility to be licensed provide effective program to ensure and maximize safety?			
3	Does industrial facility to be licensed provide appropriate rescue and relief equipment and comply with all related technical requirements?			
4	Where internal self-monitoring systems or continuous emission monitoring are implemented, does industrial facility to be licensed comply with all technical requirements during measurement operations?			

S.N	Inspection Description	Yes	No	Comments
5	Does industrial facility to be licensed comply with all technical requirements Governing protection against various biological and biochemical hazards?			
6	Does industrial facility to be licensed comply with all technical requirements regarding design and implementation of ventilation systems to protect against various biological and biochemical hazards?			

S.N	Inspection Description	Yes	No	Comments
7	Are workers in each industrial department of industrial facility to be licensed required, based on process nature, to wear Personal Protective Equipment (PPE)?			
8	Is PPE required for workers suitable for industrial process nature and influencing industrial factors within department of industrial facility to be licensed?			
9	Is PPE required for workers in each industrial department of industrial facility to be licensed compatible with body measurements?			
10	Is safety of all workers ensured during industrial operations within all departments of industrial facility to be licensed?			
11	If ensuring worker safety is not possible, has a verified attempt been made to eliminate hazards by removing harmful processes, machinery, materials, or industrial factors?			
12	If ensuring worker safety is not possible, has a verified attempt been made to substitute hazardous processes or materials with less harmful alternatives?			
13	If ensuring worker safety is not possible, has a verified attempt been made to reduce risks to safe levels through safe work systems, including administrative or mechanical controls, to normalize industrial factors?			
14	If ensuring worker safety is not possible, has a verified attempt been made to control risks at source using engineering controls or organizational measures?			
15	If ensuring worker safety is not possible, has a verified attempt—as a last resort—been made to provide suitable PPE and mandate its use and maintenance?			

1.1.6 Checklists for General Technical Requirements Governing Informational Aspects of Industrial Facility

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed conduct risk assessment and analysis to ensure safety and develop necessary emergency plans?			
2	Does industrial facility to be licensed provide all necessary instructions and data to ensure worker safety in each industrial department, placed in appropriate locations according to industrial process nature and mandatory regulations?			
3	Does industrial facility to be licensed plan and implement all necessary seminars, training courses, and evaluation tests to ensure worker safety in each industrial department according to industrial process nature and mandatory regulations?			
4	Does industrial facility to be licensed maintain necessary statistics and control mandatory logs to record worker health status developments, losses, accidents, injuries, and occupational diseases, while implementing job selection rules and maintaining separate data for each department per mandatory regulations?			

1.2 Checklists of general technical requirements Governing heat stress:

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed ensure normalization of working environment in terms of heat stress within each industrial department?			
2	Does industrial facility to be licensed periodically and regularly assess physical workload (ratio of actual working time to rest time) for all workers in each industrial department?			

S.N	Inspection Description	Yes	No	Comments
3	Does industrial facility to be licensed consider highest physical workload exerted by any worker within department when assessing permissible heat exposure limits?			
4	Does industrial facility to be licensed periodically and regularly assess physical workload level for all workers in accordance with Table 11?			
5	Does industrial facility to be licensed take into account most strenuous physical workload exerted by any worker within department when assessing permissible heat exposure limits?			
6	Under reference conditions, where continuous physical workload in specific department is light, does industrial facility to be licensed comply with permissible heat exposure limit of 30°C? Reference Conditions: Working in open areas exposed to direct sunlight with maximum solar (or thermal) radiation intensity of 1 kW/m², and high relative humidity (maximum allowable 80%), while workers wear appropriate light clothing without head covering.			
7	Under same reference conditions, where continuous physical workload increases from light to moderate in specific department, does industrial facility to be licensed reduce permissible heat exposure limit by 2°C from light workload value (30°C)?			
8	Under same reference conditions, where continuous physical workload increases from light to heavy in specific department, does industrial facility to be licensed reduce permissible heat exposure limit by 4°C from light workload value (30°C)?			

S.N	Inspection Description	Yes	No	Comments
9	Under same reference conditions and same workload level, if workload intensity is reduced from continuous to intermittent, does industrial facility to be licensed increase permissible heat exposure limit by 1°C from continuous workload value?			
10	Under same reference conditions and same workload level, if workload intensity is reduced from continuous to intermittent with breaks, does industrial facility to be licensed increase permissible heat exposure limit by 2°C from continuous workload value?			
11	Under same reference conditions and same workload level, if workload intensity is reduced from continuous to light/resting, does industrial facility to be licensed increase permissible heat exposure limit by 5°C from continuous workload value?			
12	Does industrial facility to be licensed ensure that maximum allowable relative humidity in work environment of 80% is not exceeded at any time in each industrial department?			
13	In each industrial department, does industrial facility to be licensed increase permissible heat exposure limit by 1°C for every 10% decrease in relative humidity below 80%, up to maximum increase of 4°C?			
14	In each industrial department, when working in open areas exposed to direct sunlight while using appropriate head protection, does industrial facility to be licensed increase permissible heat exposure limit by 2°C above previously assessed limits?			
15	In each industrial department, when working in poorly ventilated shaded areas, does industrial facility to be licensed increase permissible heat exposure limit by 2°C above previously assessed limits?			

S.N	Inspection Description	Yes	No	Comments
16	In each industrial department, when working in shaded areas with moderate ventilation, does industrial facility to be licensed increase permissible heat exposure limit by 5°C above all previously assessed limits?			
17	In each industrial department, when working in shaded areas with good ventilation, does industrial facility to be licensed increase permissible heat exposure limit by 8°C above all previously assessed limits?			
18	In each industrial department, does industrial facility to be licensed apply previously assessed permissible heat exposure limits to male and female workers aged 22–44 years?			
19	In each industrial department, does industrial facility to be licensed apply job selection rules to ensure physical abilities and general body characteristics of workers are suitable for required physical work?			
20	In each industrial department, does industrial facility to be licensed exclude workers with heart diseases from continuous or nearly continuous heavy physical workload?			
21	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed apply exceptional 2°C reduction to permissible heat exposure limits for male workers (16–22 and 44–55 years) and female workers (18–22 years)?			
22	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed prohibit male workers under 16 or over 55 from performing such work?			
23	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed prohibit female workers under 18 or over 44 from performing such work?			

