حكومة عجمان
Government of Ajman

هيئة المناطق الحرة
Free Zones Authority

TECHNICAL GUIDELINES MANUAL (TGM) FOR INDUSTRIAL ACTIVITIES

FREE ZONES AUTHORITY OF AJMAN

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1. Introduction

In line with the objectives of the Ajman Free Zones Authority (FZA) related to the provision of the business and activities regulations, rules, laws, and instructions issued by FZA, the Technical Guidelines Manual (TGM) for Industrial Activities has been developed. TGM aims to achieve transparency and assist all stakeholders in understanding the procedures associated with controlling and inspecting these activities.

This TGM specifies health, safety, and environmental requirements for industrial activities, and helps to explain such requirements to decision-makers and business partners. The TGM is based on relevant legal references, in addition to adopting flexibility and adaptation to new developments and activities' approval requirements. It is updated annually according to available data and developments.

FZA applies specific environmental guidelines to projects on a case-by-case basis. Business partners shall comply with the FZA's health, safety, and environmental guidelines and use eco-friendly production technologies that achieve low consumption of resources and energy, and the maximum permissible emissions according to the applicable standards in this regard.

This TGM outlines the basic requirements for industrial activities by reviewing their technical requirements. It focuses on topics, such as studying the environmental impact assessment of activities as required by the federal and local environmental law, emission control systems, and managing, treating, and reducing waste of all kinds (liquid, gaseous, and solid). It also highlights the provision of spill management and fire and explosion prevention plans, ensuring the sustainable use of water and energy resources in the facility.

The TGM explains the reporting mechanism adopted for the environmental health and safety management system, as well as focuses on the treatment of noise and limiting its effects, ensuring a healthy and safe work environment for Employees , and achieving occupational health and safety requirements.

2. Definitions

To apply this TGM, unless the context requires otherwise, the following words and phrases shall have the meanings assigned to each one of them respectively:

Term	Definition
Environmental Impact Study	Study and analysis of the environmental feasibility of activities that, if established or implemented, may affect environmental safety.
Ecosystems	The comprehensive system that comprises all the natural elements of the environment, which integrate and interact with each other.
Natural Resources	All resources that humans have no control over their existence.
Environmental Pollution	Pollution arising naturally or unnaturally because of humans directly or indirectly, intentionally or unintentionally introducing any of the pollutants into the elements of the natural environment, resulting in any danger to human health, plant life, or animal life, as well as harm to resources and ecosystems.
Pollutants	Any solid, liquid, or gaseous materials, smoke, vapors, odors, noise, radiation, heat, lighting glare, or vibrations produced naturally or by human action, leading directly or indirectly to environmental pollution and degradation or harm to humans or living organisms.
Air Pollution	Any change in the characteristics and specifications of outdoor air, workplace air, and the air of closed and semi-closed public places, resulting in a danger to human health

	and the environment, whether this pollution is caused by natural factors or human activity
Environmental Protection	Preserving its components, properties, and natural balance, preventing or reducing or combating pollution, conserving natural resources and rationalizing their consumption, protecting the living organisms that inhabit it, particularly those on the verge of extinction, and working to develop and improve all of these components.
Hazardous Materials	Solid, liquid, or gaseous materials that have properties harmful to human health or that adversely affect the environment, such as toxic materials, explosive materials, flammable materials, or materials of ionizing radiation
Harmful Materials	All materials that directly or indirectly cause harm to human health or the environment, whether these materials are chemical, biological, or radioactive.
Waste	All types of hazardous and non-hazardous waste, including nuclear waste, that are disposed of or required to be disposed of according to the provisions of the law, and include solid, liquid, gaseous, hazardous, and medical waste, smoke, dust, and vapors.
Waste Management	Collecting, storing, transporting, recycling, and disposing of waste, including subsequent care of disposal sites.
Waste Handling	All processes begin from the time waste is generated until its safe disposal, which includes collecting, storing, transporting, treating, recycling, or disposing of waste.
Waste Disposal	Processes that do not lead to the extraction or reuse of materials, such as landfilling, deep injection, biological treatment, physical/ chemical treatment, permanent storage, destruction, or any method approved by the competent authorities.
Waste Recycling	Processes that are carried out on waste to extract or reuse materials, such as using them as fuel, extracting metals and organic materials, treating soil, or re-refining oils.
Discharge	Any leakage, spillage, emission, or discharge of any type of pollutant or disposal of it into the aquatic environment, soil, or air.
Noise	All sounds, vibrations, or disturbing sound waves that are harmful to public health.
Operation fitness certificate (OFC)	A conformity certificate, which allows industrial facilities that have met the standards for the activity assigned to them to begin operations.
NO Objection certificate(NOC)	A certificate issued to service/commercial facilities (if they exist in/on a warehouse, land, or shop, and some activities in offices according to the activity classification list) that relate to health, safety, and the environment after fulfilling all technical requirements for the activity to begin work.
HSE Activities	Activities that directly or indirectly impact individuals and/or the environment and require an assessment of their compliance with standards and requirements to prevent or minimize these impacts.
Requirements of issuing the OFC/NOC certificate	A set of controls that must be available for each HSE Activity

