

CHAPTER 5

ENVIRONMENTAL MONITORING PROGRAMME

5.0 INTRODUCTION

The environmental management program can be successfully implemented only with an efficient organizational set up. Similarly regular monitoring of the various environmental parameters is required to check the pollution status and effect of control measure and mid course corrections, if required.

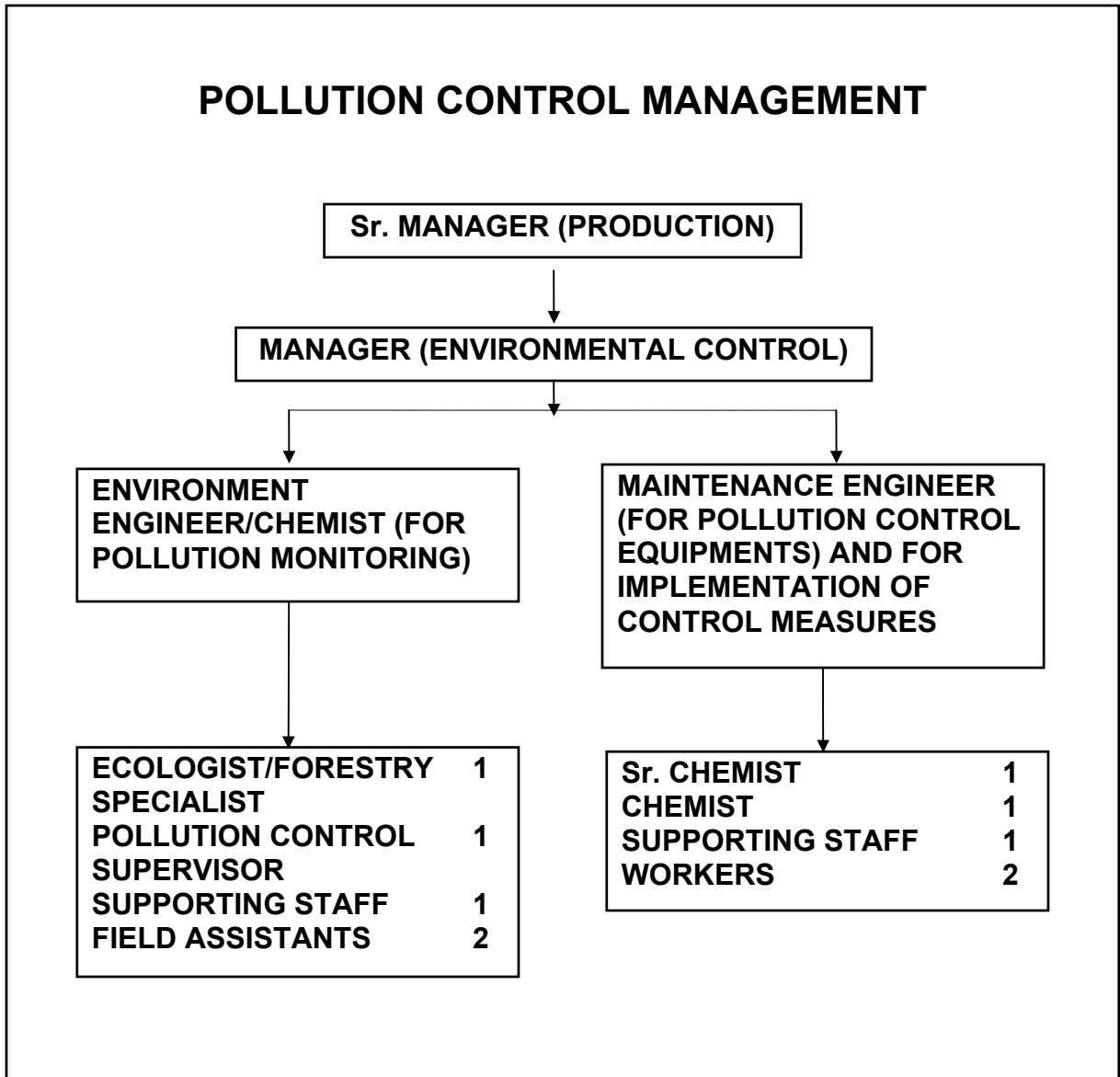
5.1 PROPOSED SET UP

Keeping the utility of monitoring results in the implementation of the environmental management program in view, an organizational chart has been proposed headed by Manager (Environmental control) as shown in Fig. 5.1. This environmental team will look after the environmental monitoring and management of the proposed cement manufacturing unit.

The said team will be responsible for :

- i. Collecting water, soil and air samples.
- ii. Analysing the water, soil and air samples.
- iii. Implementing the control and protective measures.
- iv. Co-ordinating the environment related activities within the project as well as with outside agencies.
- v. Collecting statistics of health of workers and population of the surrounding villages.
- vi. Green belt development etc.
- vii. Monitoring the progress of implementation of environmental management programme.

Figure 5.1: Environmental Organization



5.2 MONITORING SCHEDULE & PARAMETERS

To evaluate the effectiveness of environmental management programme, regular monitoring of the significant environmental parameters will be taken up. The schedule, duration and parameters to be monitored are given in Table 5.1:

TABLE 5.1: Monitoring Schedule For Environmental Parameters

Sr. No.	Particulars	Monitoring Frequency	Method of Sampling	Parameter
I	Air Pollution & Meteorology			
	A Stack Monitoring			
1	Main Stacks		Online	Particulate matter, SO ₂
	B Air Quality Monitoring			
1	Four locations in and around the plant	Once in month	24 hr continuously-HVS and PM 2.5 samplers	RPM, SO ₂ , NO _x
2	Work zone monitoring	Twice in a month	High volume sampler, PM 2.5 samplers	Do
	C Fugitive Emissions			
1	Raw material handling, feed area, and other areas specified by SPCB/CPCB	Twice in a month	8 hour basis with High Volume Sampler	SPM & RPM
II	Water and Wastewater Quality			
	A Water Quality			
1	Ground Water	Once in a season	Grab	Parameters specified under IS:2296 (Class C) and IS:10500, 1986
	B Plant/Colony Sewage			
1	Treated sewage water for horticulture,	Once in 15 days	24 hr composite	pH, SS, and O& G BOD
III	Ambient Noise Levels			
1	Near the Plant Boundary at three locations	Once in three months for the various plants	24 hr continuous with one hr interval	Noise levels in dB(A)
2.	Surrounding Area in 3km radius at Schools, prominent public places	Once in each season for ambient noise levels	24 hr continuous with one hr interval	Noise levels in dB(A)
IV	Soil Quality			
1	In and around the plant	Once in Pre-Monsoon and Post Monsoon season	Grab	Physio-chemical parameters and metals
2	Surrounding Area in 3km radius at Schools, prominent public places			

A laboratory will be established and will be suitably equipped for sampling/testing of various environmental parameters for air, water, soil. Samples requiring any special analysis may be sent to any of the recognized laboratories. The laboratory will be equipped with at least the equipment shown in Table 5.2. Thus laboratory facility will be used by both the mine and the cement plant.

TABLE 5.2: List of Environmental Monitoring Equipment / Instruments for Laboratory

Sl. No.	Description	Nos.
1	Stack monitoring kit	1
3	Portable air samplers	2
4	Respirable Dust Sampler	2
5	Automatic station for recording of micrometeorological parameters	1
6	Sound pressure level meter	1
7	Spectrophotometer	1
8	Incubator	1
9	Oven	1
10	Chemical balance	1
11	Glassware	-
12	Plankton net	1
13	Compound microscope	1
14	Chemicals for routine analysis	-