S.N	Inspection Description	Yes	No	Comments
24	In each industrial department, does industrial facility to be licensed conduct periodic measurements of workplace temperature using heat stress measurement devices?			
25	In each industrial department, does industrial facility to be licensed compare measured workplace temperatures against permissible heat exposure limits based on highest intensity and heaviest physical workload?			
26	In each industrial department, does industrial facility to be licensed familiarize all workers with signs of heat stress?			
27	In each industrial department, does industrial facility to be licensed train all workers on rules for implementing self-monitoring and peer-monitoring Governing heat stress signs?			
28	In each industrial department, does industrial facility to be licensed organizationally mandate all workers to implement self-monitoring and peer-monitoring for heat stress signs?			
29	In each industrial department, does industrial facility to be licensed conduct follow-up medical examinations for all workers according to prescribed schedules?			
30	In each industrial department, does industrial facility to be licensed exclude elderly workers and those with heart or kidney diseases from continuous or nearly continuous heavy physical workload?			
31	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed implement acclimatization system for workers entering such tasks?			
32	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed implement acclimatization system for workers returning from leave or rest exceeding four consecutive days?			

S.N	Inspection Description	Yes	No	Comments
33	In each industrial department, during continuous or nearly continuous heavy physical workload, does industrial facility to be licensed shift intensive work to before or after afternoon period, while reducing intensity or increasing rest periods during afternoon hours due to harsh climatic conditions?			
34	Does industrial facility to be licensed provide sufficient potable water sources within 75 meters of worker locations?			
35	Starting from 30°C, does industrial facility to be licensed ensure drinking water available to workers is cooled to temperature not exceeding 15°C at source?			
36	Starting from 30°C, does industrial facility to be licensed ensure drinking water contains 0.1% salts to compensate for fluid and electrolyte loss in high-temperature environments?			
37	Starting from 30°C, does industrial facility to be licensed increase salt content in provided meals to compensate for fluid and electrolyte loss?			
38	Starting from 36°C, does industrial facility to be licensed provide well-ventilated shaded rest area at workplace?			
39	Starting from 36°C, does industrial facility to be licensed provide water showers for workers at workplace?			
40	Starting from 39°C, does industrial facility to be licensed provide air-conditioned rest area at workplace?			

S.N	Inspection Description	Yes	No	Comments
41	Starting from 39°C, does industrial facility to be licensed provide additional well-ventilated shaded rest area at workplace, separate from the air-conditioned rest area?			
42	Starting from 39°C, does industrial facility to be licensed provide water showers for workers at workplace?			
43	Starting from 39°C, does industrial facility to be licensed instruct workers against moving directly from the shower to the air-conditioned area?			
44	In each industrial department, starting from 39°C, does industrial facility to be licensed ensure site manager has the immediate decision authority to suspend work when deemed necessary?			
45	In each industrial department, during continuous or nearly continuous heavy physical workload up to 36°C, does industrial facility to be licensed ensure maximum continuous work period does not exceed four hours, followed by minimum 60-minute rest period?			
46	During continuous or nearly continuous heavy physical workload between 36–39°C, does industrial facility to be licensed ensure maximum continuous work period does not exceed two hours, followed by minimum 30-minute rest period?			
47	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations Governing heat stress?			

13. Checklists for General Technical Requirements Governing Workplace Pollutants

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed ensure concentration of any substance in work environment of any industrial department does not exceed Threshold Limit Values (TLVs) set out in Table 12?			
2	Is compliance maintained with continuous exposure limits—namely TLVs—for total dust or unclassified particles?			
3	Is compliance maintained with continuous exposure limits—namely TLVs—for respirable dust or unclassified respirable particles (2.5 µm to 10 µm)?			
4	Where simple asphyxiant gases or vapors with no significant toxic effects may accumulate, especially those displacing air and reducing oxygen concentration, is oxygen level in work environment measured?			
5	Where simple asphyxiant gases or vapors may accumulate, does measured oxygen concentration in work environment air fall below 18% by volume under normal atmospheric pressure?			
6	Where substances exist as vapors or workers have direct contact, and absorption through skin, mucous membranes, or eyes increases exposure, is concentration in work environment measured and exposure accurately evaluated?			
7	Where substances exist as vapors or workers have direct contact, and absorption through skin, mucous membranes, or eyes increases exposure, are preventive measures taken to prevent dermal absorption?			
8	Where carcinogenic or suspected carcinogenic substances are potentially present in industrial facility to be licensed, are workers allowed contact or exposure in any way?			
9	Where carcinogenic or suspected carcinogenic substances are potentially present, is worker exposure in			

S.N	Inspection Description	Yes	No	Comments
	all industrial departments minimized to lowest safe level per tables, or strictly prohibited if no known TLVs exist?			

S.N	Inspection Description	Yes	No	Comments
10	Is presence or use of any substances classified as agricultural pesticides practically prohibited anywhere in industrial facility to be licensed?			
11	Are Material Safety Data Sheets (MSDS) available in Arabic for all chemical substances used, produced, or present in industrial facility to be licensed?			
12	Where MSDS in Arabic are available, are copies kept in labeled files and made accessible to everyone in a visible location within each industrial department?			
13	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations Governing workplace pollutants?			

