

Guide Number (22): Regarding Environmental Conditions for Oil Refining Factories.

1. The Company must ensure the information mentioned in the application of receiving environmental permission is accurate.
2. The Company must fully comply with the laws including the environment protection and countering pollution law issued by royal decree that includes:
 - a. Special board in managing non hazardous solid wastes.
 - b. Special board in managing hazardous wastes.
 - c. Monitoring board of air pollutants produced from fixed resources, noise pollution.
 - d. Special board of anaerobic decomposition tanks specifications and absorption holes.
 - e. Monitoring board and managing radiant materials.
 - f. Special board of registering chemical materials.
 - g. Discharge board of liquid wastes in marine environment.
 - h. Managing board of climate affairs.
 - i. Board of re-use and discharge of swage water.
3. The Company must get approval from the ministry to discharge any wastes.
4. The Company must establish sewage treatment station produced from the project's activities.
5. The Company must use the best environmental practices and the best technology available in the project to reduce bad smells.

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6. The Company must obtain (ISO 14001 Certificate) and present it to the ministry.
7. The Company must prepare an effective plan to manage urgent environmental risks and accidents including the following:
 - a. Identifying expected urgent environmental risks and accidents from the project and how to respond to it.
 - b. Identifying the activities and procedures the Company should perform before, during and after those environmental risks and accidents happen.
 - c. Identifying periodic program for implementing responding procedures training for expected and urgent environmental risks and accidents from the project.
8. The Company must obtain approval from Public Civil Defense and ambulance Authority and the supervised designation on industrial area and provide a copy to the ministry.
9. The Company must assign environmental specialist after three years in case any environmental problems or environmental pollution occurs. The environmental specialist should be registered in the ministry.
10. There must be among the suggested experts to implement revision study; approved environmental auditors holding (ISO-14001 Certified Auditors).
11. The Company must ensure the environmental specialist comply with regulations issued by the Ministry.
12. The Company must notify the Department by email or letters if any environmental accidents occur.
13. The Company should choose various trees for planting around the project.
14. The Company should follow necessary procedures to treat and dispose of hazardous wastes whether in accordance with MECA or with be'ah.
15. The Company should organize and store raw materials and final products and sludge in suitable stores according to the following:

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- a. The floor of the stores shall be covered with concrete that prevent leaking.
 - b. The roofs of the stores shall be fully closed with materials.
 - c. The stores should be big enough for the raw materials from the project for at least 3 months.
 - d. The Company should provide the department with designs and sketches of the stores.
16. The Company should provide a comprehensive plan to manage hazardous and non-hazardous wastes to MECA.
 17. The Company should provide technical information and clarifications required from the departments in the Ministry in coordination with the Environmental Specialists of the Project.
 18. The Company should use clean fuel like natural gas or electricity in the operations of the Project. And in case the Company wanted to use diesel for emergency cases.
 19. This approval for the Company wouldn't allow it to treat, use or recycle raw materials that contain radioactive materials.
 20. The Company should implement all plans shown in environmental studies, such as Environmental Impact Assessment (EIA) study and Environmental Review Auditing (ERA).
 21. The Company is fully responsible of any environmental impacts of damages or wastes that happen during the Project.
 22. The Company should establish a special department and hire a qualified manager and trained employees. This Department will be responsible of implementing the EIA and ERA.
 23. The Company should use the best environmental practices and the best international technologies to reduce the amount of pollutants.

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24. The Company should provide an estimation of the amount of elements and pollutants expected from the Project such as:
 - a. Regular air pollutants like CO₂, NO_x, NO₂, PM₁₀ and PM_{2.5}
 - b. Level of noise in public environment and work environment
 - c. Level of bad/foul odour or smell
25. The Company should establish and operate station or stations to monitor air quality that surrounds the area.
26. The Company should prepare periodic reports of performance and monitor of environmental elements and pollutants mentioned above of the Project.
27. The Company should prepare 3D detailed plan of the Project's units and facilities after two months of obtaining the approval.
28. The Company should maintain the environmental measurement and monitoring tools regularly.
29. The Company should provide the necessary requirements for electronic connection between the environmental monitor stations with the Project's facilities.
30. The Company should provide the necessary requirement to install surveillance cameras to some of the Project's units and facilities, especially to chimneys and furnaces.
31. The Company should control the production of pollutants, dust, dirt, and bad smells from shipping and loading of wastes.
32. The Company should allow specialists from the Ministry to enter the Project's facilities to inspect.
33. The Company should install CEMS on chimneys in the Project.
Continuous Emissions Monitoring Systems (CEMS)
34. The Company should perform first treatment on the water used for cooling the machines and equipments.

