
CHAPTER 8

ENVIRONMENTAL MANAGEMENT PLAN**8.1 INTRODUCTION**

After the Environmental Impact Assessment and Risk Assessment of the proposed STF development project at Naoholia in TNJ Area, it is essential to identify project specific actions for implementation during construction and operation of the project. These actions are compiled in the form of an Environment Management Plan (EMP) which delineates the mitigative measures. Though most of the environmental impacts identified in the proposed STF development project are relatively minor and localized and vulnerable zones identified in risk analysis are restricted to relatively short distance, project specific recommendations are given below for implementation to further reduce adverse environmental impacts and improve operational safety of these projects.

8.2 MITIGATIVE MEASURES FOR MINIMISING ENVIRONMENTAL IMPACTS**8.2.1 General Measures Required During Construction and Operation of STF Development Project**

The following environmental management requirements are to be implemented by the personnel of STF development project.

1. Cutting of trees/shrubs/tall grasses and damage to agricultural crops should be avoided as far as possible.
2. Any loss of agricultural crops due to land procurement for construction of STF development project should be compensated.
3. Domestic waste water as well as food left-over and other organic solid wastes generated in operational area of STF development project should be disposed off in safe manner as per the approved procedures.
4. Appropriate arrangements should be made for drainage and sewage disposal for maintaining hygienic conditions at STF development project site at Naoholia.
5. Plastic and other hazardous wastes, such as, spent batteries and waste oil, should be disposed off as per approved safe procedures.
6. As far as possible only natural gas should be used as fuel in the prime movers of power generators, crude oil dispatch pumps, etc.
7. Only HSD of low sulphur (0.1% maxm.) content should be used for Fire Pump Sets and vehicles needed for the project operations.

8. Persons working in high noise area should be advised to use ear muffs/plugs.
9. Workers should not engage in hunting of any wild animal/bird, if sited, for their meat in the new development projects and adjoining areas.
10. Local persons should be engaged preferably as unskilled and/or semi-skilled labour for the new development projects as far as possible.

8.2.2 Specific Measures Required During Construction and Operation of STF Development Project

The overall responsibility for compliance of health, safety and environment (HSE) policy of OIL during construction and operation of STF development project at Naoholia in TNJ Area rests on General Manager (Production Oil) stationed at Duliajan. General Manager (Prodn. Oil) will have Installation Manager at STF development project site. He will cooperate with regulatory authorities who may like to monitor the adequacy of environmental control measures used by OIL during construction and operation of STF development project. OIL has a well established EMP policy to address all issues related to HSE during construction and operation of existing as well as for the proposed STF development project for crude oil storage and handling. Salient features of the EMP prepared by OIL are given in **Table 8.1**.

8.2.3 Environmental Monitoring

Post-project operation monitoring programme at STF development project is summarized below and should be finalized in consultation with Assam State Pollution Control Board to meet the requirement during project operation.

Sl. No.	Description	Number of Locations	Parameter Monitored	Frequency
1.	Ambient Air Quality	3 near operational area	SPM, SO ₂ , and NO _x CH ₄ & Non-CH ₄ Hydrocarbons	Quarterly Annually
2.	Water Quality	3 to 4 near development project site	pH, Temp., Turbidity, Conductivity, BOD, COD, DO, TDS, TSS, Oil & Grease, TKN, Chloride, Sulphate, Phosphate, Ca, Mg, Fe, Na and K	Quarterly
3.	Soil Quality	2 to 3 near development project site	pH, Conductance, Water Holding Capacity, Bulk Density, Hydraulic Conductivity, Texture, Oil & Grease, Organic Matter, Cl, P, NH ₃ -N, Na, K, Ca, Mg and Iron Oxide.	Quarterly
4.	Noise Level	2 to 3 near operational area	Maximum, Minimum and Leq	Quarterly

8.2.4 Occupational Health Surveillance Programme

Exploration and production (E&P) activities do not have any specific occupational health hazards and OIL has proposed to provide health

surveillance programme for the officers and workers engaged for crude oil storage and handling operations at STF development project installation consisting of the following:

1. General Health Check-up.
2. Health Awareness Instructions and Suggestions.

8.2.6 Development of Green Belt

A properly designed green belt will be developed at STF for improving the aesthetic environment as well as for ameliorating air and noise pollution.