1.4 Checklists of general technical requirements Governing workplace ventilation:

S.N	Inspection Description	Yes	No	Comments
1	In each industrial department, does volume of space allocated per worker exceed 11.5 cubic meters, excluding any height above 4.5 meters from calculation?			
2	In any industrial department, does measured relative humidity in work environment exceed 80% at any time?			
3	Is smoking allowed inside any department of industrial facility to be licensed?			
4	In each industrial department, does Air Exchange Rate (AER) in work environment meet minimum values specified in Table 13?			
5	In each industrial department, if smoking is allowed, has AER been increased by at least 20% above minimum value specified in Table 13?			

S.N	Inspection Description	Yes	No	Comments
6	If rates in Table 13 are not initially met, has industrial facility to be licensed taken measures to ensure compliance in each industrial department via natural or mechanical general ventilation (non-localized)?			
7	Were necessary technical and engineering aspects followed during design or implementation of general ventilation system in each industrial department, whether natural or mechanical?			
8	Was design and implementation of general ventilation system (natural or mechanical) in each industrial department supervised by specialized mechanical engineer?			
9	In any industrial department, are there emissions of dust, smoke, fumes, toxic substances, or pollutants into workplace air in localized, irregular, or large quantities necessitating Local Exhaust Ventilation (LEV)?			
10	When LEV is used, is hood designed to ensure capture velocity at each emission point is sufficient to control and remove contaminants before spreading into workplace air?			
11	Were necessary technical and engineering aspects followed during design or implementation of LEV system?			
12	Was design and implementation of LEV system supervised by specialized mechanical engineer?			
13	Are periodic measurements of ventilation system efficiency conducted in each industrial department, regardless of system type?			
14	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations Governing workplace ventilation?			

1.5 Checklists of General Technical Requirements Governing Noise:

S.N	Inspection Description	Yes	No	Comments
1	In each industrial department, were machinery and tools selected based on standard specifications and modern technologies to ensure compliance with safe noise levels?			
2	In each industrial department, were operating speeds of machinery and tools selected to minimize generated noise?			
3	In each industrial department, were moving metallic parts replaced with alternative materials (e.g., plastic, Teflon) to reduce friction and mitigate noise?			
4	In each industrial department, was machinery installed on noise- and vibration-damping bases?			
5	In each industrial department, was noise source isolated using sound-insulating walls and barriers?			
6	In each industrial department, were walls and ceilings of workplaces generating significant noise lined with sound-absorbing materials?			
7	In each industrial department, are noise intensity levels and actual exposure durations evaluated and measured on a regular, periodic basis?			
8	In each industrial department, is an appropriate system for periodic/preventive maintenance and engineering inspection implemented?			
9	In any industrial department, does continuous noise level (in dB) exceed 90 dB over an 8-hour TWA?			
10	In any industrial department, is the 1 dB exchange rate applied to the 90 dB/8-hour limit for every 30-minute reduction in exposure duration?			

S.N	Inspection Description	Yes	No	Comments
11	In any industrial department, is 1 dB exchange rate applied to safe continuous noise level (90 dB/8 hours) for every 30-minute reduction in exposure duration?			
12	In non-industrial departments (e.g., administrative, offices, warehouses, security, food services), does continuous noise level (in dB) exceed 60 dB daytime or 50 dB nighttime (10:00 PM to 7:00 AM)?			
13	At industrial facility boundaries in any direction, does continuous noise level (in dB) exceed 64 dB daytime or 54 dB nighttime (10:00 PM to 7:00 AM)?			
14	Is compliance maintained with safe levels for intermittent noise—such as in heavy hammering departments—ensuring limits in Table 14 are not exceeded?			
15	In each industrial department, does instantaneous noise level (Peak Sound Pressure Level, in dB) exceed 135 dB during working hours?			
16	In each industrial department, if safe noise levels are exceeded, were engineering noise-control measures initially implemented?			
17	In each industrial department, if safe noise levels are exceeded and engineering controls are ineffective, is use of appropriate Personal Protective Equipment (PPE) strictly enforced?			
18	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing noise?			

1.6 Checklists for General Technical Requirements Governing Illumination Intensity:

S.N	Inspection Description	Yes	No	Comments
1	In each industrial department, does illumination intensity—whether natural or artificial—comply with requirements in Table 15?			
2	In each industrial department, is illumination intensity of work surface or work area adequate and appropriate for type of work performed?			
3	In each industrial department, is illumination from artificial lighting sources and natural lighting apertures uniform?			
4	In each industrial department, does illumination from artificial lighting sources and natural lighting apertures avoid direct glare?			
5	In each industrial department, does illumination from artificial lighting sources and natural lighting apertures avoid reflected glare?			
6	In each industrial department, does illumination from artificial lighting sources and natural lighting apertures avoid flickering?			
7	In each industrial department, does illumination from artificial lighting sources and natural lighting apertures avoid excessive contrast?			
8	In each industrial department, are there any barriers, equipment, furniture, or obstructions reducing illumination intensity of work surface or work area?			
9	Where natural lighting is used, does area of lighting apertures overlooking open spaces exceed one-tenth of floor area?			
10	Where natural lighting is used, does area of lighting apertures exceed one-sixth of floor area in floors located below adjacent ground level?			
11	In each industrial department, where natural lighting is used, does distribution of windows, skylights, and apertures ensure uniform light distribution across work areas?			

S.N	Inspection Description	Yes	No	Comments
12	In each industrial department, where natural lighting is used, are windows, skylights, and other natural light apertures kept open during working hours?			
13	In each industrial department, where natural lighting is used, is glass of windows, skylights, and other closed natural light apertures kept clean at all times?			
14	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing illumination intensity?			

1.7 Checklists for General Technical Requirements Governing Vibration:

S.N	Inspection Description	Yes	No	Comments
1	In each industrial department, were machinery and tools selected based on standard specifications and modern technologies to ensure compliance with Threshold Limit Values (TLVs) for vibration exposure?			
2	In each industrial department, were operating speeds of machinery and tools selected to minimize generated vibrations?			
3	In each industrial department, were moving metallic parts replaced with alternative materials (e.g., plastic, Teflon) to reduce friction and mitigate vibrations?			
4	In each industrial department, was machinery installed on vibration- and noise-damping bases?			
5	In each industrial department, are vibration levels and actual exposure durations evaluated, measured, and analyzed on a regular, periodic basis?			
6	In each industrial department, is an appropriate system for periodic/preventive maintenance and engineering inspection implemented?			