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35. The Company should install a good design system to remove and dispose of gases, particles, dust and smoke produced from furnaces.
36. The Company should control dust and particles produced from the Project by using bag filters and change them periodically.
37. The Company should estimate the amount of gases produced from the Project using IPCC.
38. The Company should provide the Ministry with the analysis results that show the percentage of PCBs in oils before refinement.
39. Hazardous wastes made of oil clay should not be burned.
40. Liquid wastes produced from the Project should be discharged to water treatment system.
41. The discharge of industrial sewage produced from the Project should be via industrial water treatment systems.
42. The remaining gases from the purification system should be guided to the thermal oxidizer before they are released to the atmosphere.
Thermal oxidizer = thermal incinerator
43. The thermal oxidizer (*thermal incinerator*) should be operated through natural gas and the height of the chimney should be at least 15 m.
44. Liquid thermal boiler should be operated via natural gas and the chimney's height should be at least 15m.
45. The emissions from the chimney should be monitored in the thermal boiler units on regular basis at least every four days for an hour.
46. The emissions from thermal oxidizer chimney should be monitored and a monthly report should be submitted to the Ministry.

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47. There won't be a production process of asphalt, raw gasoline, kerosene or diesel from the Project. It is not allowed in this environmental approval.
48. The smells/odours produced from the uncondensed gases should pass through purification systems that contains caustic soda in order to reduce bad smells / foul odours and caustic soda should be changed regularly.
49. The Company should ensure the level of dust emissions from the chimney and electrical furnaces should match the following timetable:
 - a. The maximum rate is 40 mg/m³ from the first production day to three operating years.
 - b. Maximum rate is 25 mg/m³ after 3 years of operating the Project.
50. The Company should not use CFCs, halons, carbon tetra chloride, methyl chloroform that deplete the ozone layer.
51. The Company should not use HCFCs in new manufacturing and production processes.
52. The Company should organize and store burned oils and raw materials in closed storages and not to store them in open spaces in the Project area per the following:
 - a. The floor of the storage area should be covered with concrete that prevents leakage.
 - b. The roofs of the storage area should be fully closed with materials that prevent dust and dirt.
 - c. The Company will provide designs and sketches of these storage areas to the Department within the period of approval and before starting to establish the mentioned stores.
53. The Company should register hazardous chemical materials in the Ministry that is used in the Project and obtain a permission to import and use them.
54. The Company should store chemical materials in store and tanks that are highly safe (MSDS).

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55. The Company should obtain permission to transport and store chemical materials from the Public Authority of Civil Defence and Ambulance.
56. The Company should present annual report to the Department that shows the quality and quantity of hazardous chemicals.
57. The Company should obtain a permit or approval from the Climate Affairs of MECA.
58. The Company should not use CFCs, halons, carbon tetrachloride, methyl chloroform that deplete the ozone layer.
59. The Company should not use HCFCs in new manufacturing processes.
60. In case the Company did maintain equipment with ozone depleting substances, maintenance should be done by qualified technician.
61. The Company should not use products that contain ozone depleting substances in construction.
62. The Company is allowed to discharge gases produced in the Project.
63. The Company should use suitable ways to improve the competence of energy in the Project.
(The Company should observe energy saving practices).
64. The Company should use renewable energy resources applications like solar cell panels and solar water heater in the Project.
65. The Company should use energy saving devices, such as energy-saving lamps.
66. The Company should send periodic reports to the Climate Affairs Department of MECA.
67. The Company should include all of the conditions in this Agreement with Contractors in the Project.
68. The validity of this Environmental Agreement (permit?) should be within the specified period and is renewable.

