SIX MONTHLY COMPLIANCE REPORT, JUNE-2021

"IFFCO FERTILIZER PLANT, KANDLA UNIT"

at

P.O. Box no. 12, Kandla, District- Kutch, Gujarat-370210

Environment Clearance Letter	J-11011/202/2009-IA II (I) dated 13.05.2009
Category:	5(a), A

Indian Farmers Fertiliser Cooperative Limited (IFFCO)
P.O. Box no. 12, Kandla, District- Kutch, Gujarat-370210
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Chapter 1. Purpose of The Report

As per the "Sub Para (ii)" of "Para 10" of EIA Notification 2006, it is stated that *"It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance conditions/safeguards in hard and soft copies to the regulatory authority concerned, by June and December of each calendar year"* and as per compliance of condition mentioned in Environment Clearance Letter (i.e. Part B of General Conditions, point number xv), *A Six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on website of the company*.

It is mandatory to submit a Six-Monthly Compliance Report to show the status & compliance of all the Conditions mentioned in Environment Clearance Letter, along with monitoring of various Environmental Parameters (as per CPCB Norms).

The monitoring agencies, in this case, are Gujarat State Pollution Control Board, Regional Office-MoEFCC (Bhopal) and Western Zonal Office CPCB, Vadodara.

Based on the Specific and General Conditions mentioned in the EC Letter, a Compliance Report was prepared by the EQMS India on behalf of Project Proponent; details of which are present in Chapter – 4 of Compliance Report".

Methodology for Preparation of Report is as follows:

1. Study of Environmental Clearance Letter & Related Documents,
2. Site Visits by a Team of Experts,
3. Monitoring of Environment Parameters by NABL/MoEF&CC approved laboratory, viz. Ambient Air, Water, Noise, Soil, Stack monitoring, etc.
4. Analysis of Samples collected during Monitoring,
5. Interpretation of Monitoring Results,
6. Compliance Report, explaining the entire General & specific conditions in the Environmental clearance Letter and providing details w.r.t. each condition/ guideline.

Chapter 2. Introduction

Indian Farmers Fertiliser Cooperative Limited (IFFCO) is one of India's biggest cooperative society wholly owned by Indian Cooperatives. It is the largest producer of Nitrogenous and Phosphatic fertilizers in India. Founded in 1967, IFFCO today is an amalgamation of over 36,000 Indian cooperatives with diversified business interests ranging from General Insurance to Rural Telecom apart from its core business of manufacturing and selling fertilizers. IFFCO has total of 5 no. of fertilizer manufacturing plants located in Kalol (Gujarat), Kandla (Gujarat), Phulpur (Uttar Pradesh), Aonla (Uttar Pradesh) and Paradeep (Orissa). IFFCO operates three Ammonia/ Urea plants (located at Kalol in Gujarat and Phulpur & Aonla in UP) and two DAP/NP/NPK plants (located in Paradeep in Odisha and Kandla in Gujarat) in India.

IFFCO Kandla is the single largest Phosphatic fertilizer plant in the county. It is one of the oldest IFFCO Plant and also a centre of innovation- R&D Laboratory. Unit started its commercial production in January,1975. The unit is covered over a total area of 704153.64 m^2 (174 Acres). Kandla Unit presently manufactures different combinations of NPK/DAP of 10 Lakh MTPA of P_2O_5, 15000 MT/Annum capacity of Urea Phosphate (17:44) & NPK Products by mixing Sulphate of Potash and 30000 MT/Annum of Zinc Sulphate Mono Hydrate.

The plant has been manufacturing fertilizer products in accordance to Environmental Clearance granted from MoEF&CC vide ***F.No. J-11011/202/2009-IA.II(I) dated 13.05.2009*** and Consolidated Consent to Authorization (CC&A) Letter vide No. ***AWH-97874*** dated 18.12.2018 valid upto 20.10.2023. ***(Environmental Clearance Letter and CCA Letter has been annexed as Enclosure- I & II).*** Since, Zinc Sulphate Mono-Hydrate is an inorganic chemical, the product had been exempted from Environmental Clearance and the same has been confirmed by MoEF&CC vide File No. J-11011/359/2010-IA.II(I) dated 16.12.2010 ***(Annexed as Enclosure-III)***.

In accordance with technological changes, IFFCO Kandla Unit has been bifurcated into two streams i.e., **KANDLA Phase I and KANDLA Phase II**. Kandla phase I plant comprises of original four trains i.e. **A*, B, C and D*** using TVA conventional slurry granulation process. Trains A & B were supplied by M/s Dorr Oliver, USA and Trains C & D were supplied by M/s Hindustan Dorr Oliver Ltd. Mumbai (M/s HDO). Kandla II comprise of additional trains **E & F** using Dual Pipe Reactor Granulation Process (Granulator & Dryer Pipe Reactor) Technology given by M/s Grande Paroisse, AZF, France (now known as M/s Casale, SA, Switzerland). Trains E & F were supplied by M/s HDO.

CHRONOLOGY OF PROJECT

Chronological details of the project have been provided below in **Table 2.1** and Details of products are mentioned in **Table 2.2.**

Table 2.1 : Chronology of IFFCO Kandla Plant

S. No.	Particulars	Details
1.	Establishment of IFFCO, Kandla	24th June,1971
2.	Commissioning of A & B Streams	November, 1974
3.	Commissioning of C & D Streams	June-1981
4.	Environmental Clearance Granted for Kandla Phase-II expansion from 3.09 Lakh MTPA P2O5 to 5.19 Lakh MTPA P2O5	23rd April, 1996
5.	Commissioning of Kandla Phase-II Expansion (E & F Streams)	August, 1999
6.	Environmental Clearance Granted for ***Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakh MTPA of P_2O_5)*** vide F.No. J-11011/192/2007-IA II (I)	16th August, 2007
7.	Latest Environmental Clearance Grant for ***"Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers"*** vide F.no. J-11011/202/2009-IA. II(I)	13th May,2009
8.	Exemption of Environmental Clearance for ***"Production of Zinc Sulphate (Monohydrate 33% Zinc, 30000 MTPY)"*** vide F.No. J-11011/359/2010-IA. II(I).	16th December,2010
9.	Valid Amended Consolidated Consent and Authorization (CC&A Letter) vide ***PC/CCA-KUTCH-1331/GPCBID48864*** dated 29.03.2019 {valid upto 20.10.2023	29th March 2019

Table 2.2 : List of Product as per Latest CC&A (CTO)

S. No.	Products	Capacity per Annum
1.	NPK (10:26:26)	Fortified 0.5% Zn in NPK/DAP of Total Capacity of 10 Lakh MT of P_2O_5
2.	NPK (12:32:16)	
3.	DAP (18:46)	
4.	MAP (11:52)	
5.	Urea Phosphate (17:44)	15000 MT of Bulk Capacity
6.	NPK Products by mixing Sulphate of Potash	
7.	Zinc Sulphate Monohydrate	30000 MT of Bulk Capacity

Chapter 3. Construction Status

At present, no construction has been taken at site and project is operational as per CTO granted.

Site Photographs

Figure 3.1 : **Site Photographs**

Chapter 4. Point-Wise Compliance of the Environmental Conditions

The below Compliance of environmental conditions is for whole existing plant.

Table 4.1 : Compliance of Environmental Conditions given in Part A- Specific Conditions

Part A- Specific Conditions		
S. No.	**Environmental Conditions /Safeguards**	**Compliances**
i.	The projects authorities shall ensure zero discharge from the proposed plant. The mother liquor shall be recycled in the existing plant. No utilities shall be developed for this project.	**Water Soluble Fertilizer Plant:** Plant is located in the existing NPK/DAP Fertilizer complex. Therefore, no additional utilities were constructed. The plant was hooked up with the existing facilities for utilities, power and water. All the mother liquor is recycled in the existing NPK/DAP Plant **Other plant:** Industrial wastewater along with effluent generated from the plant are being collected in the Central Sump of NPK/DAP Plant from where it is completely recycled/consumed in the scrubber process of NPK/DAP plant because NPK/DAP plant is negative water balance plant. Hence, the plant is Zero liquid effluent discharge (ZLD) based plant. Domestic Sewage is treated in Sewage Treatment Plant and the treated effluent is being used for horticultural purposes in the plant.
ii.	The project authority shall install dust extraction system with scrubber to control the dust emissions in bagging section and emissions shall conform to the prescribed standards.	Dust extraction system with scrubbing system is provided in the bagging plant to control the dust emissions. All emissions are routed through scrubbers for recovery of valuable nutrients from exhaust gases. In addition to this dust from surrounding area in the plant is also sucked and passed through wet scrubbers for recovery of nutrients and for clean & better working environment. Dusts generated from equipments like Primary Elevator, Screen Drag Feeders, Vibrating Screens, Pulverizers, Fines Conveyor, Secondary Elevator, Product Cooler, Product Elevator, polishing screen, raw material feeders are sent to dust cyclones for recovery which are fitted with a chain to reduce build-up and plugging in the outlet cone

		and with access doors for inspection of the equipment. Gases from above equipments are sucked by centrifugal fan (dust fan) through set of cyclones and discharged to dust scrubber section having weir box and separator. Scrubbing is carried out in weir box and dust separator by scrubber liquor and undissolved dust is carried to stack. All the emission parameter from stacks is within the norms prescribed by GPCB/CPCB. Photographs of dust extraction system is given in **Enclosure IV.**
iii.	The company shall carry out air quality monitoring at vents/stacks and regular monitor the gaseous emissions along with particulate matter. The report shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and SPCB.	Continuous Emission Monitoring System (CEMS) is installed in the process & utility stacks for monitoring and emission parameter of process stack of NPK/DAP plant are uploaded on CPCB server on real time basis. Also, regular stack/vent monitoring is being done by inhouse and NABL/MoEF&CC approved Lab. All the stacks/Vents are meeting the MoEF&CC/GPCB/CPCB norms. Latest Test Report is attached as **Enclosure V**
iv.	The ambient air quality shall be monitored at least at 3 locations, minimum one in down wind direction. The location of monitoring stations shall be selected in consultation with the State Pollution Control Board.	Ambient air monitoring is carried out at following 3 locations: Location-I: Ammonia Atmospheric tank, Location-II: R&D Laboratory and Location-III: Training Centre. All locations have been selected in consultation with GPCB. The latest Test report for ambient air Quality is attached as **Enclosure VI.** All the parameters are within the prescribed limit.
v.	Data on ambient air quality stack emissions and fugitive emissions shall be regularly uploaded on the website of the company and submitted on-line to the Ministry's Regional Office at Bhopal, Gujarat State Pollution Control Board (GSPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO2 and NOx shall also be displayed outside the premises at the appropriate place for the general public.	• Continuous Emission Monitoring System (CEMS) is installed in the process & utility stacks for monitoring and emission parameters of process stack of NPK/DAP plant are uploaded on CPCB server on real time basis. Photographs of CPCB server data transfer is attached as **Enclosure VII.** • Continuous ambient air quality monitoring stations are provided in the plant. Photographs of Continuous Ambient air quality monitoring stations is attached as **Enclosure VIII.**

		• Also, stack monitoring and ambient air quality monitoring is being done by inhouse and NABL/MoEF&CC approved lab. Reports of the same is regularly submitted to GPCB, CPCB & MoEF&CC. • Display board for SPM, SOx & NOx has been provided outside the factory premises at appropriate place. Photographs of Display board is attached as **Enclosure IX.**
vi.	The company shall develop the green belt in 33% area, out of total area to mitigate the effect of fugitive emissions and noise as per the guidelines of CPCB.	Approx. 22500 m^2 i.e., 3.20 % of the plant area is developed as Green area inside the premises. The plant is located beside the Kandla creek. Soil and ground water are highly saline at this place due to which it is difficult for plants to survive, and mortality rate of plants is high & area covered under green belt is limited. Green belt development has been carried out, inside the factory premises as well as in Gandhidham town. To mandate greenbelt requirements, green area outside IFFCO Kandla Unit has been developed. Total green cover of 80 Acres inside & outside of the IFFCO plant have been developed which works out to be approximately **46% of total plot area.** Details are as follows Plant -15 Acres - More than 3000 Trees Township - 26500 Trees Gandhidham Town – 5 Acres – 5000 Trees Photographs showing green area in plant area and Township is attached as **Enclosure X.** Additionally, IFFCO has carried out green belt development in Pantiya Village of Kutch District with approx. 41736 no. of trees in the village (113 Acres area). Innumerous efforts have been made for green belt development in other areas also.
vii.	The company shall implement all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertiliser industries for existing and proposed plant.	All applicable CREP conditions for fertiliser industries relevant to Kandla plant are complied. Monthly compliance report is sent to GPCB-RO, East Kutch. Latest CREP Report is attached as **Enclosure XI.**

viii.	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.	Different plans and measures are adopted by the Plant to ensure the occupational health & safety of all contract workers. Occupational Health & Safety policy is developed at the plant. Pre-placement and periodical examination (Physical examination, Urine Routine examination, Hematology, LFT, Blood Sugar, chest x rays, Audiometry, Spirometry, Vision testing, ECG, etc) of Staff and workers is being done by IFFCO to analyze the health status as per DGMS guideline. Record of the same has been maintained in the plant and submitted to the concerned department The unit is having full-fledged Occupational Health Centre in the Factory and IFFCO-Kandla is also ISO 45001:2018 certified company. Sample of latest Health surveillance report is attached as **Enclosure XII.**
ix.	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	**Fire Protection Measures Adopted in Plant:** • Full Fledged Fire & Safety department with professionally qualified, experienced & skilled staff. • Fire hydrant system network of around 11000 meter with 8.0 kg/cm^2 pressure having fire pumps working on auto is provided all over the plant & around the ammonia storage tanks to create water curtain in case of Ammonia leakage. The Water curtain can prevent the spreading of Ammonia in surrounding area of plant premises. Water monitors, water sprinklers system, contaminated type safety showers and eye washer are provided around the hazardous area. Water curtain system is provided in front of Control Room to prevent entering of Ammonia in control room. • There are four numbers of Fire Pumps each of capacity of 273 m^3/hr and Jockey Pump of 15 m^3/hr capacity and 291 Nos. of Fire Hydrant and 15 Nos. of water monitors provided in fire hydrant network all over the plant.

		• DCP Fire Extinguishers & CO_2 Fire Extinguishers provided in the plant area for immediate fire-fighting. • Smoke Detector system also provided in high hazard area of the plant. • Ammonia Sensors provided in Ammonia Storage & six Production streams. • One Foam Tender and emergency Jeep with latest Fire-fighting equipments and with experienced & trained Fire staff are always ready to fight with any emergency round the clock availabe at Fire Control Room. • PPE for labours • Onsite Emergency plan is in place. Same is attached as **Enclosure XIII.**
x.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Construction activity for the project has been completed and all the provisions mentioned were compiled during the construction activity. The temporary housing structures have been removed after completion of construction activities.

Table 4.2 : Compliance of Environmental Conditions given in Part B- General Conditions

Part B- General Conditions		
S. No.	**Environmental Conditions /Safeguards**	**Compliances**
i.	The project authorities shall strictly adhere to the stipulations of the SPCB/State Government or any Statutory body.	Noted and complied.
ii.	The gaseous emissions (SO2, NOx and fertilizer dust) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. Emission data shall be periodically monitored, and reports submitted to Ministry's Regional Office, CPCB and SPCB.	Continuous Emission Monitoring System (CEMS) is installed in the process & utility stacks for monitoring and emission parameters of process stack of NPK/DAP plant are uploaded on CPCB server on real time basis. Also, stack monitoring and ambient air quality monitoring is being done by inhouse and NABL/MoEF&CC approved lab. Reports of the same is regularly submitted to GPCB, CPCB & MoEF&CC. All the stacks/Vents are meeting the

		GPCB/CPCB norms. Latest Test Report is attached as **Enclosure V.**
iii.	All the waste waters generated from the various processes shall be recycled/ reused in the plant and zero discharge shall be maintained. The domestic wastewater shall be treated in septic tanks and treated waste shall be used for irrigation in the green belt.	Industrial wastewater along with effluent generated from the plant are being collected in the Central Sump of NPK/DAP Plant from where it is completely recycled/consumed in the scrubber process of NPK/DAP plant because NPK/DAP plant is negative water balance plant. Hence, the plant is Zero liquid effluent discharge (ZLD) based plant. Domestic Sewage is treated in Sewage Treatment Plant and the treated effluent is being used for horticultural purposes in the plant.
iv.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted and complied.
v.	At no time, the emissions shall exceed the prescribed limits, in the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Noted and complied.
vi.	The locations of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required, in the down wind direction as well as where maximum ground level concentrations are anticipated.	Ambient air monitoring is carried out at following 3 locations. Location-I: Ammonia Atmospheric tank, Location-II: R&D Laboratory and Location-III: Training Centre. All locations have been selected in consultation with GPCB. The latest Test report for ambient air Quality is attached as **Enclosure VI.** All the parameters are within the prescribed limit.

vii.	Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.	Appropriate APCS and stack is provided to the air pollution source to control the emissions from various vents. Details of Stacks and APCS are attached as **Enclosure XIV.** Scrubber liquor is collected in a local sump and recycled back into the scrubber system of the Plant.
viii.	Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Board/ Central Pollution Control Board.	Regular work zone monitoring is being done in plant by inhouse and NABL/MoEF&CC approved lab. Latest Test Report is attached as **Enclosure XV.**
ix.	The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended in October, 1994 and January, 2000 and Hazardous Waste (Management and Handling) Rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage and disposal of hazardous waste.	Noted and complied. Authorization from SPCB has been obtained for collection, treatment, storage and disposal of hazardous waste vide authorization no. AWH-97874 dated 18.12.2018 and valid upto 20.10.2023. Rules & guidelines under MSIHC Rules are strictly followed in the plant.
x.	The overall noise levels in and around the plant area shall be kept within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)	All Machinery Equipment are such that noise levels are within permissible limits. Noise at the boundary of the plant is maintained less than 75 dB(A) during daytime and 70 dB(A) during nighttime. Noise monitoring is being carried out periodically. Latest Noise monitoring report is attached as **Enclosure XVI.**
xi.	The company shall develop rainwater harvesting structures to harvest the runoff water for recharge of ground water.	The plant is located adjacent to Kandla creek. Ground water in the area is highly saline and unfit for consumption. Recharging of ground water is not possible. However, two rainwater harvesting ponds of

		20,000 m^3 & 3300 m^3 capacity have been provided at IFFCO township in Gandhidham. Photographs of Rainwater harvesting pond is attached as **Enclosure XVII.**
xii.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipts of this letter for approval.	Complied. Eco-development is carried out by IFFCO through Indian Farm Forestry Development Cooperative Limited (IFFDC) by developing wastelands for tree plantation. Afforestation in about 29,420 hectares has been achieved in various states. Details are attached as **Enclosure XVIII.** Community welfare measures are undertaken at IFFCO through its Integrated Rural Development Program (IRDP) of village adoption for overall socio-economic development in rural areas. Villages in various states have been covered under this program. Eco development and community welfare is carried out at the corporate level in IFFCO. Details are attached as **Enclosure XIX.**
xiii.	A separate Environment Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Complied. Plant has an EMC & EHS cell to monitor the implementation of the EMP & EHS. Cell is chaired by the Jt. General Manager (Technical) under supervision of Unit Head. Environment Management Cell is having four officials with other supporting members to operate and ensure EMP in the plant. Details of personnel are attached as **Enclosure XX.** Plant has also established laboratory facilities in the plant for environment monitoring. Facilities for chemical analysis is set up in plant premises. Various quality monitoring instruments are available at Central Laboratory for analysis of raw materials, gaseous and liquid composition in the process and Final product. Standard methods are used for collection of liquid and gaseous samples. All the relevant Environment and quality monitoring instruments

		are calibrated periodically through external agency / inhouse. Standard operating procedures for analysis of various parameters have been prepared and followed. Photographs of laboratory are attached as **Enclosure XXI.**
xiv.	The project authorities shall earmark adequate funds to implement the conditions stipulated by the MoEF as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Noted and complied. Adequate funds to implement conditions stipulated by MoEF and SPCB have been provided for environmental protection. These funds are not diverted for any other purpose.
xv.	The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB/CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.	Noted. Six monthly compliance report is being regularly submitted to the MoEF&CC/SPCB/CPCB. Copy of earlier submitted copy is attached as **Enclosure XXII.** Same shall be submitted on company website.
xvi.	The project proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Public has been informed that the project has been accorded environmental clearance by the Ministry and via local newspaper. The matter has been advertised in local newspapers and copy of the same forwarded to Regional Office of the Ministry. Copy of newspaper clipping is attached as **Enclosure XXIII.**
xvii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Noted and complied for all the projects executed till date.

Annexure – I: Environmental Clearance Letter

F. No. J-11011/202/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003
E-mail : plahujarai@yahoo.com
Telefax: 011 – 2436 3973
Dated: May 13, 2009

To,

The Executive Director
M/s Indian Farmers Fertilizer Co-operative Limited
Kandla, Kutch District,
Gujarat -370210

E-mail : srinivasan@iffco.nic.in / nkverma@iffco.nic.in

Sub: Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s Indian Farmers Fertilizer Cooperative (IFFCO) Limited –-reg. environmental clearance.

Sir,

This has reference your letter no. Nil dated 10th November, 2009 alongwith Form-1 and Project feasibility report seeking environmental clearance under EIA Notification 2006 for the above-mentioned project.