3. Scope of Application

3.1 The regulations collectively illustrated in this TGM embody the various permitted activities (on-site and off-site) and all guiding principles specified according to the regulatory points to ensure the protection and safety of the environment and its media (water, air, and soil), achieving long-term sustainability to protect plants, animals, and humans.

3.2 All sections hereof define the technical regulations that must be adhered to and complied with by all facilities operating within the scope of FZA to ensure the safety of the environment and its media (water, air, and soil) to achieve long-term sustainability to protect plants, animals, and humans.

3.3 The provisions hereof define the comprehensive conditions and requirements that must be met by various projects at their different stages of development, from construction and operation to cancellation. They must include data on environmental impacts before the project, supported by basic studies, and modeling, if requested.

3.4 The requirements and standards defined in these regulations are based on the requirements specified in the UAE's current laws, which are enforced by the various ministries and government agencies responsible for environmental protection.

3.5 It is the responsibility of FZA, represented by its competent departments accruing to the competencies of each department, to ensure the application of these regulations.

4. Economic Activities

Table (1):

S. NO.	Activity	S. NO.	Activity	S. NO.	Activity	S. NO.	Activity
1	Turning workshop	100	Manufacturing of ventilation and air purification equipment	200	Manufacturing of electric water heaters	299	Manufacturing of printing inks
2	Blacksmithing and welding workshop	101	Manufacturing of central air conditioning system supplies	201	Manufacturing of fuel and lighting oils	300	Manufacturing of split air conditioners
3	General vehicle maintenance and repair workshops (Garages)	103	Manufacturing of odor eliminators and room deodorizers	202	Manufacturing of lubricating oils	301	Manufacturing of kitchen appliances
4	Land transportation of petroleum materials	104	Manufacturing of cosmetics	203	Manufacturing of chlorinated paraffin oil	302	Manufacturing of automatic irrigation equipment
5	Transportation of petroleum materials by tanker trucks	105	Manufacturing of deodorants and bath salts	204	Manufacturing of safety glass	303	Manufacturing of remote-control devices
6	Marble sawing, cutting, and polishing	106	Manufacturing of air filters	205	Manufacturing of knitting yarns	304	Manufacturing of communication devices and accessories
7	Wood sawing	107	Manufacturing of water filters	206	Manufacturing of fiberglass raw materials	305	Manufacturing of furniture and kitchen fixtures
8	Dental and prosthetics laboratory	108	Manufacturing of spring mattresses	207	Manufacturing of picture frames	306	Manufacturing of public stores furniture and fixtures
9	Prostheses manufacturing laboratory	109	Manufacturing of agricultural pesticides	208	Manufacturing of conveyors for building maintenance	307	Manufacturing of school and hospital furniture
10	Treatment and refining of oil waste	110	Manufacturing of water coolers	209	Manufacturing of handbags, wallets, and belts	308	Manufacturing of electrical measuring and control devices
11	Treatment and processing of metal waste	111	Manufacturing of car and vehicle coolers	210	Manufacturing of travel bags	309	Paper Manufacturing
12	Treatment of sewage and hazardous liquids	112	Manufacturing of control panels for	211	Manufacturing of baby diapers	310	Manufacturing of leaf springs

