IFFCO
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KANDLA UNIT

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

**(By Registered Post with Ack. Due)**

29.01.2022

**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-21 to September-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 April-21 to September-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,

S Singh. 29.1.22

**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
29.01.2022

A. Swami

**INDIAN FARMERS FERTILISER COOPERATIVE LIMITED**
**KANDLA UNIT**

**Half yearly compliance report**
**Period April-2021 to September-2021**

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

**Ref: Environment Clearance F. No. J-11011/202/2009-IA II (I), dtd 13/05/2009 from Ministry of Environment and Forests (I. A. Division).**

**Part A - SPECIFIC CONDITIONS:**

| Sr. 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.<br><br>**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.<br><br>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.<br>Dusts generated from equipment 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 |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| | | cone and with access doors for inspection of the equipment. Gases from above equipment 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 **Annexure 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.<br>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 **Annexure 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:<br>Location-I: Ammonia Atmospheric tank,<br>Location-II: R&D Laboratory and<br>Location-III: Training Centre.<br><br>All locations have been selected in consultation with GPCB. The latest Test report for ambient air Quality is attached as **Annexure VI.**<br>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 **Annexure VII.**<br>• Continuous ambient air quality monitoring stations are provided in the plant. Photographs of Continuous Ambient air quality monitoring stations is attached as **Annexure VIII.**<br>• 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.<br>• Display board for SPM, SOx & NOx has been provided outside the factory premises at appropriate place. Photographs of Display board is attached as **Annexure IX.** |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| 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 m2 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.<br><br>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.**<br>Details are as follows:<br><br>Plant -15 Acres - More than 3000 Trees<br>Township - 26500 Trees<br>Gandhidham Town – 5 Acres – 5000 Trees<br><br>Photographs showing green area in plant area and Township is attached as **Annexure X.**<br><br>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 **Annexure 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.<br><br>The unit is having full-fledged Occupational Health Centre in the Factory and IFFCO-Kandla is also ISO 45001:2018 certified company. |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| ix) | The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. | **<u>Fire Protection Measures Adopted in Plant:</u>**<br>• Full Fledged Fire & Safety department with professionally qualified, experienced & skilled staff.<br>• Fire hydrant system network of around 11000 meter with 8.0 kg/cm2 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.<br>• There are four numbers of Fire Pumps each of capacity of 273 m3/hr and Jockey Pump of 15 m3/hr capacity and 291 Nos. of Fire Hydrant and 15 Nos. of water monitors provided in fire hydrant network all over the plant.<br>• DCP Fire Extinguishers & CO2 Fire Extinguishers provided in the plant area for immediate fire-fighting.<br>• Smoke Detector system also provided in high hazard area of the plant.<br>• Ammonia Sensors provided in Ammonia Storage & six Production streams.<br>• 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 available at Fire Control Room.<br>• PPE for labours |
| 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 complied during the construction activity. The temporary housing structures have been removed after completion of construction activities. |

**Part B - GENERAL CONDITIONS:**

| Sr. 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.<br>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 **Annexure 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 waste water 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.<br>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. |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| (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.<br>Location-I: Ammonia Atmospheric tank,<br>Location-II: R&D Laboratory and<br>Location-III: Training Centre.<br><br>All locations have been selected in consultation with GPCB. The latest Test report for ambient air Quality is attached as **Annexure VI.**<br>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.<br>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 **Annexure XII.** |
| (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.<br><br>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.<br><br>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, Annexures 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 **Annexure XIII.** |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| (xi) | The company shall develop rain water 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.<br><br>However, two rainwater harvesting ponds of 20,000 m3 & 3300 m3 capacity have been provided at IFFCO township in Gandhidham. Photographs of Rainwater harvesting pond is attached as **Annexure XIV.** |
| (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.<br><br>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.<br><br>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. |
| (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.<br>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.<br><br>Environment Management Cell is having four officials with other supporting members to operate and ensure EMP in the plant.<br><br>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.<br><br>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. |

| Sr. No. | Environmental Conditions /Safeguards | Compliances |
|---|---|---|
| (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.<br><br>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.<br><br>Six monthly compliance report is being regularly submitted to the MoEF&CC/SPCB/CPCB.<br><br>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.<br><br>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 **Annexure XV.** |
| (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. The project has been commissioned in the year 2011. |