2.0 The Ministry of Environment and Forests has examined the proposal and noted that M/s. Indian Farmers Fertilizer Cooperative (IFFCO) Limited, Kandla have proposed to set up a 15,000 MTPA water soluble fertiliser plant in Kandla at Kutch District in Gujarat. The proposed expansion will be within the existing plant premises. At present, IFFCO is operating a fertilizer plant having capacity of 10 Lakh MTPA of P2O5. The end products will be water soluble urea phosphate (17 : 44) and NPK product. Total area of the existing NPK / DAP plant is 174 acres. Area required for the proposed expansion will be about 1.0 acre. No eco-sensitive areas are located within the 10 km radius of the plant. Total cost of the project is Rs. 5.0 Crores.

3.0 It is noted that the total raw material requirement, water, power and other facilities will be made available from the existing infrastructure of the main process plant and no additional infrastructure is required. The continuous process plant will be setup in two streams with common drying, potash addition, mixing and final product bagging and handling facilities. The plant will be hooked up with the existing facilities for utilities, power and water. Water requirement of 12.50 m3/d will be met from the Gujarat Water Supply and Sewerage Board (GWSSB). Daily power requirement of 1.8 MWH will be met from the existing power supply. There will be no effluent discharge from the plant. Mother liquor solution will be recycled or consumed in the main NPK/DAP process plant. No gaseous emissions will be generated either from the reaction process or from the subsequent process steps of crystallization, centrifuging and drying. For control of emissions during handling of solids due to proposed expansion, dust extraction system with wet scrubber will be provided. There will not be any solid waste generation from the unit.

4.0 The project activity is listed at Sl. No. 5(a) under Category 'A' and appraised at the Central level by the Expert Appraisal Committee (Industry) in its 93rd meeting held on 14th – 16th April, 2009. The committee recommended the project for environmental clearance as per para 7(ii) of the EIA Notification, 2006 exempting the project from preparation of EIA and Public hearing.

5.0 Based on the information submitted, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14th September 2006 subject to the compliance of the following Specific and General conditions:

A. SPECIFIC CONDITIONS:

i) The projects authorities shall ensure zero discharge from the proposed plant. The mother liquor shall be recycled in the existing plant. No utilities shall be developed for this project.

ii) The project authority shall install dust extraction system with scrubber to control the dust emissions in bagging section and emissions shall conform to the prescribed standards.

iii) The company shall carry out air quality monitoring at vents/stacks and regular monitor the gaseous emissions along with particulate matter. The reports shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and SPCB.

iv) The ambient air quality shall be monitored at least at 3 locations, minimum one in down wind direction. The location of monitoring stations shall be selected in consultation with the State Pollution Control Board.

v) Data on ambient air quality, stack emissions and fugitive emissions shall be regularly uploaded on the website of the company and submitted on-line to the Ministry's Regional Office at Bhopal , Gujarat State Pollution Control Board (GSPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO_2 and NO_x shall also be displayed outside the premises at the appropriate place for the general public.

vi) The company shall develop the green belt in 33% area, out of total area to mitigate the effect of fugitive emissions and noise as per the guidelines CPCB.

vii) The company shall implement all the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP) for fertilizer industries for existing and proposed plant.

viii) Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act.

ix) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.

x) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

B. GENERAL CONDITIONS :

(i) The project authorities shall strictly adhere to the stipulations of the SPCB/state government or any statutory body.

(ii) The gaseous emissions (SO_2, NOx and fertilizer dust) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. Emission data shall be periodically monitored and reports submitted to Ministry's Regional Office, CPCB and SPCB.

(iii) All the waste waters generated from the various processes shall be recycled/reused in the plant and zero discharge shall be maintained. The domestic waste water shall be treated in septic tanks and treated waste shall be used for irrigation in the green belt.

(iv) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(v) At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.

(vi) The locations of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required, in the downwind direction as well as where maximum ground level concentrations are anticipated.

(vii) Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.

(viii) Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/Central Pollution Control Board.

(ix) The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000 and Hazardous Waste (Management and Handling) Rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.

(x) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(xi) The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water.

(xii) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval.

(xiii) A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

(xiv) The project authorities shall earmark adequate funds to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.

(xv) The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.

(xvi) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.

(xvii) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

6.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

7.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

8.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.

9.0 The above conditions will be enforced, inter-alia under the provisions of the Water(Prevention & Control of Pollution) Act,1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

P. Ahujarai

(Dr.P.L. Ahujarai)
Director

Copy to:

1. The Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar-382 010, Gujarat.
2. The Chief Conservator of Forests (Western Zone), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File/Monitoring File/Record File.

(Dr.P.L. Ahujarai)
Director

Annexure – II: Latest CTO

GPCB

GUJARAT POLLUTION CONTROL BOARD
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Sector-10-A Gandhinagar 382 010
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Website : www.gpcb.gov.in

By R.P.A.D.

No. PC/CCA-KUTCH-1331/GPCB ID 48864/ **Date:**

CORRECTION TO CONSOLIDATED CONSENT TO AUTHORIZATION (CC & A)

(Under the provisions /rules of the aforesaid environmental acts)

To,
M/s. IFFCO Ltd
PLOT NO: OLD KANDLA ,
KANDLA UNIT, P. O KANDLA.
Tal : Gandhidham,
Dist : Kutch.

Subject : Correction in CCA Amendment.

Reference : 1) CCA No. 97874 vide order no. PC/CCA-KUTCH-84(15)/GPCB ID 17878. dated 30/03/2019

2) Your letter dated 18/04/2019

In exercise of the power conferred under section-27 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 6(2) of the Hazardous & Other Waste (Management & Transboundary Movement) Rules-2016 & as amended framed under the Environmental (Protection) Act-1986 and without reducing your responsibility under the said Acts/Rules in anyway.

In reference to your letter dated 18/04/2019 for correction in CCA, this Board is empowered to amend consent order conditions. Accordingly, considering your request for correction in CCA Amendment order CCA – 97874 vide order no. PC/CCA-KUTCH-84(15)/GPCB ID 17878 dated 24/03/2019 is hereby corrected are as below;

- The condition no. 2 of the CCA order dated 30/03/2019 is corrected as below:
  1. Product capacity mentioned at Sr. No. 7 of condition No 2 shall be read as 30,000 T/Annum of Zinc Sulphate Mono Hydrate in place of 3000 T/Annum
  2. Sr. No. 6 of condition No 2 shall be read as "NPK products by mixing sulphate of potash" instead of "NPK products by mixing nutrient of potash"
- The other terms and condition mentioned in CCA No. 97874 vide order no PC/CCA-KUTCH-84(15)/GPCB ID 17878, dated 30/03/2019 shall remain unchanged

For and on behalf of
Gujarat Pollution Control Board

(Smt. U. K. Upadhyay)
Environmental Engineer

GPCB

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By R.P.A.D

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Tran boundary) Rules, 2016 framed under the Environmental (Protection) Act-1986. This Board is empowered to Grant CC&A.

And whereas Board has received consolidated consent application letter no.145452 **dated 05/11/2018** for the **Consolidated Consent and Authorization** (CC & A) of this Board under the provisions / rules of the aforesaid Acts. Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORISATION:
(Under the provisions /rules of the aforesaid environmental acts)

To,
M/S INDIAN FARMERS FERTILIZER CO-OPERATIVE LIMITED (IFFCO)
KANDLA UNIT,
P.O. KANDLA,
TALUKA: GANDHIDHAM
DIST: KUTCH-370 210.

1. **Consent Order No.** AWH-97874 **Date of issue:18/12/2018**
2. The consents shall be **valid upto-20/10/2023**for the use of outlet for the discharge of treated effluent and emission due to operation of industrial plant for manufacturing of the following items/ products:

Sr. No.	Product	Capacity Per Annum
1.	NPK 10: 26: 26:	Fortified 0.5% Zn In NPK\DAP of Total Capacity of 10 Lac MT of P_2O_5
2.	NPK 12: 32: 16:	
3.	DAP 18: 46	
4.	MAP 11: 52	
5.	Urea Phosphate (17:44)	15000 MT of Bulk Capacity
6.	NPK Products by mixing nutrient of potash	
7.	Zinc sulphate mono hydrate	3000 MT of Bulk Capacity

Subject to specific condition:

1. **You shall comply with all the conditions mentioned in the Environmental Clearance awarded to your unit vide order bearing no. F. No. J-11011/202/2009-IA II (I) dated 13/05/2009.**
2. **Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).**

3. **As per Provisions of Rule 18 of Solid Waste Management Rules-2016 you are directed to make an arrangement in Utilities to replace at least five percent (5%) of your solid fuel requirement by 'refused derived fuel'.**
4. **Industry shall obtain NOC from CGWA as per order of Hon. National Green Tribunal for the withdrawal of ground water.**
5. **Industry shall provide dedicated storage facility for fly ash.**
6. **Industry shall comply with fly ash notification 1999 as amended from time to time.**
7. **You shall kept 16 MT/Hr of FO Based Boiler on standby and shall not operate regularly.**
8. **You shall have to take adequate preventive steps to prevent odorous nuisance.**
9. **No ground water shall be withdrawal without obtaining prior permission from competent authority.**

3. CONDITIONS UNDER THE WATER ACT:

3.1. Source of Water: - Sea Water & GWIL.

3.2. The quantity of the fresh water consumption for industrial purpose shall not exceed 782.5 KL/Day.

3.3. The quantity of the fresh water consumption for domestic purpose shall not exceed 230 KL/Day.

3.4. The quantity of domestic waste water shall not exceed 200 KL/Day.

3.5. There shall be no industrial effluent discharge from the unit. The entire Mother liquor solution shall be recycled or consumed in the main NPK/DAP process plant. Unit shall stick to zero liquid discharge & there shall not be any industrial w/w discharge.

3.6 Industry shall provide fixed pipeline with flow meter for reuse of effluent and maintain its records.

3.7 Domestic effluent shall be treated into STP in order to comply with following norms:

Parameter	Permissible Limit
BOD (3 Days at 27^0 C)	20 mg/Ltr
Suspended Solid	30 mg/Ltr
Residual Chlorine	Minimum 0.5 mg/Ltr

3.8 Domestic effluent confirm to following norms shall be used for plantation/gardening with premises.

3.9 Industry shall provide fixed pipelines network with flow meter for even distribution of industrial effluent & maintain records in this regard.

3.10 Disposal system for storm water shall be provided separately, in no circumstances storm water shall be mixed with the Industrial effluent in any case.

4. CONDITIONS UNDER THE AIR ACT:

4.1. The following shall be used as a fuel in Boiler, Hot air generators and D.G. set respectively.

Sr. No.	Fuel	Quantity
1)	Coal	12.96 MT/Hr.

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4.2. The applicant shall install & operate comprehensive adequate air pollution control system in order to achieve prescribed norms.

Stack No.	Stack attached to	Stack height in meter	Air Pollution Control Measures	Parameter	Permissible limit
1.	Boiler (FO based) capacity 16 TPH (stand by) (existing)	51 Common stack	Electrostatic Precipitator	PM	150 mg/NM^3
2.	Boiler (Coal based) (Capacity 14 TPH)			SO_2 NO_x	100 ppm 50 ppm
3.	Indirect coal fired Hot air Generator for 2 Nos. providing hot air to zinc sulphate plant.	41 meter common stack for both HAG	Electrostatic precipitator individually for each HAG	PM SO_2 NO_x	150 mg/NM^3 100 ppm 50 ppm

4.3. Process gas emission from manufacturing activities and other ancillary operations in order to achieve prescribed norms:-

Stack No.	Stack attached to	Stack height in meter	Air Pollution Control Measures	Parameter	Permissible limit
1.	6 Nos. Direct coal fired hot air generator for providing hot air to NPK/DAP plant (A,B,C,D,E & F Trains)	Existing plant stack of 41 meter hight for each train I,e. A,B,C,D,E & F	Cyclone with wet scrubber	PM NH_3 F	150 mg/NM^3 175 mg/NM^3 10 mg/NM^3
2.	De-dusting unit 2 & 3	31	scrubber	PM	150 mg/NM^3
3.	Reaction Vessel-zinc sulphate plant	23	scrubber	Acid mist	50 mg/NM^3
4.	Spray dryer-1	30	Quadruple cyclone with scrubber	PM	150 mg/NM^3
5.	Spray dryer-2	30	Quadruple cyclone with scrubber	PM	150 mg/NM^3

4.4. Industry shall take adequate measure to control dusting due to storage, transportation & handling of Coal/Lignite & fly ash.

4.5. Industry shall comply with Coal handling guideline of the Board.

4.6. Industry shall comply with fly ash notification 1999 as amended from time to time.

4.7. The concentration of the following parameters in the ambient air within the premises of the industry and a distance of 10meters from the source) other than the stack/vent) shall not exceed the following levels.

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air in µg/M^3
1.	Sulphur Dioxide (SO_2).	Annual . 24 Hours	50 80
2.	Nitrogen Dioxide (NO_2)	Annual 24 Hours	40 80
3.	Particulate Matter (Size less than 10 µm) **OR** PM_{10}	Annual 24 Hours	60 100
4.	Particulate Matter (Size less than 2.5 µm) **OR** PM 2.5	Annual 24 Hours	40 60

4.8. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.

4.9. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and70 dB (A) during night time. Daytime is reckoned in between 6a.m. and10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

5. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2[See rule 6(2)]

Form for grant of authorization for occupier or operator handling Hazardous waste

5.1 Authorization order No:-**AWH-97874**date of Issue: **18/12/2018.**

5.2 M/S INDIAN FARMERS FERTILIZER CO-OPERATIVE LIMITED (IFFCO) is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at KANDLA UNIT, P.O. KANDLA, TALUKA: GANDHIDHAM, DIST: KUTCH- 370 210.

Sr. No.	Waste	Quantity MT/Year	Schedule-I/ Category	Facility
1	Used Oil	10 M.T	5.1	Collection, Storage, and disposal by selling to registered recycler.
2	Chemical Sludge out of Zinc Sulphate	1650 M.T	6.1	Collection, Storage, and disposal by selling to registered recycler.

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5.1 The authorization shall be valid up to 20/10/2023.

5.2 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

5.3 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.5.2 to the industry having valid CCA of this Board.

6. TERMS AND CONDITIONS OF AUTHORISATION

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a beach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
8. An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous and Other Waste Rules, 2016.
9. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
10. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
11. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
12. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.

16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

7. **GENERAL CONDITIONS: -**

7.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.

7.2 Applicant shall also comply with the general conditions given in annexure I.

7.3 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.

7.4 In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.

7.5 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.

7.6 The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.

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7.7 The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.

7.8 In case of change of ownership/management the name and address of the new owners/ partners/directors/proprietor should immediately be intimated to the Board.

7.9 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w. p. no. 657 of 1995 dated 14th October 2003.

8. **SPECIFIC CONDITIONS:-**

8.1 The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.

8.2 Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.

8.3 In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.

8.4 The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.

8.5 Unit shall comply provisions of E-Waste Management Rules-2016.

8.6 The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.

8.7 The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding **ninety days**. Prior permission of the Board shall be obtained for extension of the storage period.

8.8 The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.

8.9 The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

For and on behalf of
Gujarat Pollution Control Board

(Smt U.K. Upadhyay)
Environmental Engineer

NO: GPCB/CCA-KUTCH-84(15)/ID-17878/500423 **Date:-** 29/03/19

Issued to:
M/S Indian Farmers Fertilizer Co-Operative Limited (Iffco)
Kandla Unit,P.O. Kandla,
Taluka: Gandhidham
Dist: Kutch-370 210.

Annexure – III: Exemption letter for Zinc Sulphate

इफको
कांडला इकाई

knd_proc/kandla/iffco
12/18/2010 09:35 AM

To
cc
bcc
Subject

Padam <pb.rastogi@nic.in>
12/16/2010 02:39 PM

To imurugappan@iffco.nic.in
cc nkverma@iffco.nic.in
Subject Manufacture of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) at Kandla, Kutchch District, Gujarat by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO) - reg.

F. No. J-11011/359/2010-IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668
Dated 16th December, 2010

To

Shri L. Murugappan
Executive Director
M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO)
District Kuutchh - 370201, Gujarat.

E-mail: imurugappan@iffco.nic.in; nkverma@iffco.nic.in;
Fax No.: 02836-270 642.

Subject: Manufacture of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) at Kandla, Kutchch District, Gujarat by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO) - reg.

Ref. : Your letter no. nil dated 15th July, 2010 and 18th November, 2010.

Sir

Kindly refer to Ministry's letter of even no. nil dated 15th July, 2010 wherein you have submitted a proposal for the Manufacture of Zinc Sulphate

(Monohydrate 33% Zinc, 30,000 MTPY) at Kandla, Kutchch District, Gujarat.

2.0 The proposal was considered and discussed in the *15th Meeting of the Expert Appraisal Committee (Industry-2) held on 22nd–23rd October, 2010*. During deliberations, the Committee noted that proposal is for manufacturing of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) only, which is an inorganic chemical.

2.0 The matter was further examined in the Ministry. Since inorganic chemicals are not covered in the EIA Notification, 2006, the proposal is outside the purview of the environmental clearance under the EIA Notification, 2006. However, you are requested to kindly obtain requisite statutory clearances from the State Government and Gujarat State Pollution Control Board as deemed fit.

In view of the above, your ***file for the above mentioned proposal is closed and delisted from the Ministry's website .***

(Dr. P. B. Rastogi)
Director

Copy to :

1. The Secretary, Department of Environment and Forests, Govt. of Gujarat, Gandhi Nagar, Gujarat.
2. The Chairman Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar – 382 010, Gujarat

(Dr. P. B Rastogi)
Director

Minutes approved by the Chairman on 9th November, 2010

MINUTES FOR THE 15th MEETING OF THE EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) HELD DURING 22nd /23rd OCTOBER, 2010

15.4.1 Manufacture of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) at Kandla, Kutch District, Gujarat by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO) (TORs)

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken. All the Fertilizer plants are listed at S.N. 5(a) under Category (A) and appraised at the Central level.

M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO) have proposed for the Manufacture of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) at Kandla, Kutch District, Gujarat. Zinc Sulphate manufactured will be used as a micronutrient in soil. Fertilizer plant to manufacture bulk fertilizer (30 Lakh MTPM) is existing and environment clearance has been accorded for the expansion of fertilizer plants (5.19 to 10.0 Lakh TPA, P_2O5) vide letter no.J-11011/192/197-IA(II)-I dated 6.8.07. Compliance report is submitted. Consolidated Consented Authorization (CCA) for the existing plant has been accorded by the GPCB vide letter dated 8th November, 2008. Presently DAP and NPK fertilizers are manufactured. Kandla falls under seismic Zone V and necessary precaution will be taken during natural calamities. No protected areas, wildlife sanctuary, national parks are located within 15 km of the project site. The Great Rann of Kutch Bird Sanctuary for Flamingo is at 70 km. Military bases are located within 15 km radius. Total project area will be 3,000-3,500 sq. m. out of total 174 acres. Total cost of the project is Rs. 1600.00 Lakhs.

Zinc ash (65-75%, 14,500 MT) and Sulphuric Acid (16,500 MT) will be used as raw materials, which are hazardous chemicals.

Sulphuric Acid (98% cons.) will be fed into reaction vessel through pipeline from the Sulphuric Acid Storage tank and the Zn ash will be added to the reaction vessel. An agitator will be provided to agitate the Zn ash with Sulphuric acid to produce Zinc Sulphate Monohydrate. Vent and wet scrubber will absorb the H_2 gas liberated during the reaction. The slurry from the reactor will be fed to the filter press and filtrate will be pumped to the spray dryer for drying. The solid residue i.e. mud or spent wash will be

washed in mud washers. The weak liquid will be sent to reactors and mud for disposal. The product i.e. Zinc sulphate monohydrate will be sent for weighing and bagging.

Ambient air data for the period 2005-10 indicates that SPM (161-299 micro gm/m^3), SO_2 (7-12 micro gm/m^3), NOx (13-17micro gm/m^3), NH_3 (202-322 micro gm/m^3) and RSPM (100-120 micro gm/m^3) and are within GPCB limits. Scrubber will be provided to scrub fumes from the reaction vessel. No air emissions will be generated from the proposed plant. Solid escaping from dryer will be recorded by using cyclone separator where the fines will be collected and taken for bagging.

Total water requirement from existing water supply Gujarat Water Supply and Sewerage Board (GWSSB) will be 150 m^3/day. The effluent will be generated from the filter press and washing. The liquid effluent generated during scrubbing of H_2 gas, liquor generated during washing and cleaning etc. will be collected and reused in the system for the production of $ZnSO_4$. Thus, no effluent will be generated form the plant. Service water will be passed through oil separator to remove oil content in the effluent. Domestic Sewage will be treated in existing sewage treatment plant (STP). No effluent will be discharged outside the premises and Zero discharge will be adopted.