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69. In case the Company is not able to complete the environmental conditions in the Agreement, then they have to request a renewal of the Agreement (**permit?**).
70. The Company should comply with the environmental conditions and then request a permission from the Ministry.
The Company should comply with the environmental conditions and secure a permit from MECA.
71. The environmental permit is considered invalid in case:
- a. The Company is not committed in implementing the conditions.
 - b. The Company does not provide the required documents to MECA.
 - c. The Company expands the Project or transfer it to an unauthorized site.
 - d. Transferring the environmental permit to another person without obtaining MECA's approval.
72. MECA has the right to add or modify any conditions for the Project and the Company should apply it.
73. The Company should apply the environmentally-accepted practices as shown in Figures 1 -4.
74. The Company should not apply practices that are not environmentally-sound and as shown in Figures 5-8, such as smoke emissions, dust, dirt or leakage, oil spills, hazardous wastes in the Project's units and facilities.

Examples of Selected Environmentally-Sound Practices for Industrial and Services Projects

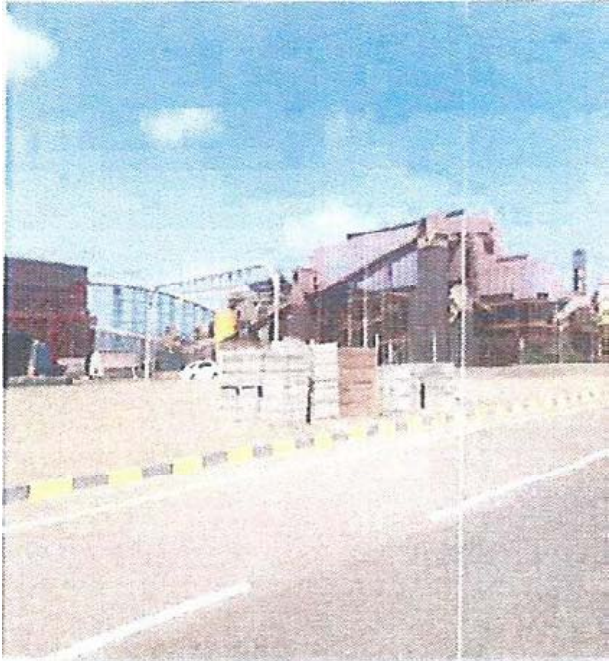


Figure 2

Shows that there is no smoke in the Project's chimneys.

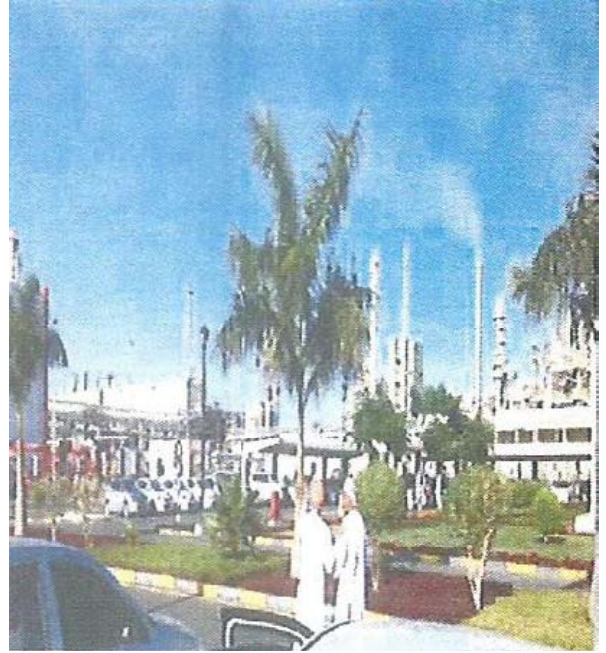


Figure 1

Planting trees within the Project site.

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Figure 4
Control room checking any damage
in the chimney or work area.



Figure 3
Dust collector system.