# List of Annexures

1. Annexure – I: Environmental Clearance Letter
2. Annexure – II: Latest CTO
3. Annexure – III: Exemption letter for Zinc Sulphate
4. Annexure – IV: Photographs of Dust Extraction System
5. Annexure – V: Latest Test Reports of Stack/Vent
6. Annexure – VI: Latest Test Report of Ambient Air Quality
7. Annexure – VII: Photographs showing CPCB server data transfer
8. Annexure – VIII: Photographs of Continuous Ambient Air Quality Monitoring Station
9. Annexure – IX: Display Board provided outside the factory premises
10. Annexure – X: Photographs of Green Area provided in plant and Township
11. Annexure – XI: Latest CREP Report submitted to GPCB
12. Annexure – XII Work Zone Monitoring Reports
13. Annexure – XIII: Latest Noise Monitoring Reports
14. Annexure – XIV: Photographs of Rainwater Harvesting Pond
15. Annexure – XV: News paper clipping for advertisement given.
16. Other Documents

Annexure-I

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.

Annexure-I



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.

Annexure-I



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).

Annexure-I



(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.

Annexure-I



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

GPCB

# GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN
Sector-10-A Gandhinagar 382 010
Phone : (079) 23222425
(079) 23232152
Fax . (079) 23232156
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**

Annexure-II

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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. |

Annexure-II

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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) | | | $SO_2$<br>$NO_x$ | 100 ppm<br>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<br>$SO_2$<br>$NO_x$ | 150 mg/NM$^3$<br>100 ppm<br>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<br>$NH_3$<br>F | 150 mg/NM$^3$<br>175 mg/NM$^3$<br>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 .<br>24 Hours | 50<br>80 |
| 2. | Nitrogen Dioxide ($NO_2$) | Annual<br>24 Hours | 40<br>80 |
| 3. | Particulate Matter (Size less than 10 µm) **OR** $PM_{10}$ | Annual<br>24 Hours | 60<br>100 |
| 4. | Particulate Matter (Size less than 2.5 µm) **OR** PM 2.5 | Annual<br>24 Hours | 40<br>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.

Annexure-II

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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

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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