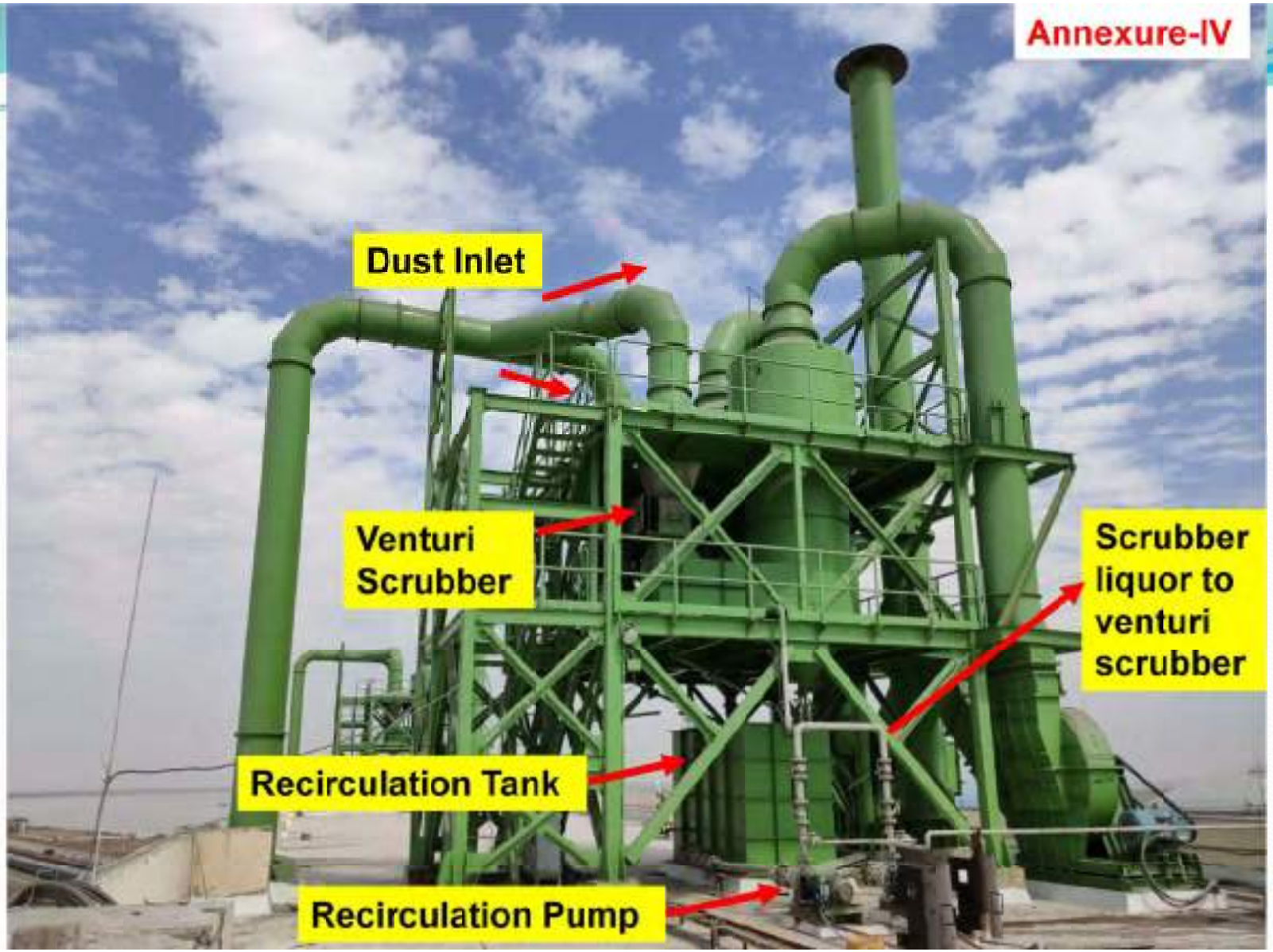
Spent ash (0.055 MT/MT of product) having Zinc (3-4%) Lead 5-7%) Iron (1-1.5%), Aluminium (1-1.5%) and rest as inert material will be generated and stored at designated place and disposed off through recycles. Waste / used / spent oil and used batteries will be sold to authorized recyclers / re-processors.

Green belt is already developed in 46% (80 acres) of total plant area of 174 acres. Power (1800 MWH) will be required. Fuel oil (5,400 kl) will be used as fuel. No increase in power demand or facility for the proposed plant will be required. Rain water recharging well have been constructed in township for the conservation of rain water.

After deliberations, the Committee noted that proposal is for manufacturing of Zinc Sulphate (Monohydrate 33% Zinc, 30,000 MTPY) which is an inorganic chemical and is not a fertilizer. Since inorganic chemicals are not covered in EIA Notification, 2006, proposal can not be considered for the environmental clearance and PAs may be asked to obtain other statutory clearances from the State Govt./SPCB. Proposal may be returned to the PAs.

Annexure – IV: Photographs of Dust Extraction System

Annexure-IV


Dust Inlet
Venturi Scrubber
Scrubber liquor to venturi scrubber
Recirculation Tank
Recirculation Pump

Annexure – V: Latest Test Reports of Stack/Vent

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/118/21-22	Date of Issue	25/06/2021
Sample Description	Flue Gas	Stack attached to	Boiler (14 TPH)
Date and time of sampling	21/06/2021 03:22 hrs.	Duration of sampling	42.3 min
Sample Receipt Date	22/06/2021	Sample ID	S/26/118
Fuel used	Coal	Stack gas Velocity in m/sec	5.51
Stack height in meter	51	Stack diameter in meter	1.5M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	117	Ambient temperature in °C	35
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	106.6	150
2.	Sulphur Dioxide (SO_2)	PPM	IS 11255 (Part 2) :1985 (RA 2014)	55.1	100
3.	Oxide of Nitrogen (NOx)	PPM	IS 11255 (Part 7) :2005 (RA 2017)	26.6	50

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel	SONI GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/120/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	De Dusting – 2
Date and time of sampling	21/06/2021 12:13 hrs.	Duration of sampling	36.5 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/120
Fuel used	NA	Stack gas Velocity in m/sec	8.15
Stack height in meter	31	Stack diameter in meter	0.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	61	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	48.8	150

Remarks →

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K.R.Patel	SONI GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- **End of Test Report** ----------

Soni Group of Technologies – Environmental Testing Laboratory

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/121/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	De Dusting – 3
Date and time of sampling	21/06/2021 13:21 hrs	Duration of sampling	35.3 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/121
Fuel used	NA	Stack gas Velocity in m/sec	8.54
Stack height in meter	31	Stack diameter in meter	0.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	56	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	46.2	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.P. Patel	
Mrs. Keya Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/125/21-22	Date of Issue	25/06/2021
Sample Description	Flue Gas	Stack attached to	Indirect Coal fired Hot Air Generator
Date and time of sampling	22/06/2021 10:02 hrs.	Duration of sampling	31.3 min
Sample Receipt Date	23/06/2021	Sample ID	S/26/125
Fuel used	Coal	Stack gas Velocity in m/sec	4.4
Stack height in meter	41	Stack diameter in meter	1.5M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	123	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	93.4	150
2.	Sulphur Dioxide (SO2)	PPM	IS 11255 (Part 2) :1985 (RA 2014)	34.5	100
3.	Oxide of Nitrogen (NOx)	PPM	IS 11255 (Part 7) :2005 (RA 2017)	17.7	50

Remarks →

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- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel		
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/119/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	Spray Dryer – 1
Date and time of sampling	21/06/2021 11:26 hrs.	Duration of sampling	22.1 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/119
Fuel used	NA	Stack gas Velocity in m/sec	4.37
Stack height in meter	30	Stack diameter in meter	1.2M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	96	Ambient temperature in °C	38
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	61.4	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel		
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/126/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	Spray Dryer – 2
Date and time of sampling	22/06/2021 11:42 hrs.	Duration of sampling	24.3 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/126
Fuel used	NA	Stack gas Velocity in m/sec	4.16
Stack height in meter	30	Stack diameter in meter	1.2M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	86	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	66.3	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

SONI GROUP OF TECHNOLOGIES INDRAD

---------- End of Test Report ----------

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/122/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – A)
Date and time of sampling	21/06/2021 15:03 hrs.	Duration of sampling	23.4 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/122
Fuel used	NA	Stack gas Velocity in m/sec	7.84
Stack height in meter	41	Stack diameter in meter	2.6M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	62	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	48.0	150

Remarks →

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K.R.Patel	
Mrs. Keya Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/122-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – A)
Date and time of sampling	21/06/2021 15:03 hrs.	Duration of sampling	23.4 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/122-A
Fuel used	NA	Stack gas Velocity in m/sec	7.84
Stack height in meter	41	Stack diameter in meter	2.6 M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	62	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH_3)	mg/Nm³	IS 11255 (Part 6) :1999 (RA 2019)	36.1	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.09	10

Remarks →

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- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel		Mr. Chirag Prajapati
Chemist		Technical Manager
Tested By		Reviewed and Approved By

SONI GROUP OF TECHNOLOGIES INDRAD

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/123/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – B)
Date and time of sampling	21/06/2021 15:47 hrs.	Duration of sampling	24.4 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/123
Fuel used	NA	Stack gas Velocity in m/sec	7.98
Stack height in meter	41	Stack diameter in meter	2.6M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	65	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	57.7	150

Remarks →

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K.B.Patel	
Mrs. Keya Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

SONI GROUP OF TECHNOLOGIES INDRAD

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/123-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – B)
Date and time of sampling	21/06/2021 15:47 hrs.	Duration of sampling	24.4 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/123-A
Fuel used	NA	Stack gas Velocity in m/sec	7.98
Stack height in meter	41	Stack diameter in meter	2.6M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	65	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH_3)	mg/Nm³	IS 11255 (Part 6) :1999 (RA 2019)	32.3	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.10	10

Remarks →

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Mrs. Keya Patel	**Mr. Chirag Prajapati**
Chemist	**Technical Manager**
Tested By	**Reviewed and Approved By**

SONI GROUP OF TECHNOLOGIES INDRAD

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No	S/06/124/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – C)
Date and time of sampling	21/06/2021 16:38 hrs.	Duration of sampling	25.1 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/124
Fuel used	NA	Stack gas Velocity in m/sec	7.76
Stack height in meter	41	Stack diameter in meter	2.8M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	64	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	50.5	150

Remarks →

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- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel		
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- **End of Test Report** ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/124-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – C)
Date and time of sampling	21/06/2021 16:38 hrs.	Duration of sampling	25.1 min
Sample Receipt Date	22/06/2021	Sample ID	S/06/124-A
Fuel used	NA	Stack gas Velocity in m/sec	7.76
Stack height in meter	41	Stack diameter in meter	2.8M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	64	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	22/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH_3)	mg/Nm³	IS 11255 (Part 6) :1999 (RA 2019)	42.3	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.08	10

Remarks →

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- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	SONI GROUP OF TECHNOLOGIES INDRAD INDIA	Mr. Chirag Prajapati
Chemist		Technical Manager
Tested By		Reviewed and Approved By

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/128/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – D)
Date and time of sampling	22/06/2021 13:22 hrs.	Duration of sampling	23.4 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/128
Fuel used	NA	Stack gas Velocity in m/sec	7.42
Stack height in meter	41	Stack diameter in meter	2.8M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	68	Ambient temperature in °C	35
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	52.9	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel	SONI GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- **End of Test Report** ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/128-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – D)
Date and time of sampling	22/06/2021 13:22 hrs.	Duration of sampling	23.4 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/128-A
Fuel used	NA	Stack gas Velocity in m/sec	7.42
Stack height in meter	41	Stack diameter in meter	2.8 M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	68	Ambient temperature in °C	35
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	22/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH_3)	mg/Nm³	IS 11255 (Part 6) :1999 (RA 2019)	29.1	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.11	10

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.P.Patel		
Mrs. Keya Patel		**Mr. Chirag Prajapati**
Chemist		**Technical Manager**
Tested By		**Reviewed and Approved By**

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

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Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/129/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – E)
Date and time of sampling	22/06/2021 14:16 hrs	Duration of sampling	24.4 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/129
Fuel used	NA	Stack gas Velocity in m/sec	7.51
Stack height in meter	41	Stack diameter in meter	2.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	70	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	59.9	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/05
Issue No.: 03
Page 1 of 1

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/129-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – E)
Date and time of sampling	22/06/2021 14:16 hrs.	Duration of sampling	24.4 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/129-A
Fuel used	NA	Stack gas Velocity in m/sec	7.51
Stack height in meter	41	Stack diameter in meter	2.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	70	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH_3)	mg/Nm³	IS 11255 (Part 8) :1999 (RA 2019)	51.3	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.09	10

Remarks →

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Mrs. Keya Patel Chemist Tested By	SONI GROUP OF TECHNOLOGIES INDRAD	Mr. Chirag Prajapati Technical Manager Reviewed and Approved By

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/05
Issue No.: 03
Page 1 of 1

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/130/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – F)
Date and time of sampling	22/06/2021 15:32 hrs.	Duration of sampling	25.5 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/130
Fuel used	NA	Stack gas Velocity in m/sec	7.51
Stack height in meter	41	Stack diameter in meter	2.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	62	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Particulate Matter	mg/Nm^3	IS 11255 (Part 1) :1985 RA 2019	55.4	150

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K.R.Patel	SOIL GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

---------- **End of Test Report** ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	S/06/130-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	HAG Process(Stack – F)
Date and time of sampling	22/06/2021 15:32 hrs.	Duration of sampling	25.5 min
Sample Receipt Date	23/06/2021	Sample ID	S/06/130-A
Fuel used	NA	Stack gas Velocity in m/sec	7.51
Stack height in meter	41	Stack diameter in meter	2.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	62	Ambient temperature in °C	33
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits as per GPCB
1.	Ammonia (NH3)	mg/Nm3	IS 11255 (Part 6) :1999 (RA 2019)	41.5	175
2.	Fluoride	mg/Nm³	IS 11255 (Part 5) :1990 (RA 2019)	0.08	10

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel Chemist Tested By	SONI GROUP OF TECHNOLOGIES INDRAD	Mr. Chirag Prajapati Technical Manager Reviewed and Approved By

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/05
Issue No.: 03
Page 1 of 1

Stack Analysis

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No	S/06/127-A/21-22	Date of Issue	25/06/2021
Sample Description	Process Stack	Stack attached to	Reaction Vessel ($ZnSO_4$)
Date and time of sampling	22/06/2021 12:50 hrs.	Duration of sampling	20.1
Sample Receipt Date	23/06/2021	Sample ID	S/06/127-A
Fuel used	NA	Stack gas Velocity in m/sec	6.2
Stack height in meter	23	Stack diameter in meter	0.9M
Sampling Procedure	IS 11255	Sampling By	SGT Team
Stack temperature of Process Emission in °C	42	Ambient temperature in °C	34
Environmental Condition during testing	25 ± 2 °C	Location of test performed	At Laboratory
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Testing Test Start Date	23/06/2021	Testing Test End Date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limits
1.	Acid Mist	mg/Nm^3	CARB (Method 8) :1999	18.4	50

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

---------- End of Test Report ----------

Annexure – VI: Latest Test Report of Ambient Air Quality

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/06
Issue No.: 02
Page 1 of 1

Ambient Air Quality

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	AA/06/115/21-22	Date of Issue	25/06/2021
Sample Description	Ambient Air	Sampling Location	Station – 2 (Nr. R & D Laboratory)
Date and time of sampling start	21/06/2021 10:32 hrs	Date and time of sampling stop	22/06/2021 10:05 hrs
Sample Receipt Date	23/06/2021	Sampling By	SGT Team
Sampling Procedure	IS 5182/ CPCB Guidelines	Sample ID	AA/06/115
Location of test performed	At Laboratory	Wind Direction	SSW
		Wind Speed (m/s)	6 – 23
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	Clear
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	23/06/2021	Test Completion date	23/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as per GPCB
1.	Particulate Matter (PM_{10})	$\mu g/m^3$	IS 5182 (Part 23): 2006 RA 2017	76.6	100
2.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	CPCB Guidelines : 2011	36.4	60
3.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	IS 5182 (Part 2): 2001 RA 2017	27.0	80
4.	Oxides of Nitrogen (NO_x)	$\mu g/m^3$	IS 5182 (Part 6): 2006 RA 2017	35.1	80

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K R Patel		
Mrs. Keya Patel		**Mr. Leve Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/06
Issue No.: 02
Page 1 of 1

Ambient Air Quality

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	AA/06/116/21-22	Date of Issue	25/06/2021
Sample Description	Ambient Air	Sampling Location	Station – 3 (Nr. Training Center)
Date and time of sampling start	21/06/2021 11:08 hrs	Date and time of sampling stop	22/06/2021 11:08 hrs
Sample Receipt Date	23/06/2021	Sampling By	SGT Team
Sampling Procedure	IS 5182/ CPCB Guidelines	Sample ID	AA/06/116
Location of test performed	At Laboratory	Wind Direction	SSW
		Wind Speed (m/s)	6 – 23
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	Clear
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	23/06/2021	Test Completion date	23/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as per GPCB
1.	Particulate Matter (PM_{10})	$\mu g/m^3$	IS 5182 (Part 23): 2006 RA 2017	73.4	100
2.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	CPCB Guidelines : 2011	42.6	60
3.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	IS 5182 (Part 2): 2001 RA 2017	29.4	80
4.	Oxides of Nitrogen (NO_x)	$\mu g/m^3$	IS 5182 (Part 6): 2006 RA 2017	30.9	80

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/06
Issue No.: 02
Page 1 of 1

Ambient Air Quality

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Atmospheric Pollution
Report No.	AA/06/114/21-22	Date of Issue	25/06/2021
Sample Description	Ambient Air	Sampling Location	Station – 1 (Ammonia atmospheric Tank)
Date and time of sampling start	21/06/2021 10:05 hrs	Date and time of sampling stop	22/06/2021 10:05 hrs
Sample Receipt Date	23/06/2021	Sampling By	SGT Team
Sampling Procedure	IS 5182/ CPCB Guidelines	Sample ID	AA/06/114
Location of test performed	At Laboratory	Wind Direction	SSW
		Wind Speed (m/s)	6 – 24
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	Clear
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	23/06/2021	Test Completion date	23/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as per GPCB
1.	Particulate Matter (PM_{10})	$\mu g/m^3$	IS 5182 (Part 23): 2006 RA 2017	85.7	100
2.	Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	CPCB Guidelines : 2011	40.7	60
3.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	IS 5182 (Part 2): 2001 RA 2017	28.1	80
4.	Oxides of Nitrogen (NO_x)	$\mu g/m^3$	IS 5182 (Part 6): 2006 RA 2017	32.0	80

Remarks →

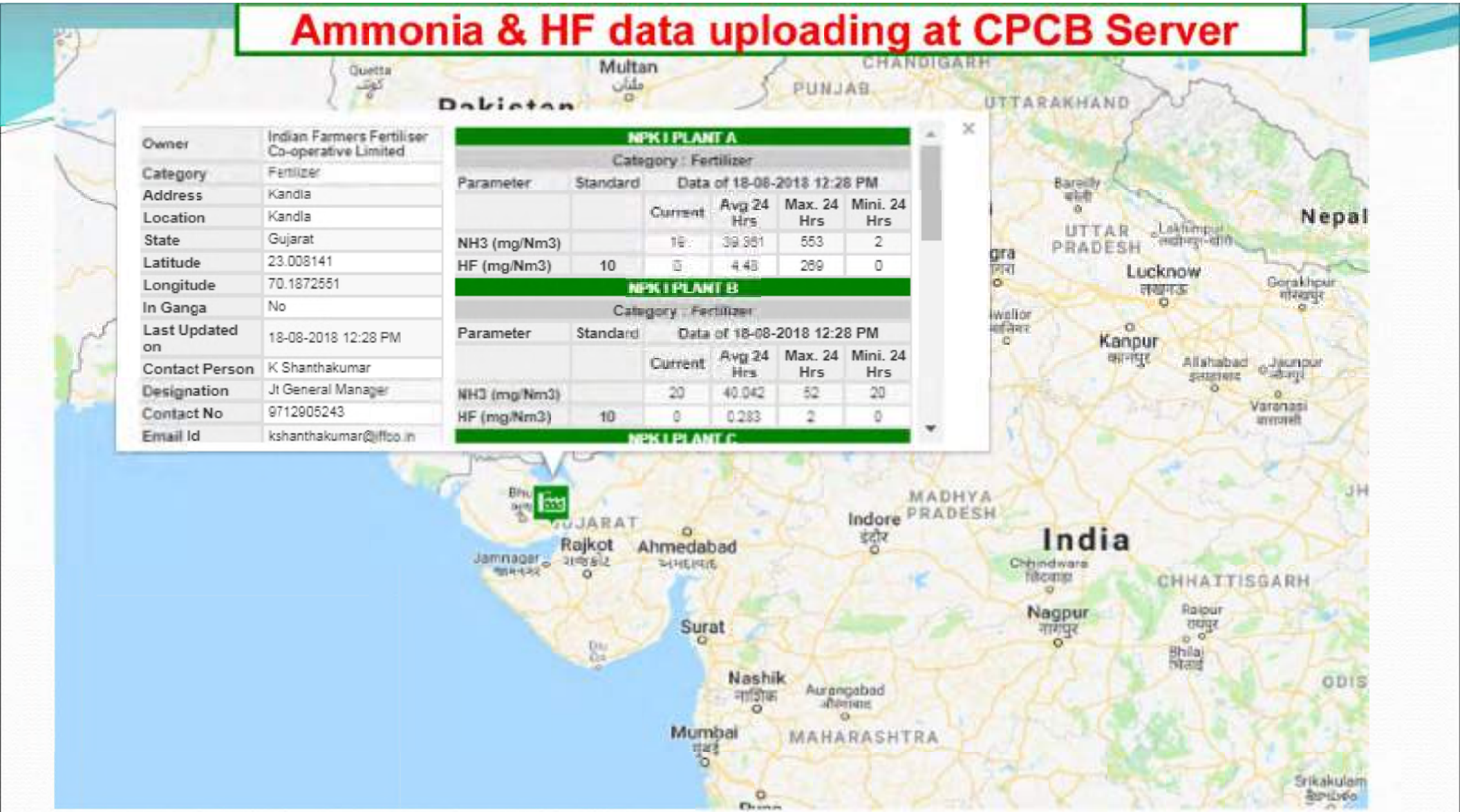
- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

K R Patel	SONI GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

End of Test Report

Annexure – VII: Photographs showing CPCB server data transfer

Ammonia & HF data uploading at CPCB Server



Owner	Indian Farmers Fertiliser Co-operative Limited
Category	Fertilizer
Address	Kandla
Location	Kandla
State	Gujarat
Latitude	23.008141
Longitude	70.1872551
In Ganga	No
Last Updated on	18-08-2018 12:28 PM
Contact Person	K Shanthakumar
Designation	Jt General Manager
Contact No	9712905243
Email Id	kshanthakumar@iffco.in