			electrical power distribution				
13	Treatment of organic waste and residues	113	Manufacturing of iron pipe accessories	212	Manufacturing of ribbon weaving, embellishments, and the like	311	Manufacturing of medals, badges, and shields
14	Treatment of glass waste	114	Manufacturing of wooden interior design accessories	213	Manufacturing of garbage and waste collection containers	312	Manufacturing of distilled water
15	Printed circuit boards	115	Manufacturing of stringed musical instrument accessories	214	Stone cutting and grinding	313	Manufacturing of protective chemicals
16	Cutting and tailoring curtains	116	Manufacturing of aluminum foil rolls	215	Manufacturing of sewing machines and their accessories	314	Manufacturing of insulation materials
17	Non-ferrous metal casting processes	117	Manufacturing of plastic toys for children	216	Manufacturing of cooking ovens, stoves, and grills	315	Manufacturing of detergents and disinfectants
18	Gold and precious non-ferrous metal casting processes	118	Manufacturing of oil well chemicals	217	Manufacturing of head coverings and hats	316	Manufacturing of wooden platforms
19	Coating and treating support rods	119	Manufacturing of electric power transmission and distribution cables	218	Manufacturing of animal feed	317	Manufacturing of marine platforms and drilling rigs
20	Coating metal products with precious metals	120	Manufacturing of polyurethane molds for decoration	219	Manufacturing of baby food	318	Manufacturing of paper office products
21	Coating metal products	121	Manufacturing of electric lamp bases and their accessories	220	Manufacturing of welding rods	319	Manufacturing of rubber products
22	Grinding grains and cereals	122	Manufacturing and assembling engine spare parts	221	Manufacturing of electrical wiring for cars	320	Manufacturing of ceramic products for construction
23	Printing postage stamps and the like	123	Manufacturing of refrigerated storage rooms	222	Manufacturing of wired communication cables	321	Manufacturing of fiberglass-reinforced plastic products
24	Printing commercial publications	124	Manufacturing of car and vehicle exhausts	223	Manufacturing of paving asphalt and asphalt products	322	Manufacturing of sponge products
25	Printing books	125	Manufacturing of gift and jewelry boxes	224	Manufacturing of cosmetic and personal care tools and supplies	323	Manufacturing of balloons and hot air balloons
26	Cards and envelopes printing	126	Manufacturing of clothes hangers and laundry clips	225	Manufacturing of cosmetic and personal care tools and supplies	324	Manufacturing of towels
27	Maintenance and repair of office and accounting equipment and machines	127	Manufacturing of cutting tools and kits	226	Manufacturing of bandage tools	325	Manufacturing of paper napkins and towels
28	Maintenance and repair of shipping containers	128	Manufacturing of consumer packages from aluminum foil	227	Manufacturing of optical magnifying tools	326	Manufacturing of spoons, knives, and tableware
29	Maintenance of central air conditioning	129	Manufacturing of vehicle tanks	228	Manufacturing of conveyor belts	327	Manufacturing of clothes and textiles

30	Building maintenance	130	Manufacturing of scale plates	229	Manufacturing of paving stones and cement slabs	328	Manufacturing of protective clothing and jackets
31	Jewelry making from non-precious metals	131	Manufacturing of engine coolants	230	Manufacturing of writing and drawing inks	329	Manufacturing of formal wear and fashion
32	Manufacturing of laundry bleach	132	Manufacturing of cleaning and polishing materials	231	Manufacturing of gypsum products	330	Manufacturing of charcoal cubes
33	Manufacturing of fire extinguishing materials	133	Manufacturing of packaging materials	232	Manufacturing of children's clothing	331	Manufacturing of car covers
34	Manufacturing of adhesives	134	Manufacturing of wicker, straw, and bamboo products	233	Manufacturing of plastic cubes	332	Manufacturing of electrical switches
35	Manufacturing of women's clothing	135	Manufacturing of traffic and informational signs	234	Manufacturing of sandals	333	Manufacturing of metal walls (partitions)
36	Manufacturing of professional clothing	136	Manufacturing of metal building reinforcement supplies	235	Manufacturing of glue	334	Manufacturing of tahini halva
37	Manufacturing of sportswear	137	Manufacturing of electric advertising banners	236	Manufacturing of valves	335	Manufacturing of carpets and rugs from textiles
38	Manufacturing of men's clothing	138	Manufacturing of sulfur	237	Manufacturing of metal plates for printing	336	Manufacturing of ropes and braids
39	Manufacturing of men's underwear	139	Manufacturing of fiber optic cables and wires	238	Manufacturing of soap	337	Manufacturing of metal ropes
40	Manufacturing of children's underwear	140	Manufacturing of plastic bottles and containers	239	Manufacturing of thermal candles	338	Manufacturing of lime
41	Manufacturing of women's underwear	141	Manufacturing of fiberglass boats	240	Manufacturing of photographic slides and films	339	Manufacturing of socks
42	Manufacturing of brooms and hand-cleaning tools	142	Manufacturing of wooden boats	241	Manufacturing of knotted nets	340	Manufacturing of agricultural tractors
43	Manufacturing of trailers	143	Manufacturing of concrete cloth	242	Manufacturing of metal nets	341	Gypsum manufacturing
44	Manufacturing of metal sections	144	Manufacturing of gloves	243	Manufacturing of chains	342	Manufacturing of trailer refrigerators
45	Manufacturing of household linens	145	Manufacturing of iron bars	244	Manufacturing of scaffolding and ladders	343	Manufacturing of matches
46	Manufacturing of plastic tablecloths	146	Manufacturing of crucibles	245	Manufacturing of metal ships	344	Manufacturing of chandeliers
47	Manufacturing of coats and jackets	147	Manufacturing of tar	246	Manufacturing of carpets	345	Manufacturing of automatic gates and barriers
48	Manufacturing of umbrellas, parasols, and their accessories	148	Manufacturing of silverware and silver jewelry	247	Manufacturing of metal curtains	346	Manufacturing of tiles and marble
49	Manufacturing of embroidery	149	Manufacturing of washing machines and dryers	248	Manufacturing of watches of all kinds	347	Manufacturing of tiles and marble
50	Manufacturing of pumps	150	Manufacturing of metal rooms	249	Manufacturing of essential oils (concentrated perfumes)	348	Manufacturing of mosaic tiles