Annexure-III

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कांडला इकाई

(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

Annexure-III

**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.

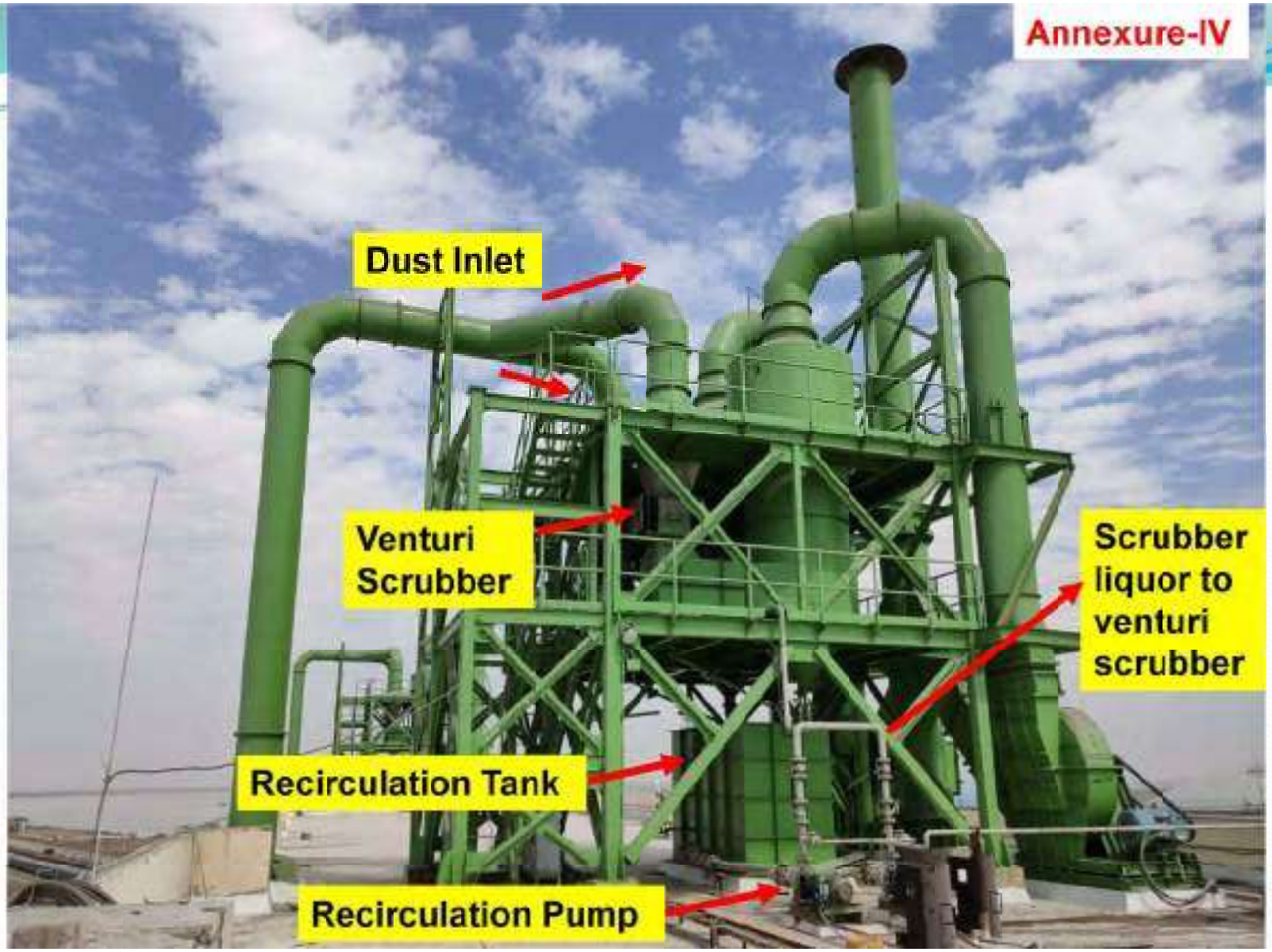
Ambient air data for the period 2005-10 indicates that SPM (161-299 micro gm/$m^3$), $SO_2$ (7-12 micro gm/$m^3$), NOx (13-17micro gm/$m^3$), $NH_3$ (202-322 micro gm/$m^3$) and RSPM (100-120 micro gm/$m^3$) and are within GPCB limits. Scrubber will be provided to scrub fumes from the reaction vessel. 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
Dust Inlet
Venturi Scrubber
Scrubber liquor to venturi scrubber
Recirculation Tank
Recirculation Pump

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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/10/075/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Waste Water | Sampling Location | STP Inlet |
| Date of Sampling | 29/10/2021 | Quantity / Nos. of Samples | 1.0 L / 2 No. |
| Type of sampling | Grab | Sampling By | SGT Team |
| Sample Receipt Date | 30/10/2021 | Sampling Procedure | IS 3025 & APHA 23rd Edi. |
| Location of test performed | At Laboratory | Sample ID | WW/10/075 |
| Environmental Condition during testing | 25 ± 2 °C | Environmental Condition during sampling | 32 °C |
| Condition of sample during receipt | Satisfactory | Sampling plan | E/SYS/09 |
| Test Start Date | 01/11/2021 | Test Completion date | 05/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit |
|---|---|---|---|---|---|
| 1. | pH @ 25°C | mg/L | IS 3025 (Part 11): 1983 (RA 2017) | 6.41 | Not Specified |
| 2. | Total Suspended Solids | mg/L | 2540 D APHA 23rd Edition 2017 | 325 | Not Specified |
| 3. | Biochemical Oxygen Demand (3 days at 27°C) | mg/L | IS 3025 (Part 44): 1993 (RA 2019) | 231 | Not Specified |