S.N	Inspection Description	Yes	No	Comments
7	In each industrial department, is compliance maintained with TLVs for vibration exposure specified in Table 16?			

S.N	Inspection Description	Yes	No	Comments
8	In each industrial department, if TLVs for vibration exposure are exceeded, were engineering vibration-control measures initially implemented—including isolation, damping, run-out prevention, and mechanical/dynamic balancing—or administrative controls adopted to reduce exposure while maintaining thermal comfort of workers?			
9	In each industrial department, if TLVs continue to be exceeded despite engineering and administrative controls, is use of appropriate PPE, such as anti-vibration gloves, strictly enforced?			
10	In each industrial department where workers are exposed to vibrations, are training programs organized to promote adoption of safe work practices for vibration hazard prevention?			
11	In each industrial department where workers are exposed to vibrations, is an appropriate preventive and curative healthcare system implemented, including pre-employment, periodic, and specialized medical examinations?			
12	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations related to vibrations?			

2. Checklists for General Technical Requirements Governing Common Industrial Departments or Equipment in Egyptian Industry

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed require workers to obtain necessary permits for operating vehicles on public roads?			
2	Does facility comply with all required conditions and precautions governing worker transport vehicles?			
3	Does facility comply with all required conditions and precautions governing vehicles and mechanical equipment?			
4	Does facility comply with all required conditions and precautions governing material handling and lifting operations?			
5	Does facility comply with all required conditions and precautions governing chains, ropes, wire ropes, and similar rigging hardware?			
6	Does facility comply with all required conditions and precautions governing electric elevators?			
7	Does facility comply with all required conditions and precautions governing security of loading, handling, or unloading areas?			
8	Does facility comply with all required conditions and precautions governing lifting machinery or cranes?			
9	Does facility comply with all required conditions and precautions governing electric hoists?			
10	Does facility comply with all required conditions and precautions governing testing and licensing of material handling and transport equipment and respective operators?			

S.N	Inspection Description	Yes	No	Comments
11	Does facility comply with all required conditions and precautions governing lighting and security of material handling and transport areas?			
12	Does facility comply with all required conditions and precautions governing tools and equipment?			
13	Does facility comply with all required conditions and precautions governing maintenance and safeguarding of tools and equipment?			
14	Does facility comply with all required conditions and precautions governing maintenance and safeguarding of sharpening tools, saws, grinding equipment, and similar machinery?			

S.N	Inspection Description	Yes	No	Comments
15	Does facility comply with all required conditions and precautions governing mechanical means used for Explosion Protection and overpressure prevention?			
16	Does facility comply with all required conditions and precautions governing steam boilers and pressure vessels?			
17	Does facility comply with all required conditions and precautions governing preventive and periodic maintenance systems and engineering inspection?			
18	Does industrial facility to be licensed comply with all required conditions and precautions governing preventive and periodic maintenance, engineering inspection, and Troubleshooting?			
19	Does facility comply with all required conditions and precautions governing air compressors and compressed air usage?			
20	Does facility comply with all required conditions and precautions governing compressed air receivers?			
21	Does facility comply with all required conditions and precautions governing spraying operations and site ventilation?			
22	Does facility comply with all required conditions and precautions governing safeguarding, transport, storage, and use of gas cylinders?			
23	Does facility comply with all required conditions and precautions governing welding operations and safeguarding and ventilation of respective sites?			

3. Checklists for General Technical Requirements Governing Uncommon Industrial Factors in Egyptian Industry

3.1 Checklists for General Technical Requirements Governing Cold Stress:

S.N	Inspection Description	Yes	No	Comments
1	Does work environment temperature in any industrial department drop below 16°C at any time during year?			
2	In each cold-environment industrial department, does industrial facility to be licensed implement necessary measures and precautions to mitigate hazards associated with low temperatures?			
3	In each cold-environment industrial department, does industrial facility to be licensed conduct periodic medical examinations for all workers at scheduled intervals?			
4	In each cold-environment industrial department, does industrial facility to be licensed provide necessary healthcare for workers requiring it?			
5	In each cold-environment industrial department, in event of frostbite on any part of worker's body, does industrial facility to be licensed promptly transfer affected worker to suitable warm location and administer required first aid?			
6	In each cold-environment industrial department, does industrial facility to be licensed apply job selection criteria?			
7	In each cold-environment industrial department, does industrial facility to be licensed exclude elderly workers and those with cardiac conditions from working in cold areas?			
8	In each cold-environment industrial department, does industrial facility to be licensed reduce physical workload for all workers to prevent excessive perspiration, which accelerates body heat loss?			

S.N	Inspection Description	Yes	No	Comments
9	In each cold-environment industrial department, does industrial facility to be licensed ensure worker clothing is dry when performing work in normal or warm temperatures prior to entering cold areas?			
10	In each cold-environment industrial department, does industrial facility to be licensed ensure proper ventilation?			
11	In each cold-environment industrial department, for cold areas lacking ventilation systems, does industrial facility to be licensed restrict exposure durations?			
12	In each cold-environment industrial department, does industrial facility to be licensed provide observation apertures or means to monitor workers for rapid intervention?			
13	In each cold-environment industrial department, if precise manual tasks exceed 10 minutes, does industrial facility to be licensed protect workers' hands via warm airflow or radiant heat sources?			
14	In each cold-environment industrial department, if performing manual tasks not requiring precision for extended periods, does industrial facility to be licensed mandate use of specialized PPE?			
15	In each cold-environment industrial department, does industrial facility to be licensed provide workers with protective, insulating, and dry winter clothing?			
16	In each cold-environment industrial department, does industrial facility to be licensed provide elderly workers and those with circulatory disorders with highly-insulating clothing?			
17	In each cold-environment industrial department, does industrial facility to be licensed prevent drafts by installing portable windbreaks in open cold work areas?			