51	Manufacturing of electric lamps	151	Gas manufacturing, liquefying, and packaging	250	Manufacturing of artificial flowers and ornamental plants	349	Manufacturing of inlaid tiles
52	Manufacturing of cement products	152	Manufacturing of paper boxes and containers	251	Manufacturing of tempered or annealed flat glass	350	Manufacturing of cement tiles
53	Manufacturing of metal meshes	153	Manufacturing of metal boxes and containers	252	Manufacturing of coated and insulated reflective glass	351	Manufacturing of adhesive paper cards
54	Manufacturing of metal building supplies (hardware)	154	Manufacturing of shackles	253	Manufacturing of plastic sheets	352	Manufacturing of liquid batteries
55	Manufacturing of plastic building supplies	155	Perfume Manufacturing	254	Manufacturing of electronic chips and semiconductors	353	Manufacturing of dry batteries
56	Manufacturing of supports and gears	156	Manufacturing of hand tools	255	Manufacturing of artificial marble	354	Manufacturing of metal barrels
57	Manufacturing of industrial chemical compounds	157	Manufacturing of glass bottles and containers	256	Manufacturing of hydraulic cranes	355	Manufacturing of petrochemicals
58	Manufacturing of mirrors and glass cutting	158	Manufacturing and embroidering women's abayas	257	Manufacturing of industrial resins	356	Manufacturing of specialized industrial machinery and equipment
59	Manufacturing of sponge mattresses	159	Manufacturing of sand (thermal) bricks	258	Manufacturing of dolls	357	Manufacturing of typewriters
60	Manufacturing of pickles	160	Manufacturing of concrete bricks	259	Manufacturing of plastic buckets and containers	358	Manufacturing of calculators
61	Manufacturing of pillows and cushions	161	Manufacturing of red bricks	260	Manufacturing of metal buckets	359	Manufacturing of cardboard boxes and containers
62	Manufacturing of electric motors and generators	162	Manufacturing of chalk	261	Manufacturing of bicycles	360	Manufacturing of metal household utensils
63	Manufacturing of precious jewelry	163	Manufacturing of glass wool	262	Manufacturing of motorcycles	361	Manufacturing of glass household utensils
64	Manufacturing of insecticides	164	Manufacturing of wooden boxes and containers	263	Manufacturing of tents and tarpaulin	362	Manufacturing of plastic household utensils
65	Manufacturing of metal fibers	165	Manufacturing of metal boxes	264	Manufacturing of ready-mixed concrete	363	Manufacturing of heat-insulating ceramic utensils
66	Aluminum smelting and purification	166	Manufacturing of industrial detergents	265	Manufacturing of air conditioning units	364	Manufacturing of transmitting and receiving antennas
67	Assembling air conditioning units	167	Mixing chemicals	266	Manufacturing of office furniture	365	Manufacturing of plastic pipes and ducts
68	Assembling fire extinguishing system equipment	168	Cargo packing services	267	Manufacturing of metal furniture	366	Manufacturing of iron pipes
69	Assembling passenger cars	169	Operation and maintenance services for oil and gas industry facilities	268	Manufacturing of wooden doors and windows	367	Manufacturing of electronic pipes
70	Assembling lighting tools and accessories	170	Refilling and repackaging services	269	Manufacturing of fireproof wooden doors	368	Manufacturing of ammonia and caustic soda