**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 | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## Soni Group of Technologies – Environmental Testing Laboratory

# Test Report

F/OPN/07
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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/10/076/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Waste Water | Sampling Location | STP Outlet |
| Date of Sampling | 29/10/2021 | Quantity / Nos. of Samples | 1.0 L / 2 No. |
| Type of sampling | Grab | Sampling By | SGT Team |
| Sample Receipt Date | 30/10/2021 | Sampling Procedure | IS 3025 & APHA 23rd Edi. |
| Location of test performed | At Laboratory | Sample ID | WW/10/076 |
| Environmental Condition during testing | 25 ± 2 °C | Environmental Condition during sampling | 32 °C |
| Condition of sample during receipt | Satisfactory | Sampling plan | E/SYS/09 |
| Test Start Date | 01/11/2021 | Test Completion date | 05/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit (GPCB) |
|---|---|---|---|---|---|
| 1. | pH @ 25°C | mg/L | IS 3025 (Part 11): 1983 (RA 2017) | 7.08 | 6.5 – 8.5 |
| 2. | Total Suspended Solids | mg/L | 2540 D APHA 23rd Edition 2017 | 14.4 | 30 |
| 3. | Biochemical Oxygen Demand (3 days at 27°C) | mg/L | IS 3025 (Part 44): 1993 (RA 2019) | 17.1 | 20 |

**Remarks →**

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

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

Annexure-V

SONI GROUP OF TECHNOLOGIES

सहकर्यम परिष्करणम् - Lets 3R together

## 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/10/076-A/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Waste Water | Sampling Location | STP Outlet |
| Date of Sampling | 29/10/2021 | Quantity / Nos. of Samples | 1.0 L / 2 No. |
| Type of sampling | Grab | Sampling By | SGT Team |
| Sample Receipt Date | 30/10/2021 | Sampling Procedure | IS 3025 & APHA 23rd Edi. |
| Location of test performed | At Laboratory | Sample ID | WW/10/076-A |
| Environmental Condition during testing | 25 ± 2 °C | Environmental Condition during sampling | 32 °C |
| Condition of sample during receipt | Satisfactory | Sampling plan | E/SYS/09 |
| Test Start Date | 01/11/2021 | Test Completion date | 05/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit (GPCB) |
|---|---|---|---|---|---|
| 1. | Residual Free Chlorine | mg/L | IS 3025 (Part 26):1986 RA 2019 | 0.53 | >0.5 |

**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 | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/001/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Flue Gas | Stack attached to | Boiler (14 TPH) |
| Date and time of sampling | 01/11/2021<br>09:28 hrs. | Duration of sampling | 40.36 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/001 |
| Fuel used | Coal | Stack gas Velocity in m/sec | 4.48 |
| Stack height in meter | 51 | Stack diameter in meter | 1560 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 136 | Ambient temperature in °C | 29 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limits (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Particulate Matter | $mg/Nm^3$ | IS 11255 (Part 1):1985 (RA 2019) | 90.7 | 150 |
| 2. | Sulphur Dioxide ($SO_2$) | PPM | IS 11255 (Part 2):1985 (RA 2019) | 49.9 | 100 |
| 3. | Oxide of Nitrogen ($NO_x$) | PPM | IS 11255 (Part 7):2005 (RA 2017) | 32.6 | 50 |

**Remarks →**

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

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## Soni Group of Technologies – Environmental Testing Laboratory

# Test Report

F/OPN/05
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Page 1 of 1

### Stack Analysis

| | | | |
|---|---|---|---|
| Name and Address of Customer | **M/s. Indian Farmers Fertilizer Co. Ltd.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/002/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process (Stack – B) |
| Date and time of sampling | 01/11/2021<br>10:36 hrs. | Duration of sampling | 42.16 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/002 |
| Fuel used | NA | Stack gas Velocity in m/sec | 8.56 |
| Stack height in meter | 41 | Stack diameter in meter | 2610 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 56 | Ambient temperature in °C | 30 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limits |
|---|---|---|---|---|---|
| 1. | Particulate Matter | $mg/Nm^3$ | IS 11255 (Part 1) :1985 (RA 2019) | 59.4 | 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.