NPK I PLANT A

Category : Fertilizer

Parameter	Standard	Data of 18-08-2018 12:28 PM			
		Current	Avg 24 Hrs	Max. 24 Hrs	Mini. 24 Hrs
NH3 (mg/Nm3)		16	39.981	553	2
HF (mg/Nm3)	10	0	4.48	289	0

NPK I PLANT B

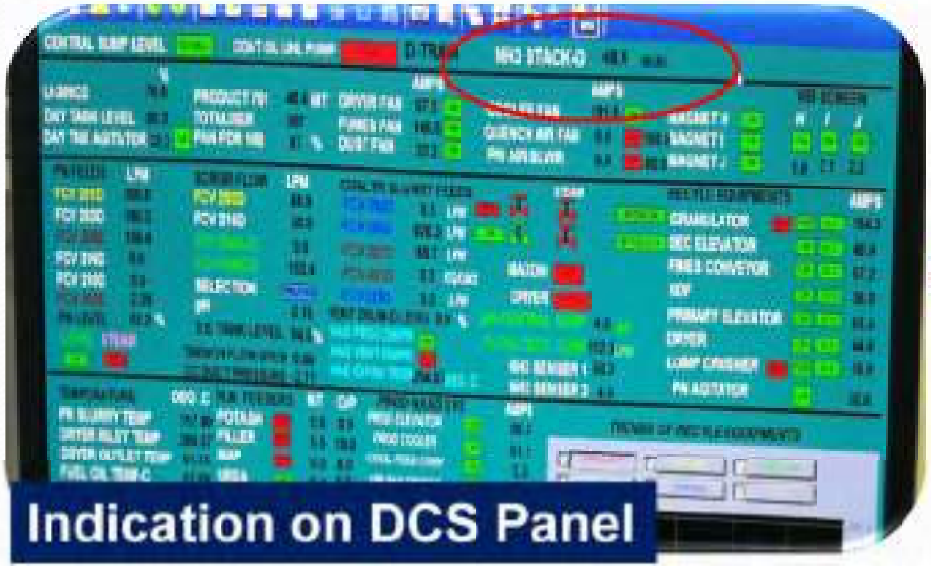
Category : Fertilizer

Parameter	Standard	Data of 18-08-2018 12:28 PM			
		Current	Avg 24 Hrs	Max. 24 Hrs	Mini. 24 Hrs
NH3 (mg/Nm3)		20	40.042	52	20
HF (mg/Nm3)	10	0	0.283	2	0

NPK I PLANT C

AMMONIA & HF ANALYSER SYSTEM

IFFCO
Wholly owned by Cooperatives



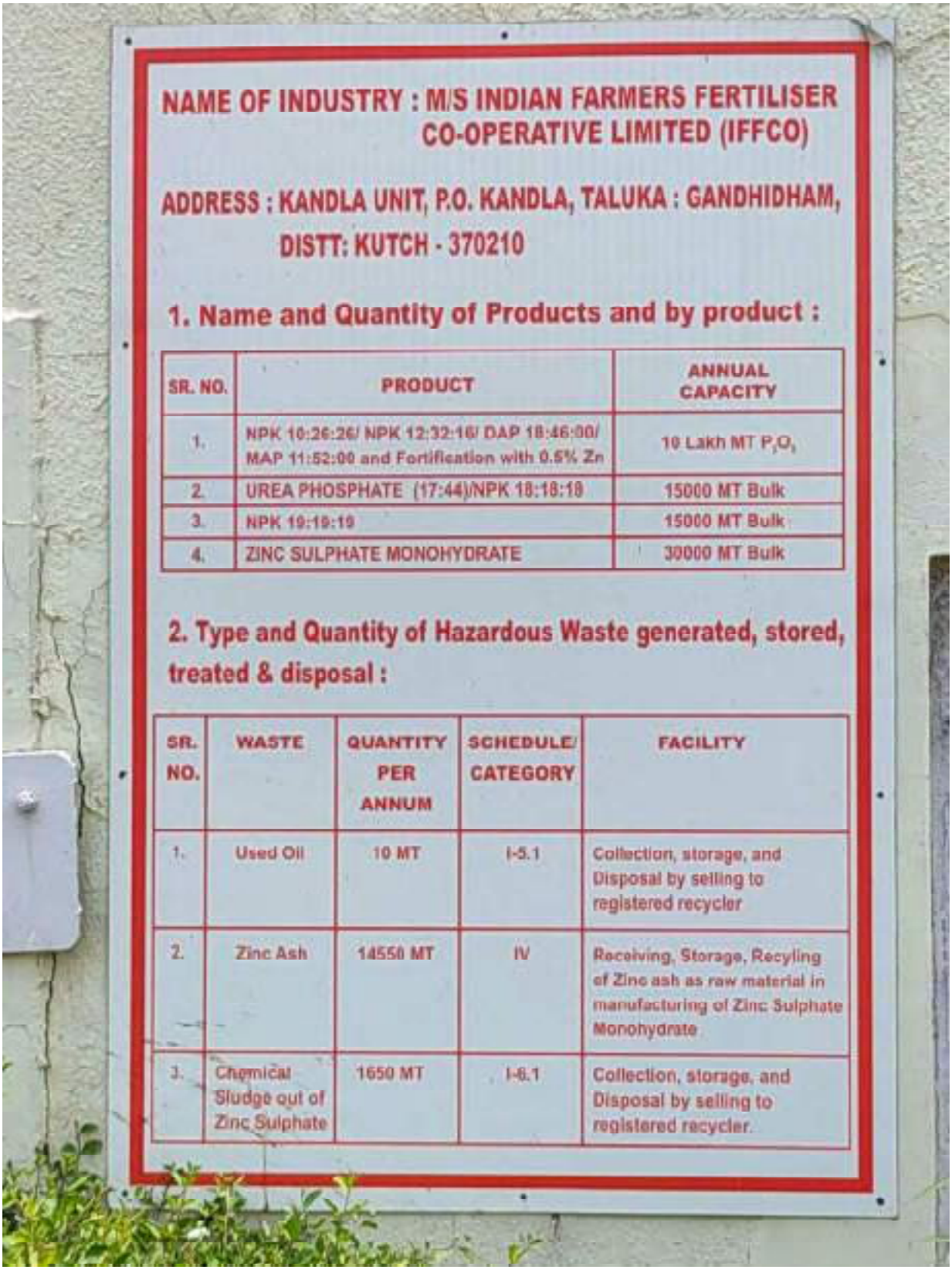
Annexure – VIII: Photographs of Continuous Ambient Air Quality Monitoring Station

STATION 1

STATION 2

STATION 3

Annexure – IX: Display Board provided outside the factory premises



NAME OF INDUSTRY : M/S INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED (IFFCO)

ADDRESS : KANDLA UNIT, P.O. KANDLA, TALUKA : GANDHIDHAM, DISTT: KUTCH - 370210

1. Name and Quantity of Products and by product :

SR. NO.	PRODUCT	ANNUAL CAPACITY
1.	NPK 10:26:26/ NPK 12:32:16/ DAP 18:46:00/ MAP 11:52:00 and Fortification with 0.5% Zn	10 Lakh MT P_2O_5
2.	UREA PHOSPHATE (17:44)/NPK 18:18:10	15000 MT Bulk
3.	NPK 19:19:19	15000 MT Bulk
4.	ZINC SULPHATE MONOHYDRATE	30000 MT Bulk

2. Type and Quantity of Hazardous Waste generated, stored, treated & disposal :

SR. NO.	WASTE	QUANTITY PER ANNUM	SCHEDULE/ CATEGORY	FACILITY
1.	Used Oil	10 MT	I-5.1	Collection, storage, and Disposal by selling to registered recycler
2.	Zinc Ash	14550 MT	IV	Receiving, Storage, Recyling of Zinc ash as raw material in manufacturing of Zinc Sulphate Monohydrate
3.	Chemical Sludge out of Zinc Sulphate	1650 MT	I-6.1	Collection, storage, and Disposal by selling to registered recycler.

3. Type of air Emission from the stacks attached to:

A) NPK/DAP Process

Sr. No.	Standard	Measured Value (mg/NM³)
1.	PM	150
2.	NH_3	175
3.	F	10

B) Boiler & Indirect HAGs

Sr. No.	Standard	Measured Value
1.	PM	150 mg/NM³
2.	SO_2	100 ppm
3.	NO_x	50 ppm

C) Zinc Sulphate Plant

Sr. No.	Stack attached to	Standard	Measured Value
1.	Reaction Vessel	Acid Mist	150 mg/NM³
2.	Spray Dryer-1	PM	100 ppm
3.	Spray Dryer-2	PM	50 ppm

4. Quantity of Industrial effluent generated, treated, reused and discharge:

Quantity:-
Treatment:-
Reused:-
Discharge:-

5. Quantity of Effluent:

CCA: AWH -97874 dated 18/12/2018;

Ref No- GPCB/CCA-KUTCH-84(7)/GPCB ID 17878/500423.

Valid up to: 20/10/2023

Annexure – X: Photographs of Green Area provided in plant and Township

PHOTOGRAPHS OF GREEN AREA

Annexure – XI: Latest CREP Report submitted to GPCB

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

इंडियन फार्मर्स फर्टिलाइजर कोऑपरेटिव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

By Registered Post With Acknowledgement

11/06/2021

To

The Regional Officer
Gujarat Pollution Control Board
2nd Floor, Room no-215/216
Administrative Office Building
Deendayal Port Trust
Gandhidham
Gujarat

Sub: Monthly Status Report of CREP Charter action points in respect of fertilizer Industry for the month of May-2021

Dear Sir,

Please find enclosed herewith the monthly status report of the charter points. It may be noted that IFFCO Kandla plant complies with all applicable points of the charter. We would like to state that IFFCO Kandla Unit is IMS (Integrated Management System) Certified, combining the requirements of ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 50001:2018. Our Environmental Policy contains the principle of compliance with applicable environmental legislation, with an endeavor to improve them, going beyond mere compliance in a cost-effective manner. This commitment is evident in the compliance status of the charter action points. Our company takes initiatives voluntarily, for carrying out its manufacturing operations in an environmentally responsible manner.

With Regards,

SKSingh 12/6/21

S K Singh
Jt. General Manager (Technical)
IFFCO - Kandla Unit

O/c Rajesh
12-06-2021
A. स्वामी
12-06-2021

ISO 9001:2015
ISO 14001:2015
ISO 45001:2018
ISO 50001:2018
BUREAU VERITAS

कांडला इकाई/ Kandla Unit, कांडला/ Kandla, कच्छ/ Kachchh, (गुजरात)/ (Gujarat) - 370210
फोन/ Phones : 02836-254000, 270381, 270382, फैक्स/ Fax : 02836-270642
Email : iffco_kandla@iffco.in • Website : www.iffco.in • IFFCO_PR • IFFCO.COOP

Gujarat Pollution Control Board, Gandhinagar
Charter on "CREP" in respect of 17 categories of industries

Industry Sector wise, Activity wise Progress Statement **Sector: Fertiliser**

Name of Industry: **Indian Farmers Fertiliser Cooperative Limited Kandla Unit**

Code: Secondary (SIC code): 04 1100 300 00. **Report for the Month: May 2021**

Address: Indian Farmers Fertiliser Cooperative Limited, Kandla Unit, Distt. Kutch, Gujarat - 370 210

Waste water Management

Sr. No.	Activity Code No.	Action point (in brief)	Target	Achievement	Compliance Status	Remarks
1		Target for conservation of water in respect of Urea plant based on different feed stocks	N.A.	N.A.	This point pertains to urea plants, hence, is not applicable to IFFCO Kandla. Total water recycle is adopted at Kandla plant, all waste water from equipment / floor cleaning is recycled back into the process.	N.A.
2		Phasing out of arsenic for CO2 absorption and chromate based chemicals for cooling systems	N.A.	N.A.	This point pertains to ammonia-urea plants, hence, is not applicable to IFFCO Kandla.	N.A.
3		Adequate treatment systems for removal of oil, chromate and fluoride from waste water	N.A.	N.A.	Chromate is not used at Kandla plant, whereas oil and fluoride are not present in the wastewater at Kandla, hence this point is not applicable to IFFCO Kandla.	N.A.

Sr. No.	Activity Code No.	Action point (in brief)	Target	Achievement	Compliance Status	Remarks
4		Proper nitrification and denitrification wherever used for effluent treatment	N.A.	N.A.	There is no effluent generated at Kandla therefore no treatment systems are installed. Hence this point is not applicable to IFFCO Kandla.	N.A.
5		Ground water monitoring around storage facilities particularly for pH & fluoride	N.A.	N.A.	Kandla plant is located beside the Kandla creek, ground water in this region is highly saline. No effluent is stored / discharged over land and no fluoride containing waste is generated, hence this point is not applicable to IFFCO Kandla.	N.A.
6		No discharge of effluent into storm water drains, regular monitoring of storm water quality	Complied	Complied	At IFFCO Kandla plant there is Zero effluent discharge. All effluent generated from the process due to floor washing/equipment draining & cleaning is collected in a sump and recycled back into the process. Storm water drains are independent from plant drains and these are generally dry and are regularly checked.	Complied
7		Where waste water flows through storm water drains even during dry season, continuous monitoring of storm water quality for pH, ammonia & fluoride to be done.	N.A.	N.A.	Storm water drains are independent from plant drains and these are generally dry and are regularly checked. Since there is no flow of water in the storm water drain, this point is not applicable to IFFCO Kandla.	N.A.

Air Pollution Management

Sr. No.	Activity Code No.	Action point (in brief)	Target	Achievement	Compliance Status	Remarks
1		All new urea plants to have natural draft prilling towers	N.A.	N.A.	This point pertains to urea plants, hence, is not applicable to IFFCO Kandla.	N.A.
2		Installation of appropriate systems in existing urea plants having forced draft prilling towers for achieving norms of urea dust emissions	N.A.	N.A.	This point pertains to urea plants, hence, is not applicable to IFFCO Kandla.	N.A.
3		Switching over of sulfuric acid plants from SCSA to DCDA system to meet emission standard for SO2	N.A.	N.A.	This point pertains to sulfuric acid plants, hence, is not applicable to IFFCO Kandla.	N.A.
4		Improvement of conversion and absorption efficiencies in DCDA sulfuric acid plants to achieve SO2 emission standards	N.A.	N.A.	This point pertains to sulfuric acid plants, hence, is not applicable to IFFCO Kandla. Even for our package boiler, stack height as per guidelines has been provided.	N.A.
5		Stack height for sulfuric acid plants to be provided as per guidelines	N.A.	N.A.	This point pertains to sulfuric acid plants, hence, is not applicable to IFFCO Kandla.	N.A.
6		Providing proper dust control systems at rock phosphate grinding unit in phosphoric acid / SSP plants to achieve particulate emissions levels as specified.	N.A.	N.A.	This point pertains to phosphoric acid plants, hence is not applicable to IFFCO Kandla. Particulate emissions from our process plant stack is within the specified norms. Regular monitoring is done, and analysis reports are submitted to GPCB.	N.A.

<table>
<tr><th>Sr. No.</th><th>Activity Code No.</th><th>Action point (in brief)</th><th>Target</th><th>Achievement</th><th colspan="5">Compliance Status</th><th>Remarks</th></tr>
<tr><td rowspan="5">7</td><td rowspan="5"></td><td rowspan="5">Particulate as well as gaseous fluoride monitoring and control systems to be provided for achieving norms on total fluoride emissions</td><td rowspan="5">Complied</td><td rowspan="5">Complied</td><td>Parameter</td><td>GPCB Limit</td><td>Min</td><td>Max</td><td>Avg</td><td rowspan="5">Complied</td></tr>
<tr><td>PM (mg/NM^3)</td><td>150</td><td>40</td><td>69</td><td>55.60</td></tr>
<tr><td>Ammonia (mg/NM^3)</td><td>175</td><td>16</td><td>108</td><td>44.93</td></tr>
<tr><td>Fluoride (mg/NM^3)</td><td>10</td><td>0.05</td><td>0.37</td><td>0.17</td></tr>
<tr><td colspan="5">Particulate matter, and Fluoride emissions from our plant is well within the specified limits of GPCB.</td></tr>
<tr><td>8</td><td></td><td>Installation of continuous monitoring systems for SO2 in sulfuric acid plants.</td><td>N.A.</td><td>N.A.</td><td colspan="5">This point pertains to sulfuric acid plants, hence, is not applicable to IFFCO Kandla.</td><td>N.A.</td></tr>
<tr><td>9</td><td></td><td>Regular monitoring of ambient air quality with regard to SO2, NOx, PM, SO3, fluoride & acid mist to be carried out</td><td>Complied</td><td>Complied.</td><td colspan="5">At our plant ambient air monitoring is carried out regularly for SO2, NOx, Ammonia & PM, as applicable to our plant, the ambient air quality for all parameters is within specified limits, analysis reports are submitted to GPCB. Full-fledged Environment Cell comprising of well-trained staff is set up at Kandla plant for effective monitoring. Emission is as given in below table.</td><td>Complied</td></tr>
</table>

Compliance Status of Air monitoring as mentioned in above point no.9					
Sr. No	Parameters	Concentration in Ambient air Microgram per cubic meter	Min	Max	Average
1	Sulphur Dioxide (SO_2)	50 (Annual) 80 (24 Hours)	16	35	22.17
2	Nitrogen Dioxide (NO_2)	40(Annual) 80 (24 Hours)	12	70	30.08
3	Ammonia (NH3)	100(Annual) 400 (24 Hours)	55	90	73.33
4	Particulate Matter (size less than 10 µm) PM 10	60 (Annual) 100 (24 Hours)	50	64	55.25
5	Particulate Matter (size less than 2.5 µm) PM 2.5	40(Annual) 60 (24 Hours)	31	42	35.67

Solid Waste Management

Sr. No.	Activity Code No.	Action point (in brief)	Target	Achievement	Compliance Status	Remarks
1		Effective management of gypsum and monitoring of ground water quality around storage facilities	N.A.	N.A.	This point pertains to phosphoric acid plants, hence, is not applicable to IFFCO Kandla.	N.A.
2		Submission of action plan for proper handling, storage and disposal of spent catalyst having toxic metals	N.A.	N.A.	No catalyst is used at Kandla plant, hence is not applicable to IFFCO Kandla.	N.A.
3		Proper management and disposal of carbon slurry, sulfur muck and chalk	N.A.	N.A.	These materials are not generated at Kandla plant, hence is not applicable to IFFCO Kandla.	N.A.
4		Proper disposal of chromium and arsenic bearing sludge and exploring the recovery of chromium from the sludge	N.A.	N.A.	These materials are not used at Kandla plant; hence this point is not applicable to IFFCO Kandla.	N.A.

Annexure – XII: Sample Health Records

ANNEXURE - B

Form no - 32

Prescribed under rule 68 - T and 102

HEALTH REGISTER FOR WORKERS OF HAZARDOUS AREA

Unit Kandla Period 2021-II Type of Employment EMPLOYEE

1. Serial number in the register of the audit workers 109456
2. Name of worker SHAIKH ZUBER AHMED
3. Sex MALE
4. Age (in years) 43:5

Dept	Name of Hazardous Process	Dangerous Process/ Operation	Name of occupation	Raw products/ byproducts	Date of Posting	Date of Transfer	Reason for Transfer	Date	Signs and Symptoms Observed During Examination	Nature of result	Result Fit or Unfit	Period of temporary withdrawal from work	Reason for withdrawal	Date of declaring fit/ unfit	Date of issuing fitness certi.	Sign of factory medical officer
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
OFFSITES	WORKING IN HAZARDOUS AREA		Sr Optr(NPK) Gr I	AMMONIA, UREA, POTASH, CONC.SULPHURIC ACID, PHOSPHORIC ACID, SODIUM SULPHATE, ZINC ASH, FILLER, DUST	2010			01/07/2021	P.R.- 80/min B.P.- 126/74mm Hg R.R.- 20/min CHEST- B/L CLEAR CVS- S1 S2 NORMAL CNS- CONSCIOUS/ ORIENTED TO TPP P/A- SOFT LIVER/ SPLEEN- NOT PALPABLE TEMPERATURE- AFEBRILE CYANOSIS- NOT PRESENT PALLOR- NOT PRESENT CLUBBING- NOT PRESENT AUDIOMETRY- WNL SPIROMETRY- WNL REMARKS-	NORMAL	FIT			01/07/2021	01/07/2021	DR. SAMYAK SOHAMBHAI LAKHIA

Note - 1. Seperate page should be maintained for individual worker.
2. Fresh entry should be made for each examination.

FORM No.33

(Prescribed under Rule 68-T and 102

Kandla Unit

CERTIFICATE OF FITNESS OF EMPLOYMENT IN HAZARDOUS PROCESS AND OPERATIONS.

(TO BE ISSUED BY FACTORY MEDICAL OFFICER)

1. Srl.No.in the Register of adult worker	210701164902
2. Name of the person examined	SANJAY KUMAR
3. Father's Husband	KISHAN LAL
4. Sex	Male
5. Residential Address	KHARI ROAD, KANDLA
	KANDLA
6. Date of birth, if available	
7. Name & Address of the Factory	IFFCO-KANDLA
8. The worker is employed/proposed	
(a) Hazardous Process	
(b) Dangerous Operation	

Clinical examination :

Pulse	86
Blood pressure	120/74
RS	NAD
CVS	NAD
ABDOMEN	NAD

I certigy that I have personally examined the above named person whose identification marks are mole over left side of forehead and who is desirous of being employed in above mentioned process/operation and that his/her, age as can be ascertained from my examination, is 31 years.

In my openion he/she is fit for employement in the said manufacturing process/operation.