71	Assembling computers - import and export	171	Refilling and repackaging services	270	Manufacturing of prefabricated wooden buildings and their parts	369	Manufacturing of wooden boards
72	Collecting toxic waste	172	Refilling and repackaging services	271	Manufacturing of metal constructions	370	Manufacturing of plastic boards
73	Assembling electric motors and generators	173	Refilling and repackaging services	272	Manufacturing of robots and simulation devices	371	Manufacturing of paper bags
74	Changing vehicle oils	174	Drilling oil and natural gas wells	273	Manufacturing of tires	372	Manufacturing of plastic bags
75	Renting alternative energy equipment and accessories	175	Garbage collection	274	Manufacturing of industrial sponge	373	Manufacturing of pens and writing tools
76	Road line and marking works	176	Wholesale distribution of vehicle fuel	275	Manufacturing of steel works for buildings	374	Manufacturing of locks and keys
77	Showroom fitting and facade installation	177	Distribution of car and vehicle fuel	276	Manufacturing of rubber floors and mats	375	Manufacturing of plastic covers
78	Scaffolding installation and dismantling	178	Cutting, polishing, and coating optical lenses	277	Manufacturing of basic organic chemical acids	376	Manufacturing of flags
79	Electromechanical equipment installation and maintenance	179	Cutting and polishing gemstones	278	Manufacturing of cutting and sawing discs and blades	377	Manufacturing of dyes and paints
80	Gas production and distribution	180	Gift wrapping	279	Manufacturing of gas cylinders	378	Metalworks for buildings
81	Recycling of metal waste	181	Mining non-ferrous metal ores	280	Manufacturing of non-electrical measuring and control devices	379	Plastic works for buildings
82	Tire retreading	182	Rose water packaging	281	Forming molds (alloy molds)	380	Manufacturing of compound chemical fertilizers
83	Recycling plastic waste	183	Salt packaging	282	Manufacturing of storage silos	381	Manufacturing of metal wires
84	Recycling used electrical and electronic equipment	184	Petroleum gas packaging	283	Manufacturing of water and liquid storage tanks	382	Manufacturing of barbed wires
85	Repair and maintenance of medical electronic equipment	185	Greases and lubricating oils packaging	284	Manufacturing of high-pressure containers	383	Manufacturing of non-metal suspended ceilings
86	Repair and maintenance of oil and natural gas wells	186	Manufacturing of window cleaning equipment	285	Manufacturing of construction metal products	384	Manufacturing of metal suspended ceilings
87	Repair of antiques and valuables	187	Forming colored glass	286	Manufacturing of iron castings	385	Manufacturing of floating docks
88	Repair of jewelry and ornaments	188	Liquefying petroleum gas	287	Manufacturing of boilers	386	Manufacturing of disposable plastic tools
89	Repair of bicycles	189	Installation and repair of oil and natural gas pipelines	288	Manufacturing of metal tanks	387	Shoe manufacturing
90	Repair and maintenance of light machines and equipment	190	Installing and repairing elevators and escalators	289	Manufacturing of plastic raw materials in primary forms	388	Manufacturing of ink and printing materials
91	Repair and maintenance of heavy machines and equipment	191	Installation, maintenance, and repair of medical and laboratory equipment	290	Working and processing crystal products	389	Manufacturing of specialized precision devices and equipment

92	Shoe repair	192	Installation and repair of measuring and control equipment	291	Diamond cutting	390	Manufacturing of household appliances and supplies
93	Repair of household electronic devices	193	Computer installation	292	Aluminum drawing	391	Manufacturing of microelectronic devices
94	Metal and iron works	194	Reinforcement and sealing of oil and natural gas wells	293	Carpet and textile weaving	392	Manufacturing of metal parts for ships
95	Extraction of silver from chemical waste	195	Storage of gases and petroleum materials	294	Iron and steel rolling	393	Manufacturing of construction metal parts
96	Extraction of gold from computer waste	196	Processing of fabric and textile waste	295	Aluminum rolling	394	Manufacturing of additional parts for cars
97	Extraction of crude oil	197	Textile processing	296	Leather tanning and processing	395	Manufacturing of home furniture
98	Extraction of natural gas	198	Manufacturing of central air conditioning equipment	297	Manufacturing of electrical power transmission and distribution equipment	396	Manufacturing of measurement and control equipment and devices
99	Manufacturing of radar equipment	199	Manufacturing of fire extinguishing system equipment	298	Manufacturing of oil and gas field equipment	397	Manufacturing of entertainment equipment and shooting platforms

5. Technical Approval for Industrial Facilities Licenses

5.1 Upon licensing industrial facilities and activities, the facility shall meet all activity requirements and obtain final approvals to start the activity.