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

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

Annexure-V

SONI GROUP OF TECHNOLOGIES

सहकर्यम परिष्करणम् - Lets 3R together

## Soni Group of Technologies – Environmental Testing Laboratory

# Test Report

F/OPN/05
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Page 1 of 1

### Stack Analysis

| | | | |
|---|---|---|---|
| Name and Address of Customer | **M/s. Indian Farmers Fertilizer Co. Ltd.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/002-A/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process (Stack – B) |
| Date and time of sampling | 01/11/2021<br>10:36 hrs. | Duration of sampling | 42.16 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/002-A |
| Fuel used | NA | Stack gas Velocity in m/sec | 8.56 |
| Stack height in meter | 41 | Stack diameter in meter | 2610 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 56 | Ambient temperature in °C | 30 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limits (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Ammonia ($NH_3$) | $mg/Nm^3$ | IS 11255 (Part 6) :1999 (RA 2019) | 36.8 | 175 |
| 2. | Fluoride | $mg/Nm^3$ | IS 11255 (Part 5) :1990 (RA 2019) | 0.36 | 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 | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/003/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process (Stack – C) |
| Date and time of sampling | 01/11/2021<br>11:40 hrs. | Duration of sampling | 50.48 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/003 |
| Fuel used | NA | Stack gas Velocity in m/sec | 7.93 |
| Stack height in meter | 41 | Stack diameter in meter | 2820 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 58 | Ambient temperature in °C | 31 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limits |
|---|---|---|---|---|---|
| 1. | Particulate Matter | $mg/Nm^3$ | IS 11255 (Part 1) :1985 (RA 2019) | 57.6 | 150 |

**Remarks →**

- Test Report shall not be reproduced except in full, without written approval of the Laboratory.
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| | | |
|---|---|---|
| Mrs. Keya Patel | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

## 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/11/003-A/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process (Stack – C) |
| Date and time of sampling | 01/11/2021 11:40 hrs. | Duration of sampling | 50.48 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/003-A |
| Fuel used | NA | Stack gas Velocity in m/sec | 7.93 |
| Stack height in meter | 41 | Stack diameter in meter | 2820 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 58 | Ambient temperature in °C | 31 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

### Test Results

| Sr. No. | Parameters | Unit | Test Method | Results | Limits (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Ammonia ($NH_3$) | $mg/Nm^3$ | IS 11255 (Part 6) :1999 (RA 2019) | 39.4 | 175 |
| 2. | Fluoride | $mg/Nm^3$ | IS 11255 (Part 5) :1990 (RA 2019) | 0.13 | 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.

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-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/004/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process(Stack – F) |
| Date and time of sampling | 01/11/2021<br>13:09 hrs. | Duration of sampling | 40.06 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/004 |
| Fuel used | NA | Stack gas Velocity in m/sec | 8.25 |
| Stack height in meter | 41 | Stack diameter in meter | 2890 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 57 | Ambient temperature in °C | 32 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limits |
|---|---|---|---|---|---|
| 1. | Particulate Matter | $mg/Nm^3$ | IS 11255 (Part 1) :1985 RA 2019 | 58.8 | 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 | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES

सहकर्यम परिष्करणम् - Lets 3R together

## 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.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/004-A/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | HAG Process(Stack – F) |
| Date and time of sampling | 01/11/2021<br>15:32 hrs. | Duration of sampling | 40.06 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/004-A |
| Fuel used | NA | Stack gas Velocity in m/sec | 8.25 |
| Stack height in meter | 41 | Stack diameter in meter | 2890 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 57 | Ambient temperature in °C | 32 |
| 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

### Test Results

| Sr. No. | Parameters | Unit | Test Method | Results | Limits as per GPCB |
|---|---|---|---|---|---|
| 1. | Ammonia ($NH_3$) | $mg/Nm^3$ | IS 11255 (Part 6) :1999 (RA 2019) | 46.8 | 175 |
| 2. | Fluoride | $mg/Nm^3$ | IS 11255 (Part 5) :1990 (RA 2019) | 0.07 | 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 | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