In my openion he/she is unfit for employement in the said manufacturing process/operation. for the reason

He/She is referred for further examination to the Certifying Surgeon.

Signature or left hand thumb Impression of the person examined

Signature of the Factory Medical Officer

DR. SAMYAK SOHAMBHAI LAKHIA

01-07-2021

OCCUPATIONAL HEALTH CHECK-UP

UNIT - **Kandla** PERIOD - **2021-II** DATE - **01-JUL-21**

NAME OF EMPLOYEE - **SHAIKH ZUBER AHMED**
PERSONAL NUMBER - **109456**

LABORATORY INVESTIGATIONS -

CBC
FBS
S.CREATININE
SGPT
LIPID PROFILE
S.URIC ACID
URINE R,M

Annexure – XIII: Onsite Emergency Plan

June- 2021

KANDLA UNIT

INDIAN FARMERS FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

ON-SITE EMERGENCY ACTION PLAN
AND
ROLE OF KEY PERSONNEL & ESSENTIAL STAFF

PREPARED BY

FIRE & SAFETY SECTION

Note : On hearing Emergency Siren Non Essential Staff who are not allotted specific duty in Action Plan for On - Site Emergency must assemble at safe Assembly Points as mentioned in this Plan after consulting their Sectional Heads / Area Incharge. All HODs./SHs should take necessary action to assemble the Non Essential Staff and Contract workmen working under them at nearest safe Assembly Points.

EMERGENCY SIREN TONE:

In case of emergency the siren will be blown as below

FIRE	**:**	**Wailing sound for Two Minutes.**
Gas Leak	**:**	**Wailing sound for Two Minutes And repeat further after 30 Seconds.**
All Clear / Testing	**:**	**Continuous sound for Two Minutes.**

TESTING..... **1st day of every month at 10.00 Hrs**.

Emergency Phones : FIRE: 4555 / 4666, MEDICAL: 4777 / 4574, SECURITY: 4855 / 4856

GENERAL INFORMATION:

Through the Environment Protection Act – 1986, the Central Government had notified 'The Manufacturing, Storage and Import of Hazardous Chemicals Rules - 1989, amended in 1994 and 2000

The Factories Act - 1948 was amended in 1987 after the Bhopal tragedy under which it was laid down that the Occupier of the hazardous Factory is responsible to prepare the On Site Emergency Plan and the same should be submitted to The Chief Inspector of Factories for approval. The plan should contain the detailed disaster control measures also.

Under both the above Acts and Rules, the Factory, handling the hazardous chemicals, must prepare the emergency plan as under.

On Site Emergency Plan: - To be prepared by Occupier of the Factory.
Off Site Emergency Plan :- To be prepared by District authorities in consultation with factories.

IFFCO - Kandla has prepared the On Site Emergency Plan and the action plan and the same is distributed to all concerned.

On - Site Emergency :

Emergency is the kind of situation, which can cause casualties within the plant premises. It may need to take help of outside agencies to bring the situation under control. Operational emergency on equipment failure situation which may go beyond control with time for long duration are also put under this category.

Off - Site Emergency :

This kind of emergency includes events, likely to endanger human life, plant and equipment within IFFCO premises and in neighborhood and it is not possible to control with the resources available within IFFCO, Help of Local Administration, Police, State Transport, and Medical Center and Hospitals shall be required to control and contain the emergency.
Emergency situation in neighbouring industry that may affect IFFCO, are also included in this category.

CLASSIFICATION OF EMERGENCIES:

According to our plan the emergency is categorized in three level i.e.

LEVEL - 1 The level of emergency which is controllable within the plant / area.
Emergency may be due to:
a) Small spot of fire in the plant.
b) Toxic gas release for short duration.
c) Collapse of small equipments.

LEVEL - 2 The emergency which is confinable within the Factory premises.
Emergency may be due to:
a) Big fire in factory premises
b) Medium scale explosion
c) Heavy leakage of toxic gas for short duration.

LEVEL- 3 Likelihood of vapour cloud with formation of toxic / flammable gases drifting and affecting the general public (i.e. outside of plant premises). This type of emergency arises out of:
a) Explosion in high pressure vessel containing toxic / flammable material.
b) Heavy leakage of toxic material for a long duration from pipe line or storage tanks.

Following priorities are to be borne in mind while directing all operations.
- safety of personnel
- minimum damage to plant , property and environment.
- minimum loss of material.

ESSENTIAL PERSONNEL:

(1) Operating Personnel of Affected Plant / Area
(2) Fire & Safety Personnel
(3) Medical Staff
(4) Security Staff
(5) Operating Personnel of non affected Plant / Area
(6) On duty Shift Staff of Mech. Maintenance / Work Shop / Electrical / Instrument / Laboratory

NON ESSENTIAL STAFF:

All the persons who are not listed in essential personnel and not included in this action plan will report to Assembly Point after consulting their Sectional Heads / Area Incharge.

AFFECTED / NON AFFECTED PLANTS / AREA:

NPK – K I / K – II / Offsite K – I / B&MH / Barge Jetty Plants are considered for having potential to develop Onsite / Offsite emergency due Toxic release & or Fire.

Any plant / Area meeting with an emergency is known as affected plant. Rests of the plant / area are known as Non affected plants.

EMERGENCY CONTROL CENTRES (ECC):

(1) At Fire & Safety Section
(2) Alternate ECC – EF Train Control Room
[If emergency situation affects ECC & wind direction is towards Time Office then Alternate ECC will be taken in line.]

ASSEMBLY POINTS:

In case of any emergency, the employees who are not allotted specific duties in action plan and non essential staff must assemble at following assembly point.

ASSEMBLY POINTS	ASSEMBLY POINT INCHARGE
MAIN WORKSHOP ((Mech.)	Sectional Head / Shift Incharge of Transportation Section
E&F TRAIN GROUND FLOOR	Sectional Head / Shift Incharge of NPK K – II
BUS STAND AREA	Head of System Department

EMERGENCY EXIT ROUTE:

In case of Ammonia leakage and wind direction being towards time office, alternative emergency escape gate may be used for exit.

FIRST HAND INFORMATION, ROLE OF KEY PERSONNEL, ON HEARING EMERGENCY SIREN:

FIRST HAND INFORMATION:-

As per the emergency plan, any person at shop floor level who possesses the first information of leakage of toxic gas or Fire will communicate about the emergency as under :-

By informing to concerned control room / Shift Incharge immediately.
In Fire Control Room Local telephone 4666 / 4555
By shouting and informing to others working in near by area.
If there is a Fire incident then try to extinguish immediately with available extinguisher in near by area.

Please remember while passing information:

Give your name & location of incidence & give direction to Fire Tender by sending one person to main road where incident has taken place.

ROLE OF KEY PERSONNEL ON HEARING EMERGENCY SIREN:

1. Unit Head will reach to Emergency Control Centre (ECC) or Alternate Emergency Control Centre depending upon wind direction & situation of emergency if ECC is affected.

2. HODs of Maintenance / Production / Technical / Material / P & A / F& A / Non affected Plant will report to Chief Emergency Controller [Unit Head] at ECC

3. Sectional Heads of Maintenance / Work Shop / Civil / Instrument / Electrical / Non affected Plant will report to their normal work places if not demanded by Incident Controller / Site Main Controller / Chief Emergency Controller; Accordingly instruct staff under their control to report to Incident place & or / plant to be present at their normal work place or to go to declared Assembly Point at the time of Emergency for further instruction & or if evacuation is needed.

4. All other Sectional Heads will report / remain at their normal work places with their staff and keep contact with their HOD or role allotted in emergency action plan.

5. All the HOD's and Section Head should attend Post Mock Drill meeting.

6. All the non essential employees will contact their Sectional Heads / Area Incharge for further instructions.

7. All Contractor's Labour will follow safe route after seeing the wind direction and reach the assembly point for further instructions.

ROLE OF CHIEF EMERGENCY CONTROLLER : (UNIT HEAD)

On receipt of information about the emergency or hearing the siren, he shall proceed to Emergency Control Centre and take charge of Chief Emergency Controller.

He has overall responsibilities of directing operation and calling outside help from emergency control room. **OR**

An alternative ECC in case of adverse condition which is EF Train Control Room.

Assess the situation quickly and decide the level of emergency (L_2 or L_3) after getting information from Incident / Site Main Controller.

If emergency of L_3 level or L_2 (Onsite) is turning to L_3 (Offsite) level inform District Authorities for operating Offsite emergency plan.

Keep contact with Site Main Controller and direct him for handling emergency. Ensure that all services for tackling emergency are in line and advise them accordingly.

Direct all emergencies within the affected area with following priorities.

a) Personnel Safety
b) Plant, Property & Environment Safety.
c) Minimum loss of production.

Direct safe shut down of plants in consultation with incident controller & key personnel, if necessary.

Ensure that all non-essential workers, visitors, contractors are evacuated to assembly points.

If necessary arrange for evacuation of neighboring population with the help of District Collector, Dy. DSP , Asst. Director (IS&H).

Ensure that search for causalities within the affected area have been carried out and arrange for hospitalization of victims.

Seek outside help from others as per requirement.

Ensure that HOD (P&A) liaison with outside agencies such as Police, District emergency authorities i.e. Collector, officials of Directorate of Industrial Safety & Health and Local Pollution Control Board. Provide advice on possible effects to areas outside the factory.

Ensure that press note is prepared and released to press & media.

ROLE OF INCIDENT CONTROLLER:
Shift In charge of Affected Plant / Area (Production)

Area In charge will act as Incident Controller till Shift In charge / Section Head reached

On receiving the information of emergency the shift In charge / area In charge concerned will direct his staff to control the situation by available gears. He will assess the scale of emergency likely to exist i.e. L_1 , L_2, OR L_3. Categorize the risk and

Inform Fire Control room (4666 / 4555) if fire crew did not reach till that time.
Inform Plant Dispensary (4777 / 4574) if personnel injury is reported / observed.

1. Decide whether to stop or continue the process and take technical decision to control the incident and inform / instruct next person to inform Unit Head regarding incident and consult senior officers as per requirement.

2. If emergency of L_2 or L_3 level, or L_1 level is turning to L_2 / L_3 level and need arises to activate emergency action plan by giving information / intimation to Fire Control room In charge (phone 4555 / 4606) for blowing emergency Siren for Gas / Fire code if Sectional Head (Site Main Controller) does not reach to the site.

3. Inform laboratory in charge to carry out ambient air and effluent sample.

4. INCIDENT CONTROLLER HAS TO EXECUTE FOLLOWING RESPONSIBILITIES.
   a) Direct evacuation of plant and areas likely to be affected by the emergency.
   b) Ensure required key personnel are called in.
   c) Advice firefighting, rescue team and provide additional manpower / material from non-affected plant.
   d) Direct for search of causalities.
   e) Evacuate non-essential workers to assembly points.
   f) Preserve evidence for subsequent inquiry in to the cause of emergency.

5. He will hand over the charge to Site Main Controller (Section Head) when he reaches the scene of Incident.

ROLE OF SITE MAIN CONTROLLER: PRODUCTION
(Section Head of Affected Plant / Area)

After receiving information from Area In charge / Incident Controller, inform Unit Head about incident if not already informed by Incident Controller and reach to the scene of incident and assess the level of emergency.

Take the charge of Site from Incident Controller.

Decide whether to stop or continue the process and take technical decision to control the incident. Consult Chief Emergency Controller (Unit Head) for the situation arising.

If Emergency not declared by Incident Controller than, inform to Fire Control room In charge (phone 4555 / 4606) for blowing emergency Siren for Gas / Fire code

Direct Incident Controller in co-ordination with Chief Emergency Controller to control the Emergency and safe shut down of plant as situation demands.

Site Main Controller has to execute following responsibilities.

A) Direct evacuation of plant and areas likely to be affected by the emergency.
b) Ensure that the required key personnel are called in.
c) Advise firefighting, rescue team and other emergency services.
d) Direct for search of causalities, if any.
e) Evacuate non-essential workers to assembly points.
f) Brief chief emergency controller on the developments.
g) Arrange for additional help for fire crew as per requirement of fire service in charge
h) Preserve evidence for subsequent inquiry in to the cause of incident / emergency.

After consulting the Fire & Safety Section In charge, declare all clear at site & inform at Emergency Control Centre (Fire Control room) to declare all clear by blowing siren.

FIRE & SAFETY SERVICES

SHIFT INCHARGE (F&S):

As soon as, notified about the location of Fire / Gas leak,

Inform Lab Shift In charge (Phone 4593) / Shift Lab. Chemist (In order of Priority) regarding Fire / Gas leak and inform to take charge of F& S Control Room.

Inform Section Head of Fire & Safety.

Blow the Sire if asked by Incident Controller (Shift In charge) / Site Main Controller (Section Head) by the emergency Siren as per required code i.e. Fire / Gas Leak.

Ensure Fire Pumps on Auto mode.

Ask for guards from Security In charge.

Proceed immediately to the scene of incident with fire tender & crew.

Position the Fire tender depending on the wind direction.

Decide the course of action in consultation with the Shift In charge (Incident Controller) and take suitable measures to extinguish the fire / assist in controlling gas leak.

Direct Rescue operation if needed

Seek the help of trained employees from Incident Controller for controlling the Emergency Situation.

Ensure that crew members are provided with proper safety equipments for tackling the emergency.

Assess the severity of the incident, and inform Incident Controller to call for additional vehicles, equipments, extinguishing media or and help from mutual aid.

Till the arrival of Sectional Head (F&S), guide the fire crew in firefighting and rescue operation by giving clear instruction.

SHIFT INCHARGE (Fire Control Room after Message of Emergency

[Laboratory Shift In charge / Shift Lab. Chemist (In order of Priority)

On request of Fire & Safety Shift in charge, Laboratory Shift In charge / Shift Lab. Chemist (In order of Priority) **will work as Shift In charge of Fire Control Room till emergency exist / All clear siren blown:**

Inform Sectional Head (F&S) about the incident (After Office Hours).

Ensure that ambulance goes to the place of incidence.

Inform Security Shift In charge.

After getting instruction form Area In charge / Incident Controller (Shift In charge) / Site Main Controller (Section Head) blow the emergency Siren as per required code i.e. Fire / Gas Leak / All Clear.

Ensure that the pressure in the fire hydrant system is maintained, if required put available pumps in auto system and still if pressure is not available in hydrant system request help of Maint. Service Staff for smooth running of Fire pumps.

Record all the messages received in a register and work as per the direction of Incident Controller / Site Main Controller till arrival of Chief Emergency Controller (Unit Head)

ROLE OF SECTIONAL HEAD OF FIRE & SAFETY:

After receiving information from Fire Control Room Inform Unit Head / HOD about incident and reach to the scene of Incident.

Direct the firefighting, emergency operations with Fire Crew & other trained persons.

Keep constant touch with Chief Emergency Controller for additional help, if necessary till arrival of Site Main Controller.

On arrival of Site Main Controller, inform him regarding additional help for incident control action who in turn will convey to Chief Emergency Controller

Ensure that all equipments & PPEs required are available at site and if required arrange for additional requirement.

Direct Rescue operation and send the victims to First Aid Center for treatment.

Inform Site Main Controller to get help from KPT, Emergency Response Centre, KSEZ, G'dham Municipality Fire Brigades & nearby Industries.

Direct the Crew members at the scene of Emergency and reinforce, replenish equipments / extinguishing media & firefighting crew.

Consult the Site Main Controller and both will take decision for declaration of all clear.

MAINTENANCE SERVICES

ROLE OF Sectional Heads of Mechanical / Workshop / Civil / Electrical / Instrument

Sectional Heads of Mechanical / Workshop / Civil / Electrical / Instrument are required to remain present at their normal work places and keep contact with their HOD and also follow the decision made by Incident Controller / Site Main Controller / Chief Emergency Controller in the light of information received by them on the developing situation of emergency. Keep constant contact with their HOD.

They shall guide the staff under their control for providing assistance/ support for controlling the emergency situation and evacuation of personnel.

HOD OF MAINTENANCE SERVICES:

Mobilize staff and necessary tools & tackles for help if required by Incident Controller / Site Main Controller for emergency Maintenance work at the place of Incident. Direct concerned personnel for providing necessary help for tackling the Emergency.

Depute one person from each discipline i.e. Mechanical, Electrical, Instrument to look after the services of Fire Pumps till all clear siren is blown.

SECURITY SERVICES

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE / SECURITY GUARDS

A) SECTIONAL HEAD / SHIFT IN-CHARGE:

On request from Shift In charge of Fire Control room depute four security guards, three for tackling emergency with fire tender and one in Fire Control room for assistance.

After hearing Siren, inform the location of fire/ Gas leak to the essential key personnel and guide the personnel coming to plant.

During non-General Shift hours, inform All HODs regarding emergency i.e. Fire / Gas leak

Guide statutory authority to go to Emergency Control Centre.

Depute Security Guard for manning the gates & traffic control at the scene of incident.

Prevent unauthorized entry in the Factory.

Render assistance as requested by Fire & Safety In charge / Incident Controller at the scene of Incident.

Mobilize additional Security for help if required.

No vehicles should be allowed inside the plant except Ambulance, Fire Tenders & emergency vehicles along with essential personnel & also direct them to the scene of incident.

Help to evacuate the persons at the scene of incident.

Arrange to provide list of contractor workers working, visitors & vehicles for evacuation purpose if required by Assembly point in charge / Chief Emergency Controller.

To operate Jeep with Public Address system to warn surrounding public as directed by Chief Emergency Controller.

B) SECURITY GUARDS:

On hearing the emergency Siren, contact Shift Security In Charge & work under his instructions.

ADMINISTRATION & PERSONNEL SERVICES

ROLE OF HOD / SECTIONAL HEAD

On getting information of emergency Immediate report to Chief Emergency Controller at Emergency Control Centre (ECC).

Arrange vehicles to shift causalities from plant site to Hospitals & evacuation of persons from assembly points to outside shelters.

Arrange buses at Assembly Points for evacuation of people.

Ensure that the media is properly guided and authentic news made available for press and media.

In addition to our vehicles arrange for hired vehicles and additional drivers if necessary for other services such as Welfare / Stores / Purchase.

Ensure that telephone operator is deputed to convey messages. Keep board free to the extent possible for incoming calls. Convey messages to Senior Officials / Nearby Organization Head etc. as directed by Chief Emergency Controller.

Arrange shelters in consultation with local authority and NGO's.

Organize canteen services for hot drinks / snacks / food as required & other welfare services etc. at the scene of incident & required locations.

A messenger /runner is to be kept ready to pass the messages in case of failure of communications.

Keep in touch with local Govt. Authorities and nearby fire services for their help. Inform District Collector, Sr. Insp. of Factories, Police Dept., and GPCB etc. as per statutory requirements.

Arrange round the clock availability of persons at hospital to look after the affected persons.

Prepare records of affected personnel with local and permanent addresses & inform their nearest relatives.

Take necessary action for compliance of statutory need such as information / reports etc. to concerned authority as per existing guidelines.

Depute one person for manning Assembly Points & maintain records of evacuated persons at various shelters / locations.

ROLE OF HOD / SECTIONAL HEAD
FIRST AID AND MEDICAL SERVICES

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE PLANT DISPENSARY / MEDICAL STAFF

SHIFT INCHARGE PLANT DISPENSARY :

On receipt of instruction from Incident Controller / Fire Control room direct Ambulance to the scene of incident.
OR on Hearing Siren of Fire Tender send Ambulance and advice to follow Fire Tender to the scene of incident.

Inform Sectional Head regarding incident.

Be ready for providing First Aid to Victims / Injured.

HEAD OF MEDICAL SERVICES:
On receipt of information from Plant Dispensary immediately report to the first aid Centre of plant and take following actions.

Keep all necessary Medicines, artificial respiration equipments etc. ready.

Render first Aid to Victims / Injured Persons & send them in time for further treatment if required.

Inform all Hospitals / Doctors of Kandla, Gandhidham regarding Incident and gear up for hospitalization and treatment of Victims / Injured persons.

Contact Chief Emergency Controller for additional help.

MEDICAL STAFF:

After receiving information or hearing Siren contact Sectional Head / Shift In charge and work as directed by them.

ENVIRONMENT & POLLUTION CONTROL

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE / CHEMIST - (LABORATORY)

SHIFT INCHARGE / CHEMIST - (LABORATORY):

On request of Fire & Safety Shift in charge , Laboratory Shift In charge / Shift Lab. Chemist (In order of Priority **he will work as Shift In charge of Fire & Safety Control Room till emergency exist / All clear siren blown.:**

Inform Sectional Head (F&S) about the incident.
Ensure that ambulance is sent to the place of incidence.
Inform Security Shift In charge

After getting information from Shift In charge of Affected Plant or area in charge / Site Main Controller i.e. SH of affected plant blow the emergency Siren as per required code i.e. Fire / Gas Leak / all clear. Confirm the Name & Designation who is instructing for blowing the siren.

Ensure that the pressure in the fire hydrant system is maintained, ensure fire pumps on auto system.

He will record all the messages received in a register and will work as per the direction of Incident Controller till arrival of Chief Emergency Controller (Unit Head)

SECTIONAL HEAD (LABORATORY):

(After office hours, Shift In charge play the role of above also)

After getting information of emergency remain present at your normal work places.
Ensure that Lab Shift In charge has taken charge of Fire & Safety Control room as a shift In charge of F&S Control Room.

Follow the decision made by Incident Controller / Site Main Controller / Chief Emergency Controller or HOD in light of information received by them on the developing situation at emergency. Keep constant touch with HOD

Arrange to carry out ambient air and effluents samples test as directed by Incident Controller or Site Main Controller.

They shall guide the staff under their control for developing situation at emergency for work / evacuation etc.