S.N	Inspection Description	Yes	No	Comments
18	In each cold-environment industrial department, does industrial facility to be licensed utilize protective tents or booths when working in open cold areas, or within enclosed cold areas when necessary?			
19	In each cold-environment industrial department, does industrial facility to be licensed minimize worker exposure duration to cold environment as much as possible?			
20	In each cold-environment industrial department, does industrial facility to be licensed require workers to promptly replace wet clothing with dry clothing, without restricting frequency of such changes?			
21	In each cold-environment industrial department, does industrial facility to be licensed mandate use of protective clothing suitable for cold environment and specific tasks?			
22	In each cold-environment industrial department, does industrial facility to be licensed require workers to keep all protective clothing clean and dry to maintain required thermal insulation properties?			
23	In each cold-environment industrial department, does industrial facility to be licensed require workers to refrain from wearing metallic jewelry or watches, as these constitute direct skin hazards?			
24	In each cold-environment industrial department, does industrial facility to be licensed maintain relative humidity below 60% to inhibit mold growth?			
25	In each cold-environment industrial department, does industrial facility to be licensed monitor door opening frequency and duration?			
26	In each cold-environment industrial department, if mold appears on food components in cold storage, does industrial facility to be licensed dispose of them immediately per instructions?			

S.N	Inspection Description	Yes	No	Comments
27	In each cold-environment industrial department, does industrial facility to be licensed ensure immediate disposal of wet organic materials?			
28	In each cold-environment industrial department, does industrial facility to be licensed store products or paper waste in closed plastic containers?			
29	In each cold-environment industrial department, does industrial facility to be licensed prohibit use or storage of cardboard boxes or other hygroscopic materials?			
30	In each cold-environment industrial department, does industrial facility to be licensed provide warm rest areas within 75 meters with suitable temperatures to restore worker activity and thermal balance?			
31	In each cold-environment industrial department, does industrial facility to be licensed provide mandatory rest breaks, with minimum of 30 minutes every two working hours?			
32	In each cold-environment industrial department, does industrial facility to be licensed increase frequency and duration of rest breaks as worksite temperature decreases?			
33	In each cold-environment industrial department, does industrial facility to be licensed provide workers with suitable warm fluids and balanced, adequate meals?			
34	In each cold-environment industrial department, for continuous high physical workloads, does industrial facility to be licensed implement acclimatization program for workers entering such strenuous work?			
35	In each cold-environment industrial department, for continuous high physical workloads, does industrial facility to be licensed implement acclimatization program for workers returning to strenuous work after leave exceeding four consecutive days?			

S.N	Inspection Description	Yes	No	Comments
36	In each cold-environment industrial department, does industrial facility to be licensed perform comprehensive annual cleaning operations?			
37	In each cold-environment industrial department, does industrial facility to be licensed conduct monthly inventory to remove expired items or those showing signs of mold?			
38	In each cold-environment industrial department, does industrial facility to be licensed label shelves and containers to identify contents and responsible departments to minimize exposure duration?			
39	In each cold-environment industrial department, when working below 0°C, does industrial facility to be licensed cover metal bars or handles with thermally insulating materials?			
40	In each cold-environment industrial department, when working below 0°C, does industrial facility to be licensed design equipment and tools to be operable without removing PPE?			
41	In each cold-environment industrial department, when working below 0°C, does industrial facility to be licensed prevent ice accumulation on door edges that could trap workers inside?			
42	In each cold-environment industrial department, when working below 0°C, does industrial facility to be licensed equip enclosed cold areas with internal emergency release locks?			
43	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), does industrial facility to be licensed require workers to understand all safety instructions, specifically use of designated transfer containers?			

S.N	Inspection Description	Yes	No	Comments
44	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), does industrial facility to be licensed require workers to avoid any actions leading to spills or splashes?			
45	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), does industrial facility to be licensed require workers to promptly clean and dry any spills or splashes immediately upon occurrence?			
46	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), does industrial facility to be licensed require workers to refrain from storing such liquids in sealed containers lacking venting outlets?			
47	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), does industrial facility to be licensed require workers to refrain from handling bulk quantities at once?			
48	In each cold-environment industrial department, when handling cryogenic liquids (-73°C or lower), if handling bulk quantities is necessary, does industrial facility to be licensed require workers to verify adequacy and quality of site ventilation systems immediately beforehand?			
49	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing Cold Stress?			

3.2. Checklists for General Technical Requirements Governing Ionizing Radiation:

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed comply with taking preventive measures against Ionizing Radiation, whether arising from radioactive materials or activities generating radiation exposure?			
2	Does industrial facility to be licensed maintain, on permanent basis, documents and records pertaining to radioactive materials, Ionizing Radiation, and protection measures taken?			
3	Does industrial facility to be licensed obtain license from Egyptian Nuclear and Radiological Regulatory Authority (ENRRA) before importing, exporting, manufacturing, possessing, handling, transporting, storing, or disposing of radiation devices, radioactive materials, or radioactive waste?			
4	Does industrial facility to be licensed obtain approval from ENRRA before using Ionizing Radiation in any manner?			
5	Does industrial facility to be licensed comply with scope of approval issued by ENRRA?			
6	Does industrial facility to be licensed notify ENRRA immediately upon loss of any radiation devices or radioactive materials, or occurrence of any incident that could expose any person to radiation doses, including incident details and causes?			
7	Does industrial facility to be licensed ensure no licensed person is allowed to use or store radiation devices or radioactive materials, or work with Ionizing Radiation, except after medical examination and verification of physical, psychological, sensory, and technical fitness per ENRRA requirements?			
8	Does industrial facility to be licensed ensure no persons under age of 18 are exposed to Ionizing Radiation?			
9	Does industrial facility to be licensed ensure licensee takes all necessary measures and precautions to protect workers exposed to Ionizing Radiation, in accordance with requirements and instructions specified by ENRRA?			