Annexure-V

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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.**<br>Kandla Unit, Kutch, 372010. | | |
| Discipline | Chemical | Group | Atmospheric Pollution |
| Report No. | S/11/005/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Process Stack | Stack attached to | De Dusting – 2 |
| Date and time of sampling | 01/11/2021<br>12:13 hrs. | Duration of sampling | 39.43 min |
| Sample Receipt Date | 01/11/2021 | Sample ID | S/11/005 |
| Fuel used | NA | Stack gas Velocity in m/sec | 7.97 |
| Stack height in meter | 31 | Stack diameter in meter | 906 |
| Sampling Procedure | IS 11255 | Sampling By | SGT Team |
| Stack temperature of Process Emission in °C | 63 | 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 | 02/11/2021 | Testing Test End Date | 02/11/2021 |

### Test Results

| Sr. No. | Parameters | Unit | Test Method | Results | Limits (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Particulate Matter | $mg/Nm^3$ | IS 11255 (Part 1) :1985 (RA 2019) | 51.2 | 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.

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

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

Annexure-VI

SONI GROUP OF TECHNOLOGIES
सहकार्यम परिष्करणम् - Lets 3R together

TC-8508

## 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/10/073/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Ambient Air | Sampling Location | Station – 1 (Ammonia atmospheric Tank) |
| Date and time of sampling start | 28/10/2021 16:16 hrs. | Date and time of sampling stop | 29/10/2021 16:16 hrs. |
| Sample Receipt Date | 29/10/2021 | Sampling By | SGT Team |
| Sampling Procedure | IS 5182/ CPCB Guidelines | Sample ID | AA/10/073 |
| Location of test performed | At Laboratory | Wind Direction | EN – SW |
| | | Wind Speed (m/s) | 2 – 9 |
| 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 | 01/11/2021 | Test Completion date | 01/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Particulate Matter ($PM_{10}$) | µg/m³ | IS 5182 (Part 23): 2006 RA 2017 | 72.7 | 100 |
| 2. | Particulate Matter ($PM_{2.5}$) | µg/m³ | CPCB Guidelines : 2011 | 52.6 | 60 |
| 3. | Sulphur Dioxide ($SO_2$) | µg/m³ | IS 5182 (Part 2): 2001 RA 2017 | 34.6 | 80 |
| 4. | Oxides of Nitrogen ($NO_x$) | µg/m³ | IS 5182 (Part 6): 2006 RA 2017 | 36.6 | 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<br>Chemist<br>Tested By | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya<br>Quality Manager<br>Reviewed and Approved By |

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

Annexure-VI

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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/10/074/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Ambient Air | Sampling Location | Station – 2 (Nr. R & D Laboratory) |
| Date and time of sampling start | 28/10/2021 16:32 hrs. | Date and time of sampling stop | 29/10/2021 16:32 hrs. |
| Sample Receipt Date | 30/10/2021 | Sampling By | SGT Team |
| Sampling Procedure | IS 5182/ CPCB Guidelines | Sample ID | AA/10/074 |
| Location of test performed | At Laboratory | Wind Direction | EN – SW |
| | | Wind Speed (m/s) | 2 – 9 |
| 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 | 01/11/2021 | Test Completion date | 01/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Particulate Matter ($PM_{10}$) | µg/m³ | IS 5182 (Part 23): 2006 RA 2017 | 68.1 | 100 |
| 2. | Particulate Matter ($PM_{2.5}$) | µg/m³ | CPCB Guidelines : 2011 | 47.4 | 60 |
| 3. | Sulphur Dioxide ($SO_2$) | µg/m³ | IS 5182 (Part 2): 2001 RA 2017 | 30.6 | 80 |
| 4. | Oxides of Nitrogen ($NO_x$) | µg/m³ | IS 5182 (Part 6): 2006 RA 2017 | 34.8 | 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.

