

## **Environment Management Plan**

**M/s. Archean Chemical Industries Private Limited** is located at Greater Rann of Kutch, Hajjipir Village, Bhuj Taluka, Kutch District.

The unit is engaged in manufacturing Sulphate of Potash (a raw material for Fertilizers) and Bromine by use of sea water and chlorine. The Unit has installed coal based co- generation Plant to produce electricity.

By setting-up the state-of-the-art plants not only ensures that we produce high quality products, but it also maintain an exceptionally clean environment for employees.

The company is committed to conduct its business with the objective of sustainability of our natural resources, balance the ecological niches and to serve the society thereby enhancing the environment.

**Objective:** Key Objectives of the Environment Management Plan are as follows:

1. To ensure that the environmental compliance of the plants meets as per the guidelines of the regulatory agencies like CPCB, MOEF and GPCB etc.
2. To ensure that adequate pollution control system are installed and operating satisfactorily. To take necessary steps to maintain the environment quality of our plant and to work continually for reducing the pollution.
3. To ensure that the pollution concentration of the treated effluent are within the prescribed standards of the regulatory agencies.
4. To ensure that the pollution concentration of the ambient air and stack air are within the prescribed standard of the regulatory agencies.
5. To ensure proper waste management handling and disposal system is setup in the plant and norms are followed as per guidelines of the regulatory agencies.

**Salient Features of the Environment Management Plan are:**

1. Environment Management cell.
2. Stack and Ambient Air Monitoring.
3. Water Quality Monitoring.
4. Noise Monitoring.

**1. Environment Management cell :**

To address the key environmental issues of a plant we have a robust Environment Management Cell headed by the senior management and assisted by the team of trained environmental professionals. The main function of the Environment Management Cell is to ensure environment compliances, ETP, STP operation, Environmental Monitoring, Hazardous waste management handling and disposal, environmental training and other related activities.

**2. Stack and Ambient Air Monitoring :**

- (a) Stack Air Monitoring: Continuous Air monitoring equipment installed at various stack of the plant to monitor the flue gas emission of the different stacks of the plant. In addition to that monthly stack monitoring is conducted by our third party i.e. M/S. Kadam Environmental Consultants. Stack air parameters conducted are PM, SO<sub>2</sub>, NOX, Br<sub>2</sub>, HBR, Cl<sub>2</sub>.
- (b) Ambient Air Monitoring: Monthly Ambient Air monitoring is conducted at different station of the plant by our third party i.e. M/S. Kadam Environmental Consultants. Ambient air parameters conducted are SPM, SO<sub>2</sub>, NOX, Br<sub>2</sub>, and Cl<sub>2</sub>.

**Stack and Ambient Air Monitoring Schedule:**

Sr.	Monitoring	Parameters	Frequency	Equipment
1.	Stack Air Monitoring	Particulate Matter	10 minutes	Stack Air Monitor
2.	Stack Air Monitoring	SO <sub>2</sub>	10 minutes	Stack Air Monitor
3.	Stack Air Monitoring	NOX	10 minutes	Stack Air Monitor
4.	Stack Air Monitoring	Br <sub>2</sub>	10 minutes	Portable handy Sampler
5.	Stack Air Monitoring	Cl <sub>2</sub>	10 minutes	Portable handy Sampler
6.	Stack Air Monitoring	HBR	10 minutes	Portable handy Sampler
7.	Ambient Air Monitoring	SPM	24 hours	Respirable Dust Sampler
8.	Ambient Air Monitoring	SO <sub>2</sub>	24 hours	Respirable Dust Sampler
9.	Ambient Air Monitoring	NOX	24 hours	Respirable Dust Sampler
10.	Ambient Air Monitoring	Br <sub>2</sub>	24 hours	Respirable Dust Sampler
11.	Ambient Air Monitoring	Cl <sub>2</sub>	24 hours	Respirable Dust Sampler

**3. Water Quality Monitoring:**

Monthly water quality monitoring and sampling is conducted of the ETP and STP by our third party i.e. M/S. Kadam Environmental Consultants. Water quality parameters analysed are for ETP -pH, colour, temperature, suspended solids, oil & grease, ammonical nitrogen and for STP- pH, suspended solids, BOD, oil & grease, residual chlorine.

**Schedule of the water quality sampling and monitoring.**

Sr.	Sampling Location	Frequency	Parameters
1.	ETP outlet	Monthly	pH, colour, temperature, suspended solids, oil & grease, ammonical nitrogen
2.	STP outlet	Monthly	pH, suspended solids, BOD, oil & grease, residual chlorine.

**4. Noise level Monitoring:**

Monthly Noise level monitoring and sampling is conducted at the different workplace by our third party i.e. M/S. Kadam Environmental Consultants. Noise level monitoring conducted at various locations of plants are near Power Plant, near Bromine Plant, near R.O/D.M. Plant, near ETP, ADM Office.

**Schedule of the Noise level monitoring.**

Sr.	Sampling Location	Frequency	Parameters
1.	Near Power Plant	Monthly	Noise Level ( Day Time)
2.	Near Bromine Plant	Monthly	Noise Level ( Day Time)
3.	Near R.O/D.M. Plant	Monthly	Noise Level ( Day Time)
4.	Near ETP	Monthly	Noise Level ( Day Time)
5.	ADM Office	Monthly	Noise Level ( Day Time)

**Fly-ash Utilization Plan:** Fly-ash generated from the power plant requires very large area to store and to dispose. Due to the loading and unloading of the fly-ash through vehicle/loader it generates huge quantity of dusting which disturbs the air quality of the surrounding environment. We are carrying water spray system and slurry mixer at the bottom side of the pneumatic silo in fly-ash collection area to minimize the impact of dusting on environment. In addition to this we have trained the workers and officers to take the necessary steps to minimize the dusting. Further, we are also utilising the fly-ash for the reclamation of low lying area.

**Training:** Training session is conducted on various subjects of environment management and compliance to educate the staff and workers and also create awareness. Environment department is responsible for conducting such training programmes.

**Conclusion:** To implement the environment management plan effectively Archean Chemical Industry Private Limited is committed to conduct its business with the objective of sustainability of our natural resources, balance the ecological niches and to serve the society by which we will enhance the environment and always strives to comply with all norms as prescribed by the government regulatory agencies with our sincere efforts in this regards.

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