S.N	Inspection Description	Yes	No	Comments
10	Does industrial facility to be licensed ensure licensee protects public, including visitors and nearby residents, per ENRRA requirements?			
11	Does industrial facility to be licensed ensure licensee protects onsite and offsite environment from Radiological hazards per ENRRA requirements?			
12	Does industrial facility to be licensed install and fix appropriate Ionizing Radiation warning signs and instructional placards in exposed work areas?			
13	Does industrial facility to be licensed implement measures to restrict unauthorized access to all Ionizing Radiation work areas?			
14	Does industrial facility to be licensed conduct periodic radiation dosimetry for workers at intervals specified by ENRRA?			
15	Does industrial facility to be licensed record radiation dose results for workers on designated forms?			
16	Is register maintained to preserve radiation dose results for workers to enable access by authorized personnel?			
17	Does industrial facility to be licensed and licensee appoint or contract ENRRA-accredited Radiation Protection Officer (RPO) or expert to monitor radiological activities, including environmental surveys, personal dosimetry, radioactive material inventory, device status, contamination logs, and emergency response management?			
18	Does industrial facility to be licensed organize training and awareness programs for personnel licensed to handle Ionizing Radiation?			

S.N	Inspection Description	Yes	No	Comments
19	Does industrial facility to be licensed conduct periodic Ionizing Radiation dosimetry for personnel at intervals specified by ENRRA?			
20	Does industrial facility to be licensed record results of periodic radiation dose measurements on designated forms?			
21	Does industrial facility to be licensed maintain log to preserve periodic radiation dose measurements for access by responsible personnel?			
22	Does industrial facility to be licensed implement medical surveillance system, including periodic medical examinations and regular Complete Blood Count (CBC) per ENRRA mandates, and conduct specialized medical assessments for acute exposure following radiological incidents?			
23	Does industrial facility to be licensed maintain specialized register for medical examination and blood analysis results for all personnel licensed to handle Ionizing Radiation?			
24	Does industrial facility to be licensed provide radioactive material transport/handling devices and specialized PPE, including lead-lined clothing, gloves, lead-equivalent eyewear, boots, and long-handled remote reach tools, compliant with ENRRA safety standards?			
25	Does industrial facility to be licensed implement ALARA principle (As Low As Reasonably Achievable) in facility design and operational procedures to minimize personal exposure and prevent unnecessary radiation exposure?			
26	Does industrial facility to be licensed implement all measures and safety standards for protection against radiological hazards during storage of radioactive sources?			

S.N	Inspection Description	Yes	No	Comments
27	Does industrial facility to be licensed implement all measures, precautions, and instructions governing basic safety and security standards for protection against radiological hazards during maintenance of radiation devices?			
28	Does industrial facility to be licensed implement all measures, precautions, and instructions governing basic safety and security standards for protection against radiological hazards regarding emergency plan?			
29	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing Ionizing Radiation?			

3.3 Checklists for General Technical Requirements Governing Laser Radiation:

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed organize training, guidance, and awareness programs for personnel handling Laser Radiation?			
2	Does industrial facility to be licensed educate operation and maintenance personnel on hazard levels and types resulting from unsafe use of Laser Radiation and associated devices?			
3	Does industrial facility to be licensed prohibit untrained or unauthorized persons from operating or maintaining laser devices?			
4	Are workers at industrial facility to be licensed required to remove master ignition key when laser device is not in use?			
5	Does industrial facility to be licensed ensure presence of trained Laser Safety Officer (LSO) responsible for securing and operating laser devices?			
6	Does industrial facility to be licensed ensure existence of written, approved, and displayed Standard Operating Procedures (SOPs) for various laser devices?			

S.N	Inspection Description	Yes	No	Comments
7	Does industrial facility to be licensed comply with permissible levels specified in Table 17 regarding Threshold Limit Values (TLVs) for ocular exposure to direct Laser Radiation?			

S.N	Inspection Description	Yes	No	Comments
8	Does industrial facility to be licensed comply with permissible levels specified in Table 18 regarding Threshold Limit Values (TLVs) for dermal exposure to direct Laser Radiation?			
9	Are workers at industrial facility to be licensed required to use Laser Safety Eyewear and protective clothing when potential risk of exposure or beam reflection exists?			
10	Does industrial facility to be licensed ensure use of minimum power or energy output necessary for required tasks?			
11	Does industrial facility to be licensed prevent exposing others to radiation levels exceeding Maximum Permissible Exposure (MPE), especially during calibration or alignment?			
12	Are workers at industrial facility to be licensed required to ensure primary and secondary laser beams are terminated with diffuse reflections or beam dumps at useful endpoints?			
13	Are workers at industrial facility to be licensed required to ensure laser beam path is positioned above eye level of seated personnel or below eye level of standing personnel?			
14	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing Laser Radiation?			

3.4. Checklists for General Technical Requirements Governing Ultraviolet Radiation Handling:

S.N	Inspection Description	Yes	No	Comments
1	Does industrial facility to be licensed organize training, guidance, and awareness programs for workers handling Ultraviolet (UV) Radiation?			
2	Does industrial facility to be licensed instruct operation and maintenance personnel on hazard levels and types resulting from unsafe use of UV Radiation and associated devices?			
3	Does industrial facility to be licensed prohibit untrained or unauthorized persons from operating or maintaining UV-emitting devices?			