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-VI

SONI GROUP OF TECHNOLOGIES
सहकर्यम परिष्करणम् - Lets 3R together

TC-8508

## 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/10/077/21-22 | Date of Issue | 09/11/2021 |
| Sample Description | Ambient Air | Sampling Location | Station – 3 (Nr. Training Center) |
| Date and time of sampling start | 29/10/2021 16:49 hrs | Date and time of sampling stop | 30/10/2021 16:49 hrs |
| Sample Receipt Date | 30/10/2021 | Sampling By | SGT Team |
| Sampling Procedure | IS 5182/ CPCB Guidelines | Sample ID | AA/10/077 |
| Location of test performed | At Laboratory | Wind Direction | EN – SW |
| | | Wind Speed (m/s) | 2 – 9 |
| 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 | 01/11/2021 | Test Completion date | 01/11/2021 |

**Test Results**

| Sr. No. | Parameters | Unit | Test Method | Results | Limit (as per GPCB) |
|---|---|---|---|---|---|
| 1. | Particulate Matter ($PM_{10}$) | µg/m³ | IS 5182 (Part 23): 2006 RA 2017 | 86.5 | 100 |
| 2. | Particulate Matter ($PM_{2.5}$) | µg/m³ | CPCB Guidelines : 2011 | 47.9 | 60 |
| 3. | Sulphur Dioxide ($SO_2$) | µg/m³ | IS 5182 (Part 2): 2001 RA 2017 | 28.3 | 80 |
| 4. | Oxides of Nitrogen ($NO_x$) | µg/m³ | IS 5182 (Part 6): 2006 RA 2017 | 34.5 | 80 |