5.2 To practice the activity, the requirements shall be met, and the inspection shall be passed.

6. Work Commencement Requirements

6.1 The customer shall upload the following documents to obtain a NOC / OFC certificate:

- Site layout plan showing the equipment distribution, prepared by a company specialized in drawing plans and approved by FZA.
- Engineering modification permission approved by FZA.
- Pest control contract with a company approved by FZA.

6.2 A site inspection shall be carried out, matching the modifications according to the approved plans. All activity supplies shall be made available.

6.3 If the site meets all industrial activities requirements, the final approval shall be in the form designated for beginning the work.

7. Technical Guidelines for Industrial Activities

7.1 General Guidelines

- An environmental impact assessment study (for activities included in the Environmental Protection and Development Law) shall be provided by specialized companies approved by FZA. The study shall be approved.
- All activities that generate emissions and activities that require closed rooms must be designed in a way that ensures that emissions are not released outside and that an air filtration and purification system to remove emissions is provided.
- Measurements of emissions and pollutants shall be provided periodically and whenever requested by FZA by involving specialized companies approved by FZA.

- Appropriate measures must be implemented to control and mitigate air emissions to avoid or reduce air pollutants, odors, and noise associated with the company's activities. All discharges into the air environment must comply with the permissible limits specified according to the laws approved and applicable in the UAE.
- The consumption of ozone-depleting substances, such as refrigeration, air conditioning, and foam applications must be according to the Montreal Protocol on Substances that Deplete the Ozone Layer. Ozone-depleting substances, such as chlorofluorocarbons, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydro bromo fluoro carbons) shall be phased out. They shall be replaced with zero ozone-depleting potential alternatives or low global warming potential alternatives.
- Waste should be collected as soon as practically possible after its generation, according to approved methods.
- All details of the waste/ treatment system/ recycling system must be recorded, and approval must be obtained annually without fail to avoid violations.

7.2 Fire and Explosion Risk Prevention Guidelines

- Fire action and evacuation plans specifically designed for the facility shall be developed and implemented.
- A secondary emergency exit and a fire assembly point shall be allocated.
- Flammable materials shall be appropriately stored and labeled. Such materials shall be handled only by authorized personnel.
- Fire extinguishing and alarm equipment shall be made available in strategic locations inside the buildings. They must be regularly inspected and maintained by the Civil Defense and a fire safety company approved by the Civil Defense.
- Fire drills must be conducted at least twice a year to ensure that Employees are aware of the action to be taken in the event of a fire or explosion.
- Fire awareness materials and warning signs must be placed in strategic locations within the facility to educate Employees about fire awareness.
- An emergency response plan shall be prepared by HSE specialized company or specialists within the company to be prominently displayed.
- Sufficient safety distance shall be provided between facilities and areas exposed to fire hazards.
- Occupational health and safety audits and fire safety audits shall be conducted in line with ISO requirements.

7.3 Technical Guidelines for Waste and Emissions

I Technical Guidelines for Liquid Waste:

- Effective drainage systems shall be installed to transport and collect oil-mixed water and rainwater.
- A separator shall be installed to separate chemicals from water.
- Department approval shall be obtained for the discharge of industrial wastewater and methods and locations of its disposal.
- A pre-treatment unit shall be installed to treat liquid waste before disposal if required.
- Periodic laboratory testing of liquid waste shall be conducted to ensure conformity to standards.

II Technical Guidelines for Solid Waste:

- Suitable containers shall be provided by the facility for waste separation to facilitate the separation of hazardous waste from non-hazardous waste for proper handling.
- The facility shall cooperate with the waste collection company in the Free Zones Authority to ensure the proper management of non-hazardous waste while maintaining relevant records.

- The facility shall provide a hierarchy of options that include source reduction for solid waste management and waste separation to facilitate recycling.