S.N	Inspection Description	Yes	No	Comments
4	Are workers at industrial facility to be licensed required to remove master ignition key when UV device is not in use?			
5	Does industrial facility to be licensed comply with Threshold Limit Values (TLVs) for UV Radiation in 180–400 nm spectral range as specified in Table 19?			
6	Does industrial facility to be licensed implement precautions for photosensitive personnel or those exposed to photosensitizing agents?			
7	Does industrial facility to be licensed comply with TLVs for UV Radiation in 320–400 nm spectral range as specified in Table 19?			
8	Does industrial facility to be licensed ensure total UV exposure to unprotected eyes does not exceed 1 mW/cm ² for durations exceeding 1000 seconds (approx. 16 minutes)?			
9	Does industrial facility to be licensed ensure UV irradiance on unprotected skin or eyes does not exceed values labeled “B” in Table 19 over eight-hour period?			
10	Does industrial facility to be licensed ensure UV exposure remains within TLVs specified in Table 19 regardless of UV-protective coating use?			
11	If ozone gas is generated from UV sources with wavelengths below 250 nm, does industrial facility to be licensed apply TLVs for chemical substances?			
12	If UV exposure exceeds TLVs specified in Table 20, are workers at industrial facility to be licensed required to use appropriate UV-protective eyewear and clothing?			
13	In each industrial department, has industrial facility to be licensed repeatedly committed serious or material violations governing UV Radiation?			

stopped

3.5. Checklists for General Technical Requirements Governing Non-Ionizing Radiation:

S. N	Inspection Description	Yes	No	Comments
1	In cases of exposure to a static or low-frequency electric field (≤ 30 kHz), does the industrial facility applying for licensing take all necessary precautions to ensure proper grounding connections?			
2	In cases of exposure to a static or low-frequency electric field (≤ 30 kHz), are workers at the industrial facility required to wear appropriate personal protective equipment such as suits or gloves, especially in areas where the static electric field intensity exceeds 15 kV/m?			
3	In cases of exposure to a static or low-frequency electric field (≤ 30 kHz), does the industrial facility prohibit exposure of individuals using pacemaker devices to static electric fields exceeding 1 kV?			
4	In cases of exposure to a static or low-frequency electric field (≤ 30 kHz), does the industrial facility comply with the ceiling threshold limits for exposure according to the affected frequencies, as specified in Table 21?			
5	In cases of exposure to a static magnetic field under radio frequencies ≤ 30 kHz, does the industrial facility comply with the threshold limits for magnetic flux density specified in Table 22?			
6	In every industrial section at the industrial facility applying for licensing, does the facility repeatedly commit serious or substantial violations Governing non-ionizing radiation?			

4. Checklists for Specific Technical Requirements Governing Outdoor Air

Pollutants in Certain Industries, Production Units, Furnaces, or Incinerators:

S. N	Inspection Description	Yes	No	Comments
1	Does the industrial facility applying for licensing repeatedly commit serious or substantial violations Governing the specific technical requirements for outdoor air pollutants issued for it?			
2	Does the industrial facility applying for licensing comply with the maximum emission limits for the coke production industry, as specified in Table 23?			
3	For emissions from the coke production industry, does the industrial facility ensure that the total particulate matter load from coke cooling units does not exceed 10 grams per ton of coke?			
4	For emissions from the coke production industry, does the industrial facility ensure that the mercury concentration does not exceed 1 mg/m ³ ?			
5	For emissions from the coke production industry, does the industrial facility ensure that the concentration of dioxins and furans does not exceed 0.1 ng/m ³ ?			
6	Does the industrial facility applying for licensing comply with the maximum emission limits for the production of vegetal and animal charcoal, as specified in Table 24?			
7	Does the industrial facility applying for licensing comply with the maximum emission limits for the production of carbon electrodes (graphite electrodes), as specified in Table 25?			
8	Does the industrial facility applying for licensing comply with the maximum emission limits for the cement industry, as specified in Table 26?			
9	For emissions from the cement industry, does the industrial facility comply with the total particulate matter emission standard of 50 mg/m ³ for a 15-minute average concentration?			



S.N	Inspection Description	Yes	No	Comments
.10	Regarding emissions from the cement industry, and in the case of burning hazardous waste at 40% of the thermal energy, does the industrial facility applying for licensing comply with the reduced total suspended solids (TSS) emission standard of 10 mg/m ³ for a 15-minute average concentration?			
.11	Regarding emissions from the cement industry, and in the case of burning waste at 40% of the thermal energy, does the industrial facility applying for licensing ensure that sulfur dioxide (SO ₂) emissions do not exceed 50 mg/m ³ ?			
.12	Regarding emissions from the cement industry, does the industrial facility applying for licensing comply with implementing continuous self-monitoring?			
.13	Regarding emissions from the cement industry, does the industrial facility applying for licensing comply with monitoring dioxins and furans by collecting a sample over a period of no less than six hours and no more than eight hours, with the monitoring conducted at least once every three months?			
.14	Regarding emissions from the cement industry, does the industrial facility applying for licensing comply with monitoring heavy metals by collecting a sample over a period of no less than thirty minutes and no more than eight hours, with the monitoring conducted at least once every three months?			
.15	Regarding emissions from the cement industry, does the industrial facility applying for licensing comply with continuously self-monitoring the suspended particulate matter in the outdoor air within the facility boundaries, taking into account the prevailing wind direction?			
.16	Does the industrial facility applying for licensing comply with the maximum emission limits for lime, dolomite, and gypsum kilns, as well as for units burning and producing similar quarry materials, as specified in Table (27)?			

.17	Does the industrial facility applying for licensing comply with the maximum emission limits for the production units of clay bricks, refractory bricks, and kilns, as specified in Table (28)?			
.18	Does the industrial facility applying for licensing comply with the maximum emission limits for the glass industry, as specified in Table (29)?			
.19	Regarding emissions from the glass industry, does the industrial facility applying for licensing ensure that the concentration of the sum of other heavy metals in the total suspended solids does not exceed 5 mg/m ³ ?			