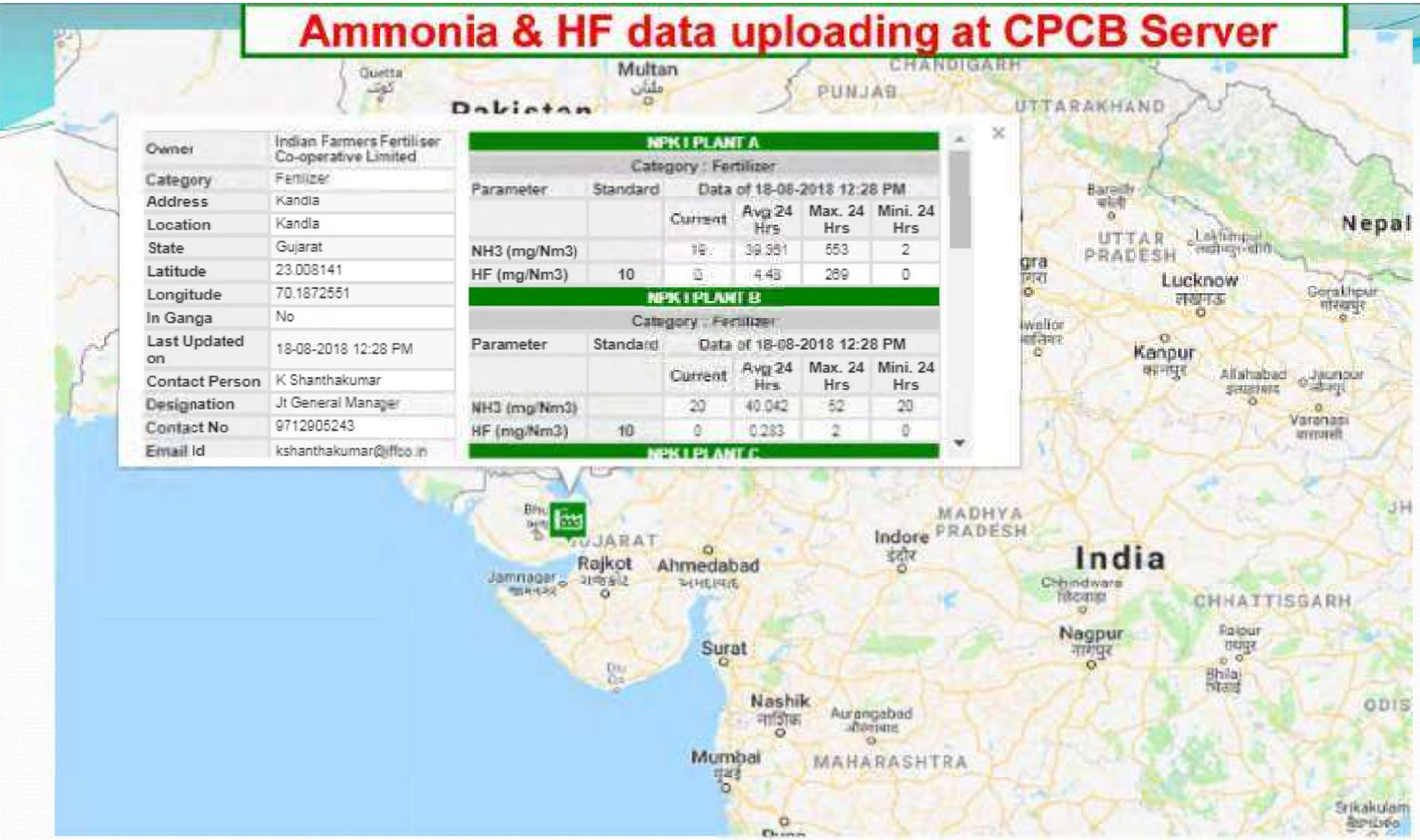
**Remarks →**

- 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 | SONI GROUP OF TECHNOLOGIES INDRAD | Mr. Love Patadiya |
| Chemist | | Quality Manager |
| Tested By | | Reviewed and Approved By |

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

# 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) | | 19 | 39.381 | 553 | 2 |
| HF (mg/Nm3) | 10 | 0 | 4.48 | 269 | 0 |

**NPK I PLANT B**

Category : Fertilizer

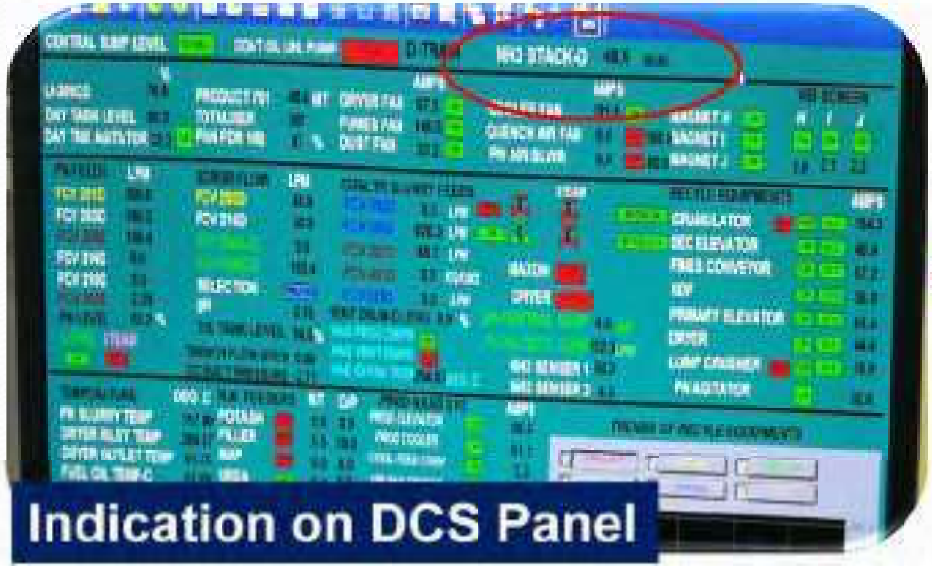
| Parameter | Standard | Data of 18-08-2018 12:28 PM | | | |
|---|---|---|---|---|---|
| | | Current | Avg 24 Hrs | Max. 24 Hrs | Mini. 24 Hrs |
| NH3 (mg/Nm3) | | 20 | 40.042 | 52 | 20 |
| HF (mg/Nm3) | 10 | 0 | 0.283 | 2 | 0 |

**NPK I PLANT C**

# AMMONIA & HF ANALYSER SYSTEM

IFFCO
Wholly owned by Cooperatives






Annexure-VIII

# STATION 1

Annexure-VIII