III **Technical Guidelines for Spills:**

- The facility must be entirely paved with impermeable materials to mitigate soil contamination in the event of major spills.
- Spill response kits shall be available within the facility, such as absorbent sand, to aid in rapid cleanup.
- Any chemical substances shall be separated, contained, and disposed of by the contracted hazardous waste handler.
- Tracking systems shall be provided to ensure accurate quantities of hazardous chemicals delivered to carriers and suppliers through examination and linking with submitted documents.
- Proper spill containment shall be ensured at all times.
- Tanks shall be regularly inspected and maintained to detect and prevent any chemical leaks.
- Surface runoff from the facility should be in line with the relevant engineering standards.

IV Vapor Emissions and Air Quality:

- All ventilation systems and procedures must be designed according to the required standards, including steam systems and carbon filters in openings.
- A gas detector should be installed to detect any leaks that may arise from the operations carried out in the institution.
- Regular quality monitoring must be conducted by the company and linked with the department to ensure compliance with legal regulations.
- Employees in hazardous areas must be provided with adequate personal protective equipment, which must be used strictly.
- A periodic health survey must be conducted among Employees in coordination with the Authority.
- Emission levels for the design and operation of each project shall be determined through the Environmental Impact Assessment.
- For all industries that generate emissions, fumes, and dust, a chimney must be provided for disposal, provided that it shall be approved by the Authority with a height of 3 meters above the warehouse roof.
- All gaseous waste, fumes, or dust discharge must have an exit velocity of not less than 8 m/s. Moisture must not condense in the chimney during the cold months. Chimneys may need to be insulated to avoid acid condensation.

7.4 Technical Guidelines for Noise Sources

- The facility shall seek to conduct operations within the noise limits approved by the Authority.
- Only built-in and soundproofed machines shall be used to reduce noise as much as possible.
- Appropriate personal protective equipment shall be provided for personnel working in noisy areas within the facility.
- A basic and regular noise mapping exercise shall be conducted by a consulting company or a health and safety specialist in the facility to ensure compliance.
- Transportation companies shall be encouraged to use well-maintained means of transportation.

7.5 Technical Guidelines for the rationalization use of water resources

- Employees shall be educated on the importance of conserving water resources.
- All used water shall be measured to determine consumption levels.
- Treated water shall be recycled for consumer purposes, such as general cleaning/ agriculture/ firefighting.

- The quantity of water used in sanitary facilities shall be minimized.

7.6 Technical Guidelines for the rationalization use of Energy Resources

- Studying the possibility of installing external /indoor solar-powered or energy-efficient outdoor lighting systems.
- Energy-efficient appliances and machine with low energy ratings shall be purchased.
- Energy saving tips shall be provided for each section of the facility to make them aware of their obligations in terms of energy conservation.
- Energy production technologies in the recycling process shall be explored.
- Energy use shall be monitored during operations, as well as the records shall be kept.

7.7 Technical Guidelines for Occupational Health and Safety

- A workplace policy and an effective emergency response plan shall be developed and implemented to educate FZA on safety measures and procedures.
- Employees must be provided with appropriate equipment and must be trained in occupational health and safety in line with applicable standards.
- Appropriate warning signs shall be strategically placed. Access to operating areas shall be limited to authorized personnel only.
- All on-site incidents should be documented, including imminent incidents.
- Annual health and safety audits shall be conducted in line with ISO 45001.
- A first aid kit shall be provided, and the FZA should be trained in first aid management.
- An inventory of all Material Safety Data Sheets (MSDS) for stored chemicals shall be maintained in the workplace, and the chemical handlers should be educated thereon.
- All unused or expired chemicals must be disposed of in an environmentally sound manner.
- All containers of chemicals shall be coded appropriately according to the regulations.
- FZA shall be trained in the hazards associated with handling chemicals and oil in the workplace through regular talks.
- A practical fire action plan shall be developed and implemented, taking into consideration the fire break distances for high-risk sections of the plant.

7.8 Technical Guidelines for Visitor and Surrounding Safety

- The facility must be secured 24 hours a day.
- Entry to the facility must be limited to the authorized personnel only.
- All visitors to the facility must be provided with protective clothing at all times.
- The company has a responsibility to ensure that first aid services are provided to FZA at all times.

7.9 Technical Guidelines for Traffic Requirements:

- The company must ensure that the gate/ surrounding of the facility is free of traffic.
- All vehicles related to the company shall be accommodated on the premises and shall not block the road.
- A supplier compliance policy shall be implemented by delivering the materials used in closed packages, containers, or tanks, ensuring their proper transportation, adhering to speed limits, and driving according to instructions inside and around the facility.

7.10 Technical Guidelines for Product Labeling

- Information must be provided by manufacturers on the health, safety, and workplace aspects concerning their products.
- All information must conform to the requirements of international standards for chemical transportation.
- The whole facility must complete the hazardous materials stored on-site form.