ASSEMBLY POINT MANAGEMENT

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE (TRANSPORTATION), NPK K-II AND SYSTEM DEPARTMENT

On hearing the Siren or intimation of Emergency immediately proceed to Assembly Point and informed to their HOD.

.

Manning the Assembly Point and get help from Sectional Head of (P&A) to shift the persons at shelters and maintain the record of persons reported at assembly points and transfer them to shelters or other places.

Keep in constant touch with their HOD & Co-ordinate other related activities as per requirement.

SUPPLY AND REPLENISHMENT MANAGEMENT

ROLE OF HOD (MATLS) / (F&A)

On receipt of information about the emergency or hearing the siren, immediately report to Chief Emergency Controller at Emergency Control Centre (ECC).

Direct all other Sectional Heads under their control to remain at their normal work places with their staff and instruct them as per requirement for further action.

Arrange additional man power for handling Store items etc.

Arrange to issue items / equipments required during emergency.

Take immediate action of emergency procurement and arrange additional manpower for local purchase etc. If required.

MUTUAL AID SCHEME

ROLE PLAYED BY MEMBERS OF MUTUAL AID SCHEME

On receiving the call they proceed immediately with fire crew and Fire Tender.

The place of incident will be guided by IFFCO MAIN GATE SECURITY GUARD.

Fire Crew In charge will report to Sectional Head / Shift In charge (F&S) and assist the emergency operation as guided.

Safety of Fire Crew will be ensured by In Charge of Assisting Fire Brigade in emergency operation.

Outside organization if involved in assisting during onsite emergency.

KEY PERSONS & THEIR TELEPHONE NUMBERS (INTERNAL)

(updated in June 2021)

NAME & DESIGNATION	OFFICE PHONE		RESIDENCE PHONE	
	INTERNAL	Mobile No.	INTERNAL	P&T
O.P. Dayama Sr. General Manager	4700	9426725505	5009	236057
A.K. Sharma GM (Production)	4548	9099982004	5006	255006
S K Singh JGM (Technical)	4816	9925008234	5122	255122
M P Singh JGM (PH)	4203	8980269222	5101	255101
Ravikant Singh JGM (Utility)	4622	9099982034	5116	255116
S D Kapse DGM (System)	4630	9426928859	5119	255119
Rajesh Ruhela DGM (Materials)	4210	8980044093	5105	255105
Maujila Saw DGM (Electrical)	4915	9099032670	5121	255121
A V Singh DGM (Mechanical)	4731	9099030118	5111	255111
S.R. Bommidi DGM (F & A)	4208	7433974761	5112	255112
Rajesh Singh Sisosia CM (P & A)	4211	9327987634	5114	255114
Lt. Col. (Rtd) Amit Kumar C.S.O.	4851	9712959049	5115	255115
N.C. Patel CM (F&S)	4678	9979026415	5102	223125
Dr. S S Lakhia CMO	4791	9428475963	5205	255205
D U Ajani CM (NPK)K-II	4543	9426250745	5237	255237
G K Amin SM (TPT)	4942	9925316819		262304

IMPORTANT TELEPHONE NUMBERS (EXTERNAL)

(OFF-SITE EMERGENCY PLAN)

Sl. No.	DESIGNATION OF THE AUTHORITY	OFFICE PHONE	RESIDENCE PHONE
1.	DISTRICT COLLECTOR, BHUJ	(02832) 250020	(02832)250350
2.	DISTRICT SUPDT. OF POLICE BHUJ	(02832) 250511, 250250	(02832) 250850, 221502
3.	CHAIRMAN, KANDLA PORT TRUST	233001, 234601	233002, 234691
4.	VICE CHAIRMAN, KPT	234121	234113
5.	DISTRICT DIVISIONAL OFFICER, BHUJ	250080	
6.	DEPUTY COLLECTOR, ANJAR	243345	243363
7.	MAMLATDAR, GANDHIDHAM	221793	222875
8.	MAMLATDAR, ANJAR	242588	243362
9.	DY. SUPDT. OF POLICE, ANJAR	243254	242596
10.	POLICE INSPECTOR, GANDHIDHAM	232500	234500
11.	POLICE STATION, KANDLA	270527	270404
12.	FACTORY INSPECTOR, ADIPUR	260020	260262
13.	DY. CONSERVATOR, K.P.T.	233585	234734
14.	TRAFFIC MANAGER, K.P.T.	270625	235100
15.	K.P.T. FIRE STATION	270176, 270178	238238
16.	K. S. E. Z - FIRE BRIDGE	252232	223629
17.	CIVIL DEFENCE, GANDHIDHAM	220221	-
18.	G'DHAM MUNICIPAL FIRE SERVICES	231610	-
19.	RAMBAUG HOSPITAL	220263	265266
20.	K.P.T. HOSPITAL, KANDLA	270205	-
21.	K.P.T. HOSPITAL ,GOPALPURI	220072	220497
22.	BHUJ CIVIL HOSPITAL	220191	220129
23.	G.E.B., GANDHIDHAM	221728	-
24.	G.E.B., ANJAR	242715, 242023	-
25.	G. W. S. S. B, GANDHIDHAM	220717, 221152	221152
26.	RLY AREA MANAGER GANDHIDHAM	221340	236237
27.	S.T. BUS STAND, GANDHIDHAM	220198	-
28.	G'DHAM CHAMBER OF COMMERCE	220735	-
29.	C. I. S. F. ,KANDLA	270208	-
30.	GPCB - REGIONAL OFFICE, BHUJ	(02832)250620	-
31.	Disaster Management Control Room, Bhuj	(02832)252347	
32.	VOPAK CRL. OLD KANDLA	270505, 270181	
33.	JRE, Old Kandla (IMC Group)	270356, 653528	
34.	United Storage & Tanks (IMC Group)	653529	
35.	IMC – New Kandla	271223, 271222	653526
36.	FOCT, Near Booster	270783, 270827	235072
37.	JK Synthetics	270223, 270443	
38.	N.P. Patel Terminal, Old Kandla	270347, 270066	228807
39.	Kesar Enterprise	270202	
40.	Indo Nippon	270795, 270295	262715
41.	IOCL, LPG	270127, 270805	
42.	IOCL, Kandla	233274	
43.	IOCL, FST	270264	

Annexure – XIV: Stack & APCS Details

AIR EMISSION MANAGEMENT

The process stack of complex phosphatic fertilizer plant at Kandla emits PM, NH3 & HF from DAP/NPK plant. The emissions from the existing plant stacks are well within the statutory limits prescribed by Gujarat Pollution Control Board. Continuous Emission Monitoring System (CEMS) have been installed in all process stacks of existing unit for monitoring of NH3 & HF and emission parameter are uploaded on CPCB server on real time basis. The level of emissions to be attained in the proposed amendment facilities would also meet the prescribed standards.

Further the plant is located away from populated area and is adjacent to the creek. There is no major vegetation within around 15 Kms area of plant due to saline & sandy soil. Above all these factors, the wind speed is very high (around 23 to 40 Km/hr) and the direction also remains towards seaside most of the period in the year.

However, to control air emissions, several measures have been provided within the plant. Few of the many have been provided below:

- Adequate air pollution control system has been installed to achieve prescribed norms.
- Bag filter has been provided at Coal Crusher Unit and Coal handling.
- Dust Suppression System has been installed at coal unloading area.
- Covered Conveyors are used for transferring coal from crushing area to HAG.
- The industry has installed Continuous Emission Monitoring System (CEMS) at stack attached to Boiler, 6 Nos. Direct Coal Fired Hot Air Generator for Providing Hot Air to NPK/DAP (A, B, C, D, E & F Trains) and Indirect Coal Fired Hot Air Generator for 2 Nos. providing Hot Air to Zinc Sulphate Plant.
- The chimney(s) vent attached to various sources of emission is easily identified.
- Green Area has been developed up to feasible extent.
- Dust generated from the process is collected, stored and reused back into the process.
- Ambient Air Monitoring is being carried out at minimum 3 locations (Ammonia Atmospheric Tank, R&D Laboratory and Training Centre) that have been selected in consultation with GPCB.

Bag filter has been provided at Coal Crusher Unit and Coal handling system. Dry-fog Dust Suppression System has been installed at crushed coal unloading & hopper area. Covered Conveyors are used for transferring crushed coal to HAG units.

Details of Air Pollution Control Measures have been provided below in **Table 1**:

Table 1: Details of Air Pollution Control Measures/Devices in Project

S. No	Stack	Stack Height (m)	APCS	Velocity (m/s)	Temp. (^{0}C)	Flow (m^3/hr)	Type of Pollutant
Existing							
Utilities							
1.	Boiler (Coal Based) - 14 TPH	51 m (Common Stack)	ESP	08-10	120-130	30000	PM, SO2, Nox

S. No	Stack	Stack Height (m)	APCS	Velocity (m/s)	Temp. (^{0}C)	Flow (m^3/hr)	Type of Pollutant
2.	Boiler (FO Based) - 16 TPH (standby)						
3.	Indirect Coal Fired Hot Air Generator for 2 Nos. providing hot air to Spary dryer of one stream for Zinc Sulphate Plant & another stream for Sulphur WDG plant	41 m common stack for Both HAG	ESP individually for each HAG	9-12	100-110	35000	PM, SO2, Nox
4.	DG Sets (2 x 1010 kVA)	Stack height: 28 m Stack Dia: 0.35 m	-	-	-	-	PM, SO2, Nox
Process Emission							
5.	Reaction Vessel-Zinc Sulphate Plant	23	Scrubber	08-10	60-70	8000	Acid Mist
6.	Spray Dryer-1	30	Quadruple Cyclone with Scrubber	10-12	50-60	80900	PM
7.	Spray Dryer-2	30	Quadruple Cyclone with Scrubber	10-12	50-61	80900	PM
8.	6 Nos. Direct Coal Fired Hot Air Generator for providing Hot Air to NPK/DAP Plant (A,B,C,D,E & F Trains)	41 m for each train	Venturi/Cyclone Scrubber + Fumes Scrubber (Dry/Wet Scrubber) + Tail Gas Scrubber with Mist Eliminator	12-18	50-60	A Train : 235900 B Train : 226940 C Train : 242690 D Train: 242690 E Train: 332810 F Train: 332810	PM, NH3, HF
9.	De-dusting System Unit (2 nos.)	31 m	Scrubber	9-10	45-50	45000	PM
10.	De-dusting System Unit (3 nos.)	41 m	Scrubber	9-10	45-50	30000	PM
Proposed Stacks							

S. No	Stack	Stack Height (m)	APCS	Velocity (m/s)	Temp. (^{0}C)	Flow (m^3/hr)	Type of Pollutant
11.	Hot Air Generator for providing Hot Air to NPK/DAP Plant (G Trains)	41 m	Venturi/Cyclone Scrubber + Fumes Scrubber (Dry/Wet Scrubber) + Tail Gas Scrubber with Mist Eliminator	15-17	50-60	332810	PM, NH3, HF
12.	Roller Mills (Sulphur WDG-90)	30 m	Cyclone with wet Scrubber	8-11	40-50	4100	PM

Table 2: Consolidated List of APCS at IFFO, Kandla

Sl. No.	Source of Emission (Ammonia/Dust)	Treatment in Air Pollution Control Equipment	Outlet of Air Pollution Control Equipment
	FUMES SCRUBBER		
1	Pipe Reactors & Granulator	Inclined venturi scrubber	Outlet of Inclined Venturi
2	Outlet of Inclined Venturi	Fumes Scrubber	Outlet of Fumes Scrubber
3	Outlet from Fumes Scrubber	Tail Gas scrubber	Main Process Plant Stack
	DRYER CYCLONE & SCRUBBER		
4	Rotary Dryer	Dryer Cyclone	Outlet of Dryer Cyclone
5	Cyclones of Dryer	Dryer Scrubber	Outlet of Dryer Scrubber
6	Outlet from Dryer Scrubber	Tail Gas scrubber	Main Process Plant Stack
	COOLER CYCLONE & SCRUBBER		
7	Rotary Cooler	Cooler Cyclone	Outlet of Cooler Cyclone
8	Outlet of Cooler Cyclone	Cooler Scrubber	Main Process Plant Stack
	DUST CYCLONE SCRUBBER		
9	Dust collection system from various equipment	Dust Cyclone	Outlet of Dust Cyclone
10	Outlet of Dust Cyclone	Dust Scrubber	Main Process Plant Stack

DETAILS OF AIR POLLUTION CONTROL DEVICES

1. Cyclones in NPK/DAP Plant

High efficiency dry cyclone separator & wet scrubbing system shall be installed to maintain the particulate matter emission within the GPCB limit from the proposed plant de-dusting system stack.

Dust Cyclone: Dusts generated from equipment's like Primary Elevator, Screen Drag Feeders, Vibrating Screens, Pulverizers, Fines Conveyor, Secondary Elevator, Product Cooler, Product Elevator, Polishing screen, raw material feeders are sent to dust cyclones for recovery which are fitted with a chain to reduce build-up and plugging in the outlet cone and with access doors for inspection of the equipment. Gases from above equipment's are sucked by centrifugal fan (dust fan) through set of cyclones and discharged it to dust scrubber section having weir box and separator. Scrubbing is carried out in weir box and dust separator by scrubber liquor and undissolved dust is carried to stack.

Dryer Cyclone: Dryer cyclone collects ammonia fumes and dust from Rotary Dryer with the help of Dryer Fan. Due to cyclonic effect and moment of inertia, heavy particles are collected to recycle system and light particles along with fumes are sent to Dryer weir box followed by dryer separator having negative suction where, scrubbing is carried out with scrubber liquor having pH 4.5 – 5.0. Scrubbed liquor is collected in Scrubber Effluent tank. Un-scrubbed fumes and dust are again passed to Tail gas Separator for maximum recovery of ammonia which is a valuable nutrient by spraying liquor having pH of 2 – 2.5. The outlet of tail gas separator is connected to stack.

Cooler Cyclone: Cooler cyclone collected dust from Product Cooler with the help of cooler fan. Cooler fan discharge air to cooler cyclone where separation of heavy particles and light particles are done due to cyclonic effect. Heavy particles are again recycled back to the recycle system and light particles are passed to cooler separator where, scrubbing is carried out with the help of liquor having pH 2 – 2.5. Un-scrubber dust is discharged to stack.

2. Wet Scrubbers

The off gases from dryer and cooler cyclones and then sent for wet scrubbing. There are five scrubbers in the scrubber system. These are fumes scrubber, dryer scrubber, cooler scrubber, dust scrubber, and tail gas scrubbers. The dryer, dust and fumes scrubber are of the venturi cyclone separator type and the cooler scrubber is Cyclonic spray tower.

Dust Scrubbing System: The exit gases from dust cyclones having fine dust particles are getting scrubbed with the scrubber liquor in Venturi scrubber.

Cooler Scrubbing System: Gas coming out from cooler cyclone having fine dust particles is getting scrubbed with the scrubber liquor in cooler scrubber. Sulphuric acid is also added into the scrubbing system in cooler & tail gas scrubber sump for better absorption and recovery of ammonia. Phosphoric acid is added in launder close to fumes sump. Fresh water is added in cooler sump and main scrubber effluent tank.

Latest Modification have been done within the Scrubbing System of the plant to reduce air emissions.

a. **Installation of Deflector Plate in Tail Gas Scrubber and Cooler Scrubber** has been done. This has resulted in almost Zero-carryover from Tail Gas Scrubber outlet and recovery of SPM having nutrient and also making the environment clean.

Deflector Plates of dia 850 mm & 2000 mm have been installed in Tail Gas Scrubber & Cooler scrubber respectively through in-house modification to contain the mist and SPM to stack.

Before Installation: Tail Gas Scrubber is having Chevron Mist Eliminator. The demister pads are used for removal of mist carrying with SPM. However, Mist Eliminator of TG Scrubber started choking with time and SPM escapes to stack. This escape of SPM with mist results in stack carryover which spreads in the surrounding.

After Installation: Due to high momentum of particle striking to deflector plate, the particle and mist drop down and came back to scrubber.

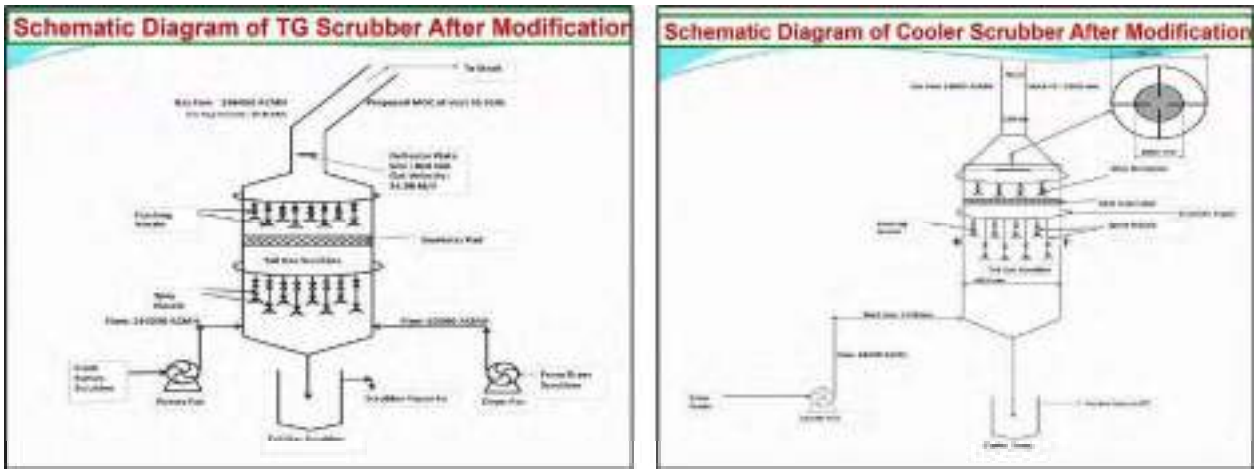


Figure 1: Schematic Diagram of TG Scrubber & Cooler Scrubber after Modification

b. **Online Stack Monitoring System in Process Stacks of NPK/DAP Plant**

IFFCO Kandla has commissioned online Monitoring System for Ammonia & HF in stack of asix streams of NPK/DAP plant in K-I & K-II plant based on Tuneable Diode Laser (TDL) Technology.

3. Mist Eliminator (Demisting Pad)

Demisting Pad has been installed in the common stack at the outlet of TG Scrubber and Cooler Scrubber. Gases from discharge of the tail gas and dust scrubber are vent to open atmosphere through a common stack installed at the cooler separator outlet.

Annexure – XV: Work Zone Monitoring Reports

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FORM NO. 37
(Prescribed under Rule 12-B)
Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.
2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers
3 Date Of Sampling: 22/06/2021 (15.10Hrs)
4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Between Horton Sphers	Ammonia	Gaseous Analyzer	1 No.	PPM	1.6	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit,

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(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 21/05/2021 (13.06 Hrs)

4 Particulars of sampling: as per below table

Sr No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	TWA concentration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Near Granulator A Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.8	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH PEL/ Exposure Limit

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FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 21/06/2021 (13.42 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near Granulator 'B' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.5	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

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FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 21/06/2021 (13.42 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near Granulator 'C' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	1.2	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

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FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 22/06/2021 (09.36 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near Granulator 'D' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.5	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

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FORM NO. 37
(Prescribed under Rule 12-B)
Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 22/06/2021 (10.14 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near Granulator 'E' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.3	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

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FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 22/06/2021 (11.12 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near Granulator 'F' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.5	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 22/06/2021 (11.56Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near NH_3 Storage Tank – A	Ammonia	Gaseous Analyzer	1 No.	PPM	0.4	35*	Electronics Instrument method	3	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 22/06/2021 (12.28Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near NH_3 Storage Tank – B	Ammonia	Gaseous Analyzer	1 No.	PPM	0.2	35*	Electronics Instrument method	3	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1	Name of the Department/Plant.:	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.
2	Raw materials, by-products and finished Products involving in the process:	Phosphoric Acid, Ammonia, NP / NPK Fertilizers
3	Date Of Sampling:	22/06/2021 (13.13Hrs)
4	Particulars of sampling:	as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near NH_3 Storage Tank – C	Ammonia	Gaseous Analyzer	1 No.	PPM	1.9	35*	Electronics instrument method	2	Complied	[signature]	SANDIP PATEL

* As per NIOSH (REL) Exposure Limit,

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FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 21/06/2021 (10.42 Hrs)

4 Particulars of sampling: as per below table

Sr No	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Near PN Tank 'A' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.2	35*	Electronics Instrument method	3	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

SONI GROUP OF TECHNOLOGIES INDRAD

Kandla Amrut Industrial Park, Opp.
Village Indrad, Ta. Kadi, Dist. Mehsana -382715

FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010

2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers

3 Date Of Sampling: 21/06/2021 (11.11 Hrs)

4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near PN Tank 'B' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	0.1	35*	Electronics Instrument method	1	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit,

FORM NO. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1	Name of the Department/Plant	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.
2	Raw materials, by-products and finished Products involving in the process	Phosphoric Acid, Ammonia, NP / NPK Fertilizers
3	Date Of Sampling	21/06/2021 (11.54 Hrs)
4	Particulars of sampling	as per below table

Sr No.	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	TWA concentration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Near PN Tank C Train	Ammonia	Gaseous Analyzer	1 No	PPM	0.1	35*	Electronics Instrument method	2	Complied	[signature]	SANDIP PATEL

* As per NIOSH PEL Exposure Limit

SONI GROUP OF TECHNOLOGIES [stamp]

SONI GROUP
OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

FORM NO. 37
(Prescribed under Rule 12-B)
Register containing particulars of monitoring of working environment required under Section 7-A(a)(e).