S. N	Inspection Description	Yes	No	Comments
.20	Regarding emissions from the glass industry, does the industrial facility applying for licensing ensure that the selenium concentration does not exceed 1 mg/m ³ , with all measurements taken as solid particles?			
.21	Regarding emissions from the glass industry, does the industrial facility applying for licensing ensure that the arsenic emission load does not exceed 2 grams per hour?			
.22	Regarding emissions from the glass industry, does the industrial facility applying for licensing ensure that the cadmium emission load does not exceed 0.5 grams per hour?			
.23	Does the industrial facility applying for licensing comply with the maximum emission limits for the ceramics and sanitary ware industry, as specified in Table (30)?			
.24	Regarding emissions from the ceramics and sanitary ware industry, does the industrial facility applying for licensing ensure that the lead emission load does not exceed 2.5 grams per hour?			
.25	Regarding emissions from the ceramics and sanitary ware industry, does the industrial facility applying for licensing comply with measuring the heavy metals in the total suspended solids?			
.26	Does the industrial facility applying for licensing comply with the maximum emission limits for quarry material production units (crushers or mixers), as specified in Table (31)?			
.27	Does the industrial facility applying for licensing comply with the maximum emission limits for asphalt mixing units, as specified in Table (32)?			
.28	When determining the locations of asphalt mixing units, does the industrial facility applying for licensing ensure that the distance between the asphalt mixing unit and any residential area is no less than 500 meters, taking into account the prevailing wind direction?			

.29	Does the industrial facility applying for licensing comply with the maximum emission limits for the iron and steel industry, as specified in Table (33)?			
.30	Does the industrial facility applying for licensing comply with the maximum emission limits for the ferrous alloys industry, as specified in Table (34)?			
.31	Regarding emissions from the ferrous alloys industry, does the industrial facility applying for licensing ensure that the total concentration of heavy metals does not exceed 10 mg/m ³ ?			

S. N	Inspection Description	Yes	No	Comments
.32	Regarding emissions from the ferrosilicon alloys industry, does the industrial facility applying for licensing ensure that the concentration of free silicon measured in the total suspended solids does not exceed 10 mg/m ³ ?			
.33	Does the industrial facility applying for licensing comply with the maximum limits specified in Table (35) for all emissions from the non-ferrous metal extraction industry, which primarily includes nickel, copper, lead, zinc, and aluminum?			
.34	Regarding emissions from the non-ferrous metal extraction industry, which primarily includes nickel, copper, lead, zinc, and aluminum, does the industrial facility applying for licensing ensure that the concentration of dioxins and furans does not exceed 0.1 ng/m ³ ?			
.35	Regarding emissions from the ferrous alloys industry, in the case of nickel production units, does the industrial facility applying for licensing ensure that the ammonia emission concentration does not exceed 5 mg/m ³ ?			
.36	Regarding emissions from the ferrous alloys industry, in the case of nickel production units, does the industrial facility applying for licensing ensure that the chlorine emission concentration does not exceed 0.5 mg/m ³ ?			
.37	Regarding emissions from the ferrous alloys industry, in the case of lead or zinc extraction using chemical refining, electrolysis, or solvent methods, does the industrial facility applying for licensing ensure that the arsenic emission concentration does not exceed 0.5 mg/m ³ ?			
.38	Regarding emissions from the ferrous alloys industry, in the case of aluminum production units, does the industrial facility applying for licensing ensure that the hydrogen chloride (HCl) emission concentration does not exceed 5 mg/m ³ ?			

39.	Regarding emissions from the ferrous alloys industry, in the case of aluminum production units, does the industrial facility applying for licensing ensure that the hydrogen fluoride (HF) emission concentration does not exceed 0.5 mg/m ³ ?			
40.	Regarding emissions from the ferrous alloys industry, in the case of aluminum production units, does the industrial facility applying for licensing ensure that the total emission concentration of fluoride compounds does not exceed 0.8 mg/m ³ ?			

S. N	Inspection Description	Yes	No	Comments
.41	Regarding emissions from the ferrous alloys industry, in the case of aluminum production units, does the industrial facility applying for licensing ensure that the specific load of total suspended solids does not exceed 2 kg per ton of product?			
.42	Regarding emissions from the ferrous alloys industry, in the case of aluminum production units, does the industrial facility applying for licensing ensure that the specific load of fluorine does not exceed 0.5 milligrams per kilogram of product?			
.43	Does the industrial facility applying for licensing comply with the maximum emission limits for metal casting and forming, as well as all processes of casting ferrous and non-ferrous metals using sand molds or other types of molds, and the preparation of sand molds, as specified in Table (36)?			
.44	Does the industrial facility applying for licensing comply with the maximum emission limits for the chemical, pharmaceutical, and cosmetics industries, as specified in Table (37)?			
.45	Regarding emissions from the chemical, pharmaceutical, and cosmetics industries, does the industrial facility applying for licensing ensure that the concentration of carbon disulfide does not exceed 3 mg/m ³ , particularly in units for sulfur recovery from natural gas?			
.46	Does the industrial facility applying for licensing comply with the maximum emission limits for textile dyeing and finishing, as specified in Table (38)?			
.47	Does the industrial facility applying for licensing comply with the maximum emission limits for the electronics and semiconductor manufacturing industry, as specified in Table (39)?			

48.	Does the industrial facility applying for licensing comply with the maximum emission limits for municipal and non-hazardous industrial waste incinerators, as specified in Table (40)?			
49.	Does the industrial facility applying for licensing comply with the maximum emission limits for hazardous waste incinerators, as specified in Table (41)?			
50.	Does the industrial facility applying for licensing comply with the maximum emission limits for emissions from other industrial sources, as specified in Table (42)?			

5. Checklists for the Specific Technical Requirements Governing the Prescribed Building Ratios According to Each Industrial Activity

S. N	Inspection Description	Yes	No	Comments
1	Does the industrial facility applying for licensing comply with the prescribed building ratios for its activity, as specified in Table (43) of the technical requirements?			