- A Material Safety Data Sheet (MSDS) must be maintained for all raw materials, products, components, etc.

7.11 Material Safety Data Sheet

- The MSDS must meet the following basic information:
- Identification of the manufacturer, product, and components.
- Physical and chemical properties.
- Health effects of the product.
- Physical risks.
- Environmental effects and exposure limits.
- Recommendations for safe work practices: Transportation, storage, and handling; waste disposal; protective clothing; personal protective equipment; and first aid.
- Fire-fighting methods specific to the material.

7.12 Technical Guidelines for Identification Labels

Labels must, at a minimum, meet the requirements of the standard and specifications for material identification labels, and it is recommended that they include the following basic information:

- Word or symbol; identification information, including manufacturer, product, and components.
- Hazards and safety, first aid, and disposal methods.
- Material Safety Data Sheets and date of issue.
- Labels must be on the outside of the product container, and in languages and formats that can be understood by those who need the information.

7.13 Technical Guidelines for Workplace Monitoring

- Manufacturers must ensure that representative data on airborne emission concentrations is available.
- Data must be obtained using previous and scientifically valid representative databases for workplace monitoring, or in the absence of representative data, through workplace monitoring.
- Workplace monitoring must include personal or stationary monitoring, or both, and must be conducted and evaluated by trained and experienced personnel.
- Workplace monitoring programs must be designed and implemented in consultation with Employees and their representatives.
- Manufacturers must make workplace monitoring results available to Employees , their representatives, and FZA based on monitoring data.
- FZA must decide on standardized work practices for repetitive work and publish them as guidance documents. Standardized work practices must ensure that exposure is kept below prescribed exposure limits.

7.14 Treatment System

The facility must provide a treatment system that includes the following:

- Odor control mechanism/ air pollution/ treatment system/ control unit details
- Quantity of waste/ hazardous waste and treatment system details.
- Sewage treatment system details.
- Air pollution monitoring details (stacks/ point source/ area sources/ emission calculation).

7.15 Technical Guidelines for Hazardous Materials and Industrial Waste

- All industries must, wherever possible, use non-hazardous materials instead of hazardous materials. All industrial waste and process residues must be properly disposed of by the contractors approved by the authority.
- All hazardous materials (flammable, reactive, combustible, radioactive, corrosive, and toxic) must be stored in clearly marked containers or vessels.
- The storage and handling of hazardous materials must be in line with the Authority's instructions or international standards and shall be appropriate to their hazardous properties. Storage areas and liquid containment for fuel, raw materials, processed materials, solvents, waste, and finished products must be designed with secondary containment (such as dikes and berms) to prevent spills and contamination of soil, groundwater, etc.
- A fire prevention system and secondary containment for storage facilities must be provided when necessary or as required by regulations to prevent fires or the release of hazardous materials into the environment.
- The consumption of ozone-depleting substances, such as refrigeration, air conditioning, and foam applications must be according to the Montreal Protocol on Substances that Deplete the Ozone Layer.
- Ozone-depleting substances, such as chlorofluorocarbons, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydro bromo fluoro carbons) shall be phased out. They shall be replaced with zero ozone-depleting potential alternatives or low global warming potential alternatives.

8. Documents and Procedures Required for Auditing and Follow-up

8.1 Regular tests should be conducted by an engineering company to ensure the safety of installations, especially tanks.

8.2 Recycling of materials and waste resulting from the activity.

8.3 Daily inventory management to ensure that there are no leaks.

8.4 Development of emergency procedures to deal with risks that may arise from the project.

8.5 HSE report, including monitoring and details on the following:
- Details of the odor control unit/ air emissions control/ treatment system/ stack emission inventory, and other air emission points and area sources located at the facility.
- Ambient air monitoring report and monitoring details.
- Wastewater quality treatment details and monitoring details
- Hazardous waste treatment system details and monitoring details.
- Indoor air quality monitoring details.
- Ambient noise monitoring.
- Industrial internal training and awareness details.
- HSE training details.
- An outreach plan shall be developed for stakeholders in cooperation with the relevant departments.

9. Permissions and Third-Party Companies

9.1 The permission issued by FZA allows facilities and individuals to carry out tasks and access specific sites according to the requirements and conditions related to the permission. It is not transferable between facilities or individuals.

9.2 All types of food permissions are available on the official website of the Ajman Free Zones Authority: https://www.FZA.ae.