1 Name of the Department/Plant.: **M/s. Indian Farmers Fertilizer Co. Ltd.**
Kandla Unit, Kutch, 372010.
2 Raw materials, by-products and finished Products involving in the process: Phosphoric Acid, Ammonia, NP / NPK Fertilizers
3 Date Of Sampling: 21/06/2021 (12.31 Hrs)
4 Particulars of sampling: as per below table

Sr. No.	Location/ Operation Mentioned	Identified conta-minant	Sampling Instrument used	Airborne Contamination		Average	TWA concen-tration (As given in second schedule)	Reference method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letter)
				Number of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Near PN Tank 'D' Train	Ammonia	Gaseous Analyzer	1 No.	PPM	2.2	35*	Electronics Instrument method	2	Complied		SANDIP PATEL

* As per NIOSH (REL) Exposure Limit.

Annexure – XVI: Latest Noise Monitoring Reports

Soni Group of Technologies – Environmental Testing Laboratory

Test Report / Certificate

Noise Level Monitoring

Name and address of customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Report / Certificate No.	N/06/131/21-22	Date of Issue	25/06/2021
Time of Sampling	15:42 to 16:22Hrs 20:23 to 21:41	Sample Identification no.	N/06/131
Sample description	Noise Level		
Sampling By	SGT Team		
Date of Sampling	21/06/2021		
Sampling Method	IS 11702		
Sampling Instrument	Sound Level Meter		

Test Results

Sr. No	Name of Location	DAY TIME MONITORING		Night Time Monitoring	
		dB(A)	Norms dB(A)	dB (A)	Norms dB(B)
1.	Nr. Main Gate	68.4	75	64.7	70
2.	Nr. STP	69.2	75	66.3	70
3.	Nr. Admin Building	59.5	75	51.8	70
4.	Nr. Boiler	70.4	75	68.7	70
5.	Nr. Training Centre	66.9	75	65.1	70
6.	Nr. R & D Lab	62.7	75	58.4	70
7.	Nr. Coal Storage Area	53.5	75	50.6	70

Remarks →

- Test results relates to the sample tested only.
- Test Report shall not be reproduced except in full, without written approval of the Laboratory.

Mr.Sandip Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

Annexure – XVII: Photographs of Rainwater Harvesting Pond

Water Recharging Pond

Capacity: 20000 m^3

Rain water harvesting Pond

Capacity: 3300 m^3

Annexure – XVIII: Details of Eco-development carried out by IFFCO

INDIAN FARMER FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

IFFDC activities under taken by IFFCO

IFFCO promoted a separate Multi-State Cooperative Society named 'Indian Farm Forestry Development Cooperative Limited' (IFFDC) in 1993 with the objective to conserve environment and mitigate climate changes through sustainable natural resource management for enhancing socio- economic status of rural poor, tribal community and women in particular.

So far, 29,421 hectare wasteland has been developed as multipurpose biodiversity forests in Uttar Pradesh, Madhya Pradesh, Rajasthan and Uttarakhand. These forests are catering to needs of Community and sequestrating about 1.41 lakh ton atmospheric carbon annually, helping in mitigating the climate change. These forests are managed by 152 village level Primary Farm Forestry Cooperative Societies (PFFCS) having 19,331 members, out of which, about 38 per cent are landless, 51 per cent are small/marginal farmers. Women constitute 32 percent of total membership.

Presently, IFFDC is implementing 22 projects on farm forestry, integrated watershed development, climate proofing, rural livelihood development, women empowerment, CSR etc. This has helped to increase income of the farmers and rural poor in about 9,554 villages in 8 States. About 15,171 ha additional area brought under irrigation by developing 17,330 ha under Watershed in various States in partnership with NABARD and State Govts. For women empowerment, IFFDC is nurturing 1,825 Self Help Groups (SHGs) having 18,465 members (95 percent women members) through skill and microenterprises development etc.

IFFCO has entrusted the Seed Production Program (SPP) to IFFDC. Accordingly, IFFDC has undertaken the SPP of high yielding and promising varieties of different crops on farmer’s fields with its 5 state-of-art technology Seed Processing Units (SPU) located in the States of Haryana, Uttar Pradesh, Punjab and Rajasthan. During 2019-20, total 3.73 lakhs quintals certified seed of Paddy, Hybrid Paddy, Moong, Soybean, Urad, Sesame, Hybrid Bajra, Hybrid Maize, Sudan Sorghum Grass during Kharif and Wheat, Barley, Gram, Mustard, Cumin, and Berseem during Rabi were made available to the farmers through IFFCO Farmers Service Centers (FSCs), IFFCO-eBazar, IFFDC Kisan Seva Kendra (KSKs), IFFDC Agricultural Forestry Service Centers (AFSCs) and Primary Farm Forestry Cooperative Societies (PFFCS). IFFDC supplies seeds to Agriculture Department under Minikit Scheme of National Mission on Oilseed & Oil-Palm (NMOOP) and National Food Security Mission (NFSM), Government of India. During the year 2019-20, total 385 kg of vegetable seeds of 16 different crops have also been made available to farmers.

Annexure – XIX: Details of Community Welfare

INDIAN FARMER FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

IRDP activities under taken by Kandla Unit

IFFCO's Integrated Rural Development Programme (IRDP) activities consists of various welfare and development programs for rural areas and social organisations. IFFCO undertakes various programs under IRDP at villages to educate farmers and cooperatives to enhance crop productivity. IFFCO has also undertaken various activities towards its social responsibilities for a strong social fabric and improving educational facilities of the children. IFFCO Kandla has undertaken various social activities for Villages, Schools and social institutions.

Details of IRDP activities are given below:

S/N.	Date of sanction / release of fund	Beneficiary	Activities	Approved Amount in Rs.
2020-21				
1	07.10.2020	Customs House, Kanlda	Green Belt Development at Customs House, Kanlda	23,600.00
2	20.09.2020	Shri Balguru School, Gandhidham & Shri Vishveshraya School, Gandhidham	Items of general cleaning and sanitation	61,568.00
3	07.05.2020	Ganeshnagar Maheshwari Samaj	COVID19 Relief Initiatives – Food and Ration supplies	52,200.00
4	11.04.2020	Street dwellers / homeless people / footpath / roadside dwellers - Gandhidham	COVID19 Relief Initiatives – Food and Ration supplies	1,00,500.00
5	11.04.2020	Street dwellers / homeless people / footpath / roadside dwellers - Adipur	COVID19 Relief Initiatives – Food and Ration supplies	99,500.00
6	06.04.2020	Dist. Collector, Kachchh, Gujarat	COVID19 Relief Initiatives – Supply of 3 Nos. of Defibrillators	7,50,000.00
			Sub Total	10,87,368.00
	2019-20			
7	30.03.2020	The Gandhidham Chamber of Commerce	COVID19 Relief Initiatives – Food and Ration supplies reimbursement	2,00,000.00
8	07.03.2020	Shri Bhausaheb Bhawar	Cyclist who is spreading good messages on Swachh Bharat, Gender Equality, Education of Girls etc	10,000.00
9	15.02.2020	Shri Jagjivan Nagar Prathmik Shala, Gandhidham	Ceiling Fans	13,924.00

INDIAN FARMER FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

10	31.08.2019	Utarkash Foundation	Fodder for rehabilitated bovines affected during Summer 2019 drought	1,00,000.00
			Sub Total	3,23,924.00
2018-19				
11	01.01.2019	Sarpanch, Sapeda Village, Anjar	Dust Bin	1,00,000.00
12	01.01.2019	St. Joseph Hospital Trust, Gandhidham	Furniture	2,00,000.00
13	01.01.2019	Shri Navjivan Viklang Sevashray, Bachau	Computers	1,00,000.00
14	16.11.2018	Dy Collector, Anjar	Social cause – Unity Run	67,200.00
15	28.08.2018	Bharat Vikas Parisad	Tree Guards	30,000.00
16	28.08.2018	Shree Haripura (Nirina) Prathmik Shala	Computers for school	1,00,000.00
17	28.08.2018	Shree Anjar Nagar Prathmik Shala No 3	Benches for school students	1,00,000.00
18	24.05.2018	Manav Seva Trust	Uniform, shoes etc for students	88,000.00
19	24.05.2018	Shree Ramakrishna Sharda Sewa Shram	Furniture for training centre	1,00,000.00
20	24.05.2018	Shree Sahyog Saraswati Vidyamandir	Sponsorship of training aids and naming one facility	2,00,000.00
21	24.05.2018	Lions Club of Bhuj Kutch Sight First	Training aids for Children with Cerebral Palsy	1,00,000.00
22	24.05.2018	QASAB, Bhuj	Furniture and training aids, outlet equipments	1,00,000.00
23	24.05.2018	Vishveshraya Primary School	Furniture	1,00,000.00
24	19.05.2018	Govt. of Gujarat's Sujlam Suflam Yojna	Dredging of water bodies around Anjar Area as per letter dated 17.05.2018 of Hon'bl Minister of State , GoG.	2,00,000.00

INDIAN FARMER FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

25	03.05.2018	Mukhya Mantri Kanya Kelavani Nidhi	Welfare of Girl Child	1,00,000.00
			Sub Total	16,85,200.00
	2017-18			
26	15.12.2017	Shree Gowshala Sewa Samiti	Shed for Bovine Animals	2,00,000.00
27	15.12.2017	St Mary's School, Kandla	Computers for School	1,00,000.00
28	11.09.2017	Mathak Village Panchayat	Solid Waste collection boxes under Swachh Bharat Mission	2,00,000.00
29	11.09.2017	Lakhapar Village Panchayat	Concrete Seats and Playing equipment for Common Garder	2,00,000.00
30	29-06-2017	M/s Manav Seva Trust	Uniform for inmates	82,500.00
			Sub Total	7,82,500.00
			Grand Total	38,78,992.00

Annexure – XX: Details of EMC Cell

Detail of EMC Cell

SN	Name	Designation	Telephone No. (office)	Address
1.	Shri S K Singh	Jt. General Manager (Technical)	02836-254816	IFFCO Kandla Unit P.O. Kandla, Kutch – 370210 Gujarat
2.	Shri T Swamy	Dy. General Manager (Process Engineering)	02836-254946	
3.	Shri J H Ravat	Chief Manager (Laboratory)	02836-254517	
4.	Shri Sukrit Srivastava	Dy. Manager (Process Engineering)	02836-254725	

Annexure – XXI: Photographs of Laboratory

PHOTOGRAPHS OF LABORATORY

Annexure – XXII: Copy of earlier submitted compliance report

INDIAN FARMER FERTILISER COOPERATIVE LIMITED
KANDLA UNIT

Status of Half Yearly Compliance Report for last 3 years

Sr. No.	Year	Period Of Compliance	Date of Submission of Half Yearly Compliance
1	2020-2021	Apr-2020-September-2020	21.11.2020
2		Oct-2020-March-2021	17.05.2021
3	2019-2020	Apr-2019-September-2019	22.10.2019
4		Oct-2019-March-2020	02.06.2020
5	2018-2019	Apr-2018-September-2018	24.10.2018
6		Oct-2018-March-2019	26.04.2019

Plant Stacks & Ambient

इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड

INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

(By Registered Post with Ack. Due)

21.11.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakhs MTPA of P_2O_5) at Kandla, Kachchh, Gujarat by M/s IFFCO Ltd. - Environment Clearance, Half Yearly Compliance Report

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. J-11011/192/2007-IA-II (I) dated 16.08.2007.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant, by MOEF, New Delhi, enclosed please find herewith the Half Yearly Compliance Report for the period April-2020 to September-2020 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

21.11.2020

Jt. General Manager (Technical)

cc: The Member Secretary, Gujarat Pollution Control Board (GPCB), Paryavaran Bhavan, Sector 10 A, GANDHINAGAR–382 043, Gujarat.

cc: The Regional Officer, Gujarat Pollution Control Board, 2nd FLOOR, Room no-215/216, Administrative Office Building, Deendayal Port Trust, Gandhidham, Gujarat.

O/c Rajesh
21.11.2020

कांडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

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इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

21.11.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Half Yearly Compliance Report for the period April-20 to September-20 for the Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s IFFCO Ltd

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. F. No. J-11011/202/2009-IA II (I) dated 13.05.2009.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant for manufacture of water soluble fertilizers, enclosed please find herewith the Half Yearly Compliance Report for the period April-20 to September-20 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

21/11/2020

Jt. General Manager (Technical)

Cc: Environment Impact Assessment (IA) Division,
Government of India
Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110 003

Cc: The Member Secretary, Gujarat Pollution Control Board (GPCB),
Paryavaran Bhavan, Sector 10 A, GANDHINAGAR – 382 043,
Gujarat.

o/c Rajesh
21.11.2020

कंडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

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इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

22.10.2019

To,
Shri Dr. A. Mehrotra
Additional Director (S)
Ministry of Environment & Forests,
Regional Office, Western Region,
Kendriya Paryavaran Bhavan,
E-5, Ravishankar Nagar,
Bhopal - 462016
Madhya Pradesh

Sub: Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakhs MTPA of P_2O_5) at Kandla, Kachchh, Gujarat by M/s IFFCO Ltd. - Environment Clearance, Half Yearly Compliance Report.

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. J-11011/192/2007-IA-II (I) dated 16.08.2007.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant, by MOEF, New Delhi, enclosed please find herewith the Half Yearly Compliance Report for the period April-2019 to September-2019 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

Dy. General Manager (Technical)

cc: The Member Secretary, Gujarat Pollution Control Board (GPCB), Paryavaran Bhavan, Sector 10 A, GANDHINAGAR–382 043, Gujarat.

cc: The Regional Officer, Gujarat Pollution Control Board, 2nd FLOOR, Room no-215/216, Administrative Office Building, Deendayal Port Trust, Gandhidham, Gujarat.

कांडला इकाई / Kandla Unit, कांडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

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इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

26th Apr 2019

To,
Dr. A. Mehrotra
Additional Director (S)
Government of India
Regional Office, Western Region,
Kendriya Paryavaran Bhawan, Link Road No-3,
E-5, Ravi Shankar Nagar,
BHOPAL-462 016
MADHYA PRADESH

Sub: Half Yearly Compliance Report for the period October-18 to March-19 for the Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s IFFCO Ltd.

Ref : Ministry of Environment & Forests, New Delhi Environment Clearance letter No. F. No. J-11011/202/2009-IA II (I) dated 13.05.2009.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant for manufacture of water soluble fertilizers, enclosed please find herewith the Half Yearly Compliance Report for the period Oct - 18 to Mar - 19 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

Jt. General Manager (Technical)

cc: **To, Environment Impact Assessment (IA) Division,**
Government of India
Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110 003

To, The Member Secretary, Gujarat Pollution Control Board (GPCB),
Paryavaran Bhavan, Sector 10 A, GANDHINAGAR – 382 043,
Gujarat.

D/c

कंडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

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KANDLA UNIT

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INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

02.06.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakhs MTPA of P_2O_5) at Kandla, Kachchh, Gujarat by M/s IFFCO Ltd. - Environment Clearance, Half Yearly Compliance Report

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. J-11011/192/2007-IA-II (I) dated 16.08.2007.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant, by MOEF, New Delhi, enclosed please find herewith the Half Yearly Compliance Report for the period October-2019 to March-2020 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

03/6/2020

Jt. General Manager (Technical)

cc: The Member Secretary, Gujarat Pollution Control Board (GPCB), Paryavaran Bhavan, Sector 10 A, GANDHINAGAR–382 043, Gujarat.

cc: The Regional Officer, Gujarat Pollution Control Board, 2nd FLOOR, Room no-215/216, Administrative Office Building, Deendayal Port Trust, Gandhidham, Gujarat.

02.06.2020

03.06.2020

कंडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

IFFCO
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KANDLA UNIT

इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

02.06.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Half Yearly Compliance Report for the period October-19 to March-20 for the Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s IFFCO Ltd

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. F. No. J-11011/202/2009-IA II (I) dated 13.05.2009.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant for manufacture of water soluble fertilizers, enclosed please find herewith the Half Yearly Compliance Report for the period October-19 to March-20 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

03/6/2020

Jt. General Manager (Technical)

Cc: Environment Impact Assessment (IA) Division,
Government of India
Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110 003

Cc: The Member Secretary, Gujarat Pollution Control Board (GPCB),
Paryavaran Bhavan, Sector 10 A, GANDHINAGAR – 382 043,
Gujarat.

9c Rcvd
02.06.2020
03.06.2020

कंडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642
Email : iffco_kandla@iffco.in Website : www.iffco.in, www.iffco.coop

Plant Stack & Ambient

इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड

INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

(By Registered Post with Ack. Due)

21.11.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakhs MTPA of P_2O_5) at Kandla, Kachchh, Gujarat by M/s IFFCO Ltd. - Environment Clearance, Half Yearly Compliance Report

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. J-11011/192/2007-IA-II (I) dated 16.08.2007.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant, by MOEF, New Delhi, enclosed please find herewith the Half Yearly Compliance Report for the period April-2020 to September-2020 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

21.11.2020

Jt. General Manager (Technical)

cc: The Member Secretary, Gujarat Pollution Control Board (GPCB), Paryavaran Bhavan, Sector 10 A, GANDHINAGAR–382 043, Gujarat.

cc: The Regional Officer, Gujarat Pollution Control Board, 2nd FLOOR, Room no-215/216, Administrative Office Building, Deendayal Port Trust, Gandhidham, Gujarat.

o/c Rajesh
21.11.2020

कांडला इकाई / Kandla Unit, कांडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

इंडियन फारमर्स फर्टिलाइजर को-आपरेटीव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

21.11.2020

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Half Yearly Compliance Report for the period April-20 to September-20 for the Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s IFFCO Ltd

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. F. No. J-11011/202/2009-IA II (I) dated 13.05.2009.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant for manufacture of water soluble fertilizers, enclosed please find herewith the Half Yearly Compliance Report for the period April-20 to September-20 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

21/11/2020

Jt. General Manager (Technical)

Cc: Environment Impact Assessment (IA) Division,
Government of India
Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110 003

Cc: The Member Secretary, Gujarat Pollution Control Board (GPCB),
Paryavaran Bhavan, Sector 10 A, GANDHINAGAR – 382 043,
Gujarat.

o/c Rajesh
21.11.2020

कंडला इकाई / Kandla Unit, कंडला / Kandla, कच्छ / Kachchh, (गुजरात) (Gujarat) - 370 210.
फोन / Phones : 02836-254000, 270381, 270382, फैक्स / Fax : 02836-270642

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Wholly owned by Cooperatives
KANDLA UNIT

इंडियन फार्मर्स फर्टिलाइजर कोऑपरेटिव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

17.05.2021

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Expansion of Fertilizer Plant (5.19 Lakhs MTPA to 10.0 Lakhs MTPA of P_2O_5) at Kandla, Kachchh, Gujarat by M/s IFFCO Ltd. - Environment Clearance, Half Yearly Compliance Report

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. J-11011/192/2007-IA-II (I) dated 16.08.2007.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant, by MOEF, New Delhi, enclosed please find herewith the Half Yearly Compliance Report for the period October-2020 to March-2021 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

17/5/21

Jt. General Manager (Technical)

% Rajesh
17.05.21

cc: The Member Secretary, Gujarat Pollution Control Board (GPCB), Paryavaran Bhavan, Sector 10 A, GANDHINAGAR–382 043, Gujarat.

cc: The Regional Officer, Gujarat Pollution Control Board, 2nd FLOOR, Room no-215/216, Administrative Office Building, Deendayal Port Trust, Gandhidham, Gujarat.

कांडला इकाई/ Kandla Unit, कांडला/ Kandla, कच्छ/ Kachchh, (गुजरात)/ (Gujarat) - 370210
फोन/ Phones : 02836-254000, 270381, 270382, फैक्स/ Fax : 02836-270642
Email : iffco_kandla@iffco.in • Website : www.iffco.in

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

इंडियन फार्मर्स फर्टिलाइजर कोऑपरेटिव लिमिटेड
INDIAN FARMERS FERTILISER CO-OPERATIVE LIMITED

(By Registered Post with Ack. Due)

17.05.2021

To
Deputy Director General of Forest (Central)
Ministry of Environment, Forest & Climate Change
Regional Office, Western Region
Kendriya Paryavaran Bhavan
E-5, Ravishankar Nagar
Bhopal - 462016
Madhya Pradesh

Sub: Half Yearly Compliance Report for the period October-20 to March-21 for the Expansion of Fertilizer Plant by manufacturing Water Soluble Fertilizers at Kandla in Kutch District, Gujarat by M/s IFFCO Ltd

Ref: Ministry of Environment & Forests, New Delhi Environment Clearance letter No. F. No. J-11011/202/2009-IA II (I) dated 13.05.2009.

Dear Sir,

With reference to the above referred Environmental Clearance issued to Kandla plant for manufacture of water soluble fertilizers, enclosed please find herewith the Half Yearly Compliance Report for the period October-20 to March-21 in respect of the stipulated Environmental Clearance terms and conditions in hard copy. The Half Yearly Compliance Report is submitted under Clause 10 of the EIA Notification NO. SO 1533 (E) of 14th September, 2006.

With Kind Regards,

17.5.21

Jt. General Manager (Technical)

c/c Rajesh 17.05.21
17.05.2021

Cc: Environment Impact Assessment (IA) Division,
Government of India
Ministry of Environment & Forests,
Paryavaran Bhawan, CGO Complex, Lodhi Road,
New Delhi – 110 003

Cc: The Member Secretary, *Gujarat Pollution Control Board (GPCB)*,
Paryavaran Bhavan, Sector 10 A, GANDHINAGAR – 382 043,
Gujarat.