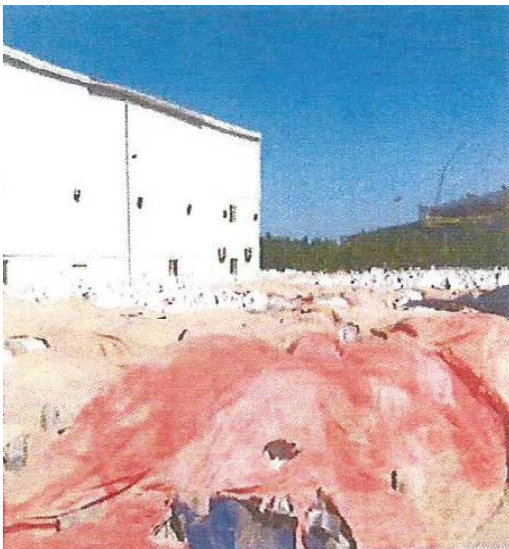


Figure 6
Soft materials storage in an open area.

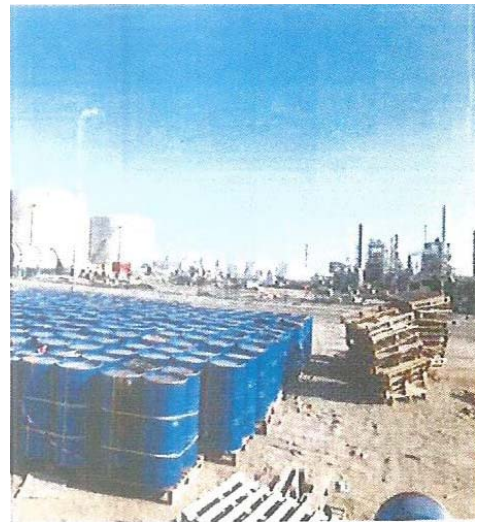


Figure 5
Diesel barrels on uncovered floor

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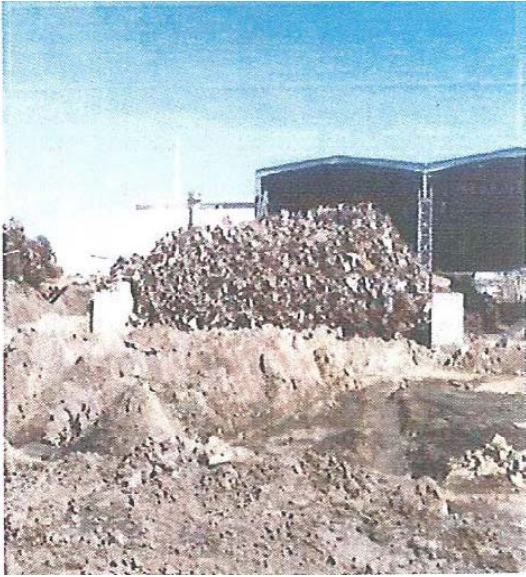


Figure 8

Iron scraps in open areas.

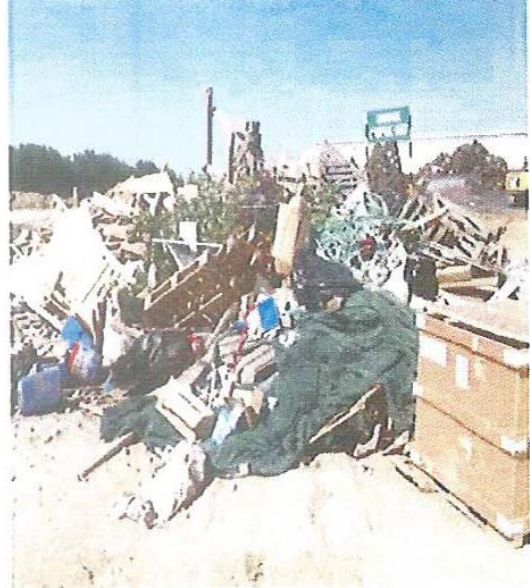


Figure 7

Storing solid wastes on pervious grounds or surfaces.