Annexure – XXIII: Details of Newspaper

IFFCO

Kandla Unit

KUTCH MITRA

INDIAN FARMERS FERTILISER COOPERATIVE LIMITED

KANDLA UNIT

(An ISO 14001:2004 Certified Organisation)

Kandla, Kachchh (Gujarat) 370 210, India

It is hereby informed that the Ministry of Environment & Forest (I.A Division), Government of India, New Delhi, accords Environmental Clearance vide letter No. F.No. J-11011/202/2009-IA II (I) dated 13/05/2009 to our "Water Soluble fertilizer (urea-phosphate (17:44)) Manufacturing Project at Existing Kandla Plant" under the provision of EIA notification 2006. Copies of Clearance letter are available at the places, namely GPCB, Gandhinagar and on website http:/www.envfor.nic.in

Sd/-

Dated:20/05/2009 Factory Manager

Ref.: KM. Date: 24-05-09

KUTCH UDAY - 25/05/2009

IFFCO

Kandla Unit

INDIAN FARMERS FERTILISER COOPERATIVE LIMITED

KANDLA UNIT

(An ISO 14001:2004 Certified Organisation)
Kandla, Kachchh (Gujarat) 370 210, India)

It is hereby informed that the Ministry of Environment & Forest (I.A Division), Government of India, New Delhi, accords Environmental Clearance vide letter No. F.No. J-11011/202/2009-IA II (I) dated 13/05/2009 to our "Water Soluble fertilizer (urea-phosphate (17:44)) Manufacturing Project at Existing Kandla Plant" under the provision of EIA notification 2006. Copies of Clearance letter are available at the places, namely GPCB, Gandhinagar and on website http:/www.envfor.nic.in

Sd/-
Factory Manager

Dated : 20/05/2009

For information please.

6

Annexure – XXIV: Other Test Reports

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/113/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Drinking Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/113
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
1.	pH @ 25°C	mg/L	IS 3025 (Part 11): 1983 (RA 2017)	6.90	6.5 – 8.5	No Relaxation
2.	Temperature	mg/L	2550 B APHA 23rd Edition 2017	34	---	---
3.	Turbidity	NTU	2130 B APHA 23rd Edition 2017	1.2	1	5
4.	Total Dissolved Solids	mg/L	2540 C APHA 23rd Edition 2017	167	500	2000
5.	Total Suspended Solids	mg/L	2540 D APHA 23rd Edition 2017	B.D.L (DL=10)	--	--
6.	Chloride as Cl	mg/L	IS 3025 (Part 32): 1988 (RA 2019)	40.4	250	1000
7.	Sulphate as SO_4^{-2}	mg/L	4500 SO_4^{-2} E APHA 23rd Edition 2017	5.64	200	400
8.	Fluoride as F	mg/L	4500 F- D APHA 23rd Edition 2017	0.77	1.0	1.5
9.	Total Alkalinity as $CaCO_3$	mg/L	2320 B APHA 23rd Edition 2017	40	200	600
10.	Total Hardness as $CaCO_3$	mg/L	2340 C APHA 23rd Edition 2017	56	200	600
11.	Calcium as $CaCO_3$	mg/L	3500 Ca B APHA 23rd Edition 2017	30	75	200

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment/ Waste Water
Report No.	W/06/113/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Drinking Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Ed.
Location of test performed	At Laboratory	Sample ID	W/06/113
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	F/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
12.	Magnesium as Mg	mg/L	3500 Mg B APHA 23rd Edition 2017	26	30	100
13.	Iron as Fe	mg/L	3500 Fe B APHA 23rd Edition 2017	B.D.L	0.3	No Relaxation
14.	Sodium as Na	mg/L	3500 Na B APHA 23rd Edition 2017	56	---	---
15.	Potassium as K	mg/L	3500 K B APHA 23rd Edition 2017	6	---	---
16.	Phenol	mg/L	5530 D APHA 23rd Edition 2017	B.D.L (DL=0.01)	0.001	0.002

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/113-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Drinking Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/113-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
1.	Electrical Conductivity	ms/cm	APHA(23rd Edition 2017) 2510 B	0.28	---	---
2.	Total Chromium	mg/L	IS 3025 (Part 52) : 2003 (RA 2019)	<0.05	0.05	No Relaxation
3.	Copper (as Cu)	mg/L	IS 3025 Part 42:1992 (RA 2019)	< 0.2	0.05	1.5
4.	Nickel (as Ni)	mg/L	IS 3025 Part 54:2003 (RA 2019)	N.D.	0.02	No Relaxation
5.	Zinc (as Zn)	mg/L	AAS-APHA(23rd Edition 2012)3111 B	N.D.	05	15
6.	Nitrate (as NO_3-N)	mg/L	IS 3025 Part 34:2009 (RA 2019)	3.12	45	No Relaxation
7.	Cadmium as Cd	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	0.003	No Relaxation
8.	Lead as Pb	mg/L	AAS-APHA(23rdEdition 2017) 3111 B	N.D.	0.01	No Relaxation
9.	Mercury as Hg	mg/L	IS 3025 (Part 48) :1994 RA 2019	N.D.	0.001	No Relaxation

K R Patel

Mrs. Keya Patel
Chemist
Tested By

SONI GROUP OF TECHNOLOGIES INDRAD

Mr. Chirag Prajapati
Technical Manager
Reviewed and Approved By

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/113-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Drinking Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/113-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
10.	Total Arsenic	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	0.01	0.05
11.	Manganese as Mn	mg/L	IS 3025 Part 59:2006 (RA 2017)	<0.01	0.1	0.3
12.	Total Coliform	CFU/ 100mL	IS 5887 Part-1:1976 (RA 2018)	Absent	Shall not be detectable in any100 mL sample	

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel		Mr. Chirag Prajapati
Chemist		Technical Manager
Tested By		Reviewed and Approved By

End of Test Report

SONI GROUP

Soni Group of Technologies – Environmental Testing Laboratory

Test Report/Certificate

Chemical Analysis Of Soil

Customer's Name and Address	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010		
Report/Certificate No	S/06/117/20-21	Date of Issue	30/06/2021
Sample Description	Garden Soil	Quantity/Nos. of Sample	1 kg / 1 Nos
Date of Sampling	23/06/2021	Sampling Procedure	Grab
Sampling By	SGT Team	Sample ID	S/06/117
Sample Receipt Date	23/06/2021	Test Parameters & Methods	As per below table
Packing/Seal	Sealed	Purpose	QC
Test Start Date	24/06/2021	Test Completion date	29/06/2021

Test Results

Sr. No.	Parameters	Test Results	Unit	Test Method
1.	pH (1:2.5 Suspension)	6.58	–	IS : 2720 (Part-29):1987 (RA 2016)
2.	Conductivity(1:2 Suspension)	0.56	ms/cm	IS : 14767:2000 (RA 2016)
3.	Chloride	158	mg/kg	Soil manual of India (Department of Agriculture & Cooperation ministry of Agriculture Government of India January 2011.
4.	Fluoride	0.002	mg/kg	IS 3025 (Part-60) : 2008 (RA 2019)
5.	Organic Matter	56.6	%	IS : 2720 (Part-22):1972 (RA 2015)
6.	Organic Carbon	23.4	%	IS : 2720 (Part-22):1972 (RA 2015)
7.	Zinc	108	mg/kg	USEPA 3050 B 1996
8.	Iron	6.18	%	USEPA 3050 B 1996
9.	Copper	98	mg/kg	USEPA 3050 B 1996
10.	Manganese	62.4	mg/kg	USEPA 3050 B 1996
11.	Available Nutrients	216	mg/kg	P.K. Gupta
12.	Nitrogen	426	mg/kg	P.K. Gupta
13.	Phosphorus	318	mg/kg	P.K. Gupta
14.	Potassium	117	mg/kg	IS 3025 (Part-45) : 1993 (RA 2019)

K.R.Patel	
Chemist	**Authorize Signature**
Tested By	**Reviewed and Approved By**

125, Kamla Amrut Industrial Park, Opp. Torrent Pharmaceuticals, Ahmedabad-Mehsana highway, Village: Indrad, Ta. : Kadi, Dist. : Mehsana -382715, Gujarat, Mo. : +91-92651 24527 sgt.env@gmail.com

Soni Group of Technologies – Environmental Testing Laboratory

Test Report/Certificate

Chemical Analysis Of Soil

Customer's Name and Address	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010		
Report/Certificate No.	S/06/117/20-21	Date of Issue	30/06/2021
Sample Description	Garden Soil	Quantity/Nos. of Sample	1 kg / 1 Nos.
Date of Sampling	23/06/2021	Sampling Procedure	Grab
Sampling By	SGT Team	Sample ID	S/06/117
Sample Receipt Date	23/06/2021	Test Parameters & Methods	As per below table
Packing/Seal	Sealed	Purpose	QC
Test Start Date	24/06/2021	Test Completion date	29/06/2021

Test Results

Sr. No.	Parameters	Test Results	Unit	Test Method
15.	Cation Exchange Capacity	58.74	meq/ 100gm	IS : 2720 (Part-24):1976 (RA 2016)
20.	Porosity	1.06	g/cm^3	P.K.Gupta
21.	Bulk density	1.12	g/cm^3	IS : 2720 (Part-29):1975 (RA 2015)
22.	Water Holding Capacity	12.6	%	Soil manual of India (Department of Agriculture & Cooperation ministry of Agriculture Government of India January 2011.
23.	Permeability	1.83 * 10^{-3}	mD	IS 2720 (Part 17) : 1986 (RA : 2016)
24.	Particle size distribution			P.K.Gupta
24.a	Texture (Gravel)	10.2	%	
24.b	Texture (Clay)	43.6	%	
24.c	Texture (Sand)	32.8	%	
24.d	Texture (Silt)	13.4	%	

Remarks

- Test results relates to the sample tested only.
- Test Report shall not be reproduced except in full, without written approval of the Laboratory.

Chemist	**Authorize Signature**
Tested By	**Reviewed and Approved By**

SONI GROUP
OF TECHNOLOGIES

TC-8508

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/07
Issue No 03

Chemical Analysis Of Water / Waste water

Name and Address of Customer	M/s. Indian Farmers Fertilizer Co. Ltd Kandla Unit, Kutch, 372010		
Discipline	Chemical	Group	Pollution and Environment Water
Report No.	W/06/112/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Potable Water (GWSSB)
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi
Location of test performed	At Laboratory	Sample ID	W/06/112
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500 Acceptable limit	Limit as IS 10500 Permissible Limit
1.	pH @ 25°C	mg/L	IS 3025 (Part 11): 1983 (RA 2017)	7.87	6.5 – 8.5	No Relaxation
2.	Temperature	mg/L	2550 B APHA 23rd Edition 2017	32	—	—
3.	Turbidity	NTU	2130 B APHA 23rd Edition 2017	6.12	1	5
4.	Total Dissolved Solids	mg/L	2540 C APHA 23rd Edition 2017	632	500	2000
5.	Total Suspended Solids	mg/L	2540 D APHA 23rd Edition 2017	2.68	–	–
6.	Chloride as Cl	mg/L	IS 3025 (Part 32): 1988 (RA 2019)	260	250	1000
7.	Sulphate as SO_4^{2-}	mg/L	4500 SO_4^{-2} E APHA 23rd Edition 2017	107	200	400
8.	Fluoride as F	mg/L	4500 F- D APHA 23rd Edition 2017	1.22	1.0	1.5
9.	Total Alkalinity as $CaCO_3$	mg/L	2320 B APHA 23rd Edition 2017	120	200	600
10.	Total Hardness as $CaCO_3$	mg/L	2340 C APHA 23rd Edition 2017	204	200	600
11.	Calcium as $CaCO_3$	mg/L	3500 Ca B APHA 23rd Edition 2017	43.3	75	200

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/07
Issue No.: 03

Chemical Analysis Of Water / Waste water

Name and Address of Customer	M/s. Indian Farmers Fertilizer Co. Ltd Kandla Unit, Kutch, 372010		
Discipline	Chemical	Group	Pollution and Environment /Waste Water
Report No.	W/06/112/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Potable Water (GWSSB)
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/112
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
12.	Magnesium as Mg	mg/L	3500 Mg B APHA 23rd Edition 2017	23.3	30	100
13.	Iron as Fe	mg/L	3500 Fe B APHA 23rd Edition 2017	5.0	0.3	No Relaxation
14.	Sodium as Na	mg/L	3500 Na B APHA 23rd Edition 2017	178	—	—
15.	Potassium as K	mg/L	3500 K B APHA 23rd Edition 2017	46	—	—
16.	Phenol	mg/L	5530 D APHA 23rd Edition 2017	B.D.L. (DL=0.01)	0.001	0.002

Remarks →

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
- Sample will be disposed after 15 days from the date of issue of the report unless agreed with the customer.

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

SONI GROUP OF TECHNOLOGIES INDRAD

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	M/s. Indian Farmers Fertilizer Co. Ltd. Kandla Unit, Kutch. 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/112-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Potable Water (GWSSB)
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/112-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
1.	Electrical Conductivity	ms/cm	APHA(23rd Edition 2017) 2510 B	1.32	---	---
2.	Total Chromium	mg/L	IS 3025 (Part 52) : 2003 (RA 2019)	<0.05	0.05	No Relaxation
3.	Copper (as Cu)	mg/L	IS 3025 Part 42:1992 (RA 2019)	< 0.2	0.05	1.5
4.	Nickel (as Ni)	mg/L	IS 3025 Part 54:2003 (RA 2019)	<0.05	0.02	No Relaxation
5.	Zinc (as Zn)	mg/L	AAS-APHA(23rd Edition 2012)3111 B	N.D.	05	15
6.	Nitrate (as NO_3-N)	mg/L	IS 3025 Part 34:2009 (RA 2019)	6.78	45	No Relaxation
7.	Cadmium as Cd	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	0.003	No Relaxation
8.	Lead as Pb	mg/L	AAS-APHA(23rdEdition 2017) 3111 B	N.D.	0.01	No Relaxation
9.	Mercury as Hg	mg/L	IS 3025 (Part 48) :1994 RA 2019	N.D.	0.001	No Relaxation

Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

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Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit. Kutch. 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/112-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Potable Water (GWSSB)
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/112-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit as IS 10500	
					Acceptable limit	Permissible Limit
10.	Total Arsenic	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	0.01	0.05
11.	Manganese as Mn	mg/L	IS 3025 Part 59 2006 (RA 2017)	<0.01	0.1	0.3
12.	Total Coliform	CFU/ 100mL	IS 5887 Part-1:1976 (RA 2018)	Absent	Shall not be detectable in any 100 mL sample	

Remarks →

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Mrs. Keya Patel	**Mr. Love Patadiya**
Chemist	**Quality Manager**
Tested By	**Reviewed and Approved By**

---------- **End of Test Report** ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment/ Waste Water
Report No.	W/06/111/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Sea Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/111
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit
12.	Magnesium as Mg	mg/L	3500 Mg B APHA 23rd Edition 2017	2400	Not Specified
13.	Iron as Fe	mg/L	3500 Fe B APHA 23rd Edition 2017	3.3	Not Specified
14.	Sodium as Na	mg/L	3500 Na B APHA 23rd Edition 2017	9600	Not Specified
15.	Potassium as K	mg/L	3500 K B APHA 23rd Edition 2017	360	Not Specified
16.	Phenol	mg/L	5530 D APHA 23rd Edition 2017	0.06	Not Specified

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Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/111/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Sea Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Ed.
Location of test performed	At Laboratory	Sample ID	W/06/111
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	33 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit
1.	pH @ 25°C	mg/L	IS 3025 (Part 11): 1983 (RA 2017)	8.68	Not Specified
2.	Temperature	mg/L	2550 B APHA 23rd Edition 2017	35	Not Specified
3.	Turbidity	NTU	2130 B APHA 23rd Edition 2017	12.8	Not Specified
4.	Total Dissolved Solids	mg/L	2540 C APHA 23rd Edition 2017	28320	Not Specified
5.	Total Suspended Solids	mg/L	2540 D APHA 23rd Edition 2017	B.D.L.(DL=10)	Not Specified
6.	Chloride as Cl	mg/L	IS 3025 (Part 32): 1988 (RA 2019)	14487	Not Specified
7.	Sulphate as SO_4^{2-}	mg/L	4500 SO_4^{-2} E APHA 23rd Edition 2017	2581	Not Specified
8.	Fluoride as F	mg/L	4500 F- D APHA 23rd Edition 2017	1.22	Not Specified
9.	Total Alkalinity as $CaCO_3$	mg/L	2320 B APHA 23rd Edition 2017	234	Not Specified
10.	Total Hardness as $CaCO_3$	mg/L	2340 C APHA 23rd Edition 2017	5200	Not Specified
11.	Calcium as $CaCO_3$	mg/L	3500 Ca B APHA 23rd Edition 2017	2800	Not Specified

K.R.Patel		
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/111-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Sea Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/111-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	34 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit
1.	Electrical Conductivity	ms/cm	APHA(23rd Edition 2017) 2510 B	37	Not Specified
2.	Total Chromium	mg/L	IS 3025 (Part 52) : 2003 (RA 2019)	<0.05	Not Specified
3.	Copper (as Cu)	mg/L	IS 3025 Part 42:1992 (RA 2019)	< 0.2	Not Specified
4.	Nickel (as Ni)	mg/L	IS 3025 Part 54:2003 (RA 2019)	<0.05	Not Specified
5.	Zinc (as Zn)	mg/L	AAS-APHA(23rd Edition 2012)3111 B	N.D.	Not Specified
6.	Nitrate (as NO_3-N)	mg/L	IS 3025 Part 34:2009 (RA 2019)	3.12	Not Specified
7.	Cadmium as Cd	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	Not Specified
8.	Lead as Pb	mg/L	AAS-APHA(23rdEdition 2017) 3111 B	N.D.	Not Specified
9.	Mercury as Hg	mg/L	IS 3025 (Part 48) :1994 RA 2019	N.D.	Not Specified

K.R.Patel		
Mrs. Keya Patel		**Mr. Chirag Prajapati**
Chemist		**Technical Manager**
Tested By		**Reviewed and Approved By**

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

Chemical Analysis Of Water / Waste water

Name and Address of Customer	M/s. Indian Farmers Fertilizer Co. Ltd Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Water
Report No.	W/06/111-A/21-22	Date of Issue	24/06/2021
Sample Description	Water	Sampling Location	Sea Water
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	W/06/111-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	34 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit
10.	Total Arsenic	mg/L	AAS-APHA(23rd Edition 2017) 3111 B	N.D.	Not Specified
11.	Manganese as Mn	mg/L	IS 3025 Part 59:2006 (RA 2017)	<0.01	Not Specified

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K.R.Patel	
Mrs. Keya Patel	Mr. Chirag Prajapati
Chemist	Technical Manager
Tested By	Reviewed and Approved By

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End of Test Report

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Test Report

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Issue No.: 03
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Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010		
Discipline	Chemical	Group	Pollution and Environment /Waste Water
Report No.	WW/06/109/21-22	Date of Issue	24/06/2021
Sample Description	Waste Water	Sampling Location	STP inlet
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	WW/06/109
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	35 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit
1.	pH @ 25°C	mg/L	IS 3025 (Part 11): 1983 (RA 2017)	6.27	Not Specified
2.	Total Suspended Solids	mg/L	2540 D APHA 23rd Edition 2017	139	Not Specified
3.	Biochemical Oxygen Demand (3 days at 27°C)	mg/L	IS 3025 (Part 44): 1993 (RA 2019)	265	Not Specified

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K.R.Patel		
Mrs. Keya Patel		**Mr. Love Patadiya**
Chemist		**Quality Manager**
Tested By		**Reviewed and Approved By**

End of Test Report

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/07
Issue No.: 03
Page 1 of 1

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Waste Water
Report No.	WW/06/110/21-22	Date of Issue	24/06/2021
Sample Description	Waste Water	Sampling Location	STP Outlet
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	WW/06/110
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	35 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit (GPCB)
1.	pH @ 25°C	mg/L	IS 3025 (Part 11): 1983 (RA 2017)	7.19	6.5 – 8.5
2.	Total Suspended Solids	mg/L	2540 D APHA 23rd Edition 2017	22.6	30
3.	Biochemical Oxygen Demand (3 days at 27°C)	mg/L	IS 3025 (Part 44): 1993 (RA 2019)	15.2	20

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Mrs. Keya Patel	Mr. Love Patadiya
Chemist	Quality Manager
Tested By	Reviewed and Approved By

---------- End of Test Report ----------

Soni Group of Technologies – Environmental Testing Laboratory

Test Report

F/OPN/07
Issue No.: 03
Page 1 of 1

Chemical Analysis Of Water / Waste water

Name and Address of Customer	**M/s. Indian Farmers Fertilizer Co. Ltd.** Kandla Unit, Kutch, 372010.		
Discipline	Chemical	Group	Pollution and Environment /Waste Water
Report No.	WW/06/110-A/21-22	Date of Issue	24/06/2021
Sample Description	Waste Water	Sampling Location	STP Outlet
Date of Sampling	21/06/2021	Quantity / Nos. of Samples	1.0 L / 2 No.
Type of sampling	Grab	Sampling By	SGT Team
Sample Receipt Date	22/06/2021	Sampling Procedure	IS 3025 & APHA 23rd Edi.
Location of test performed	At Laboratory	Sample ID	WW/06/110-A
Environmental Condition during testing	25 ± 2 °C	Environmental Condition during sampling	35 °C
Condition of sample during receipt	Satisfactory	Sampling plan	E/SYS/09
Test Start Date	22/06/2021	Test Completion date	24/06/2021

Test Results

Sr. No.	Parameters	Unit	Test Method	Results	Limit (GPCB)
1.	Residual Free Chlorine	mg/L	IS 3025 (Part 26):1986 RA 2019	0.6	> 0.5

Remarks →

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K.R.Patel	SONI GROUP OF TECHNOLOGIES INDRAD	
Mrs. Keya Patel		**Mr. Chirag Prajapati**
Chemist		**Technical Manager**
Tested By		**Reviewed and Approved By**

End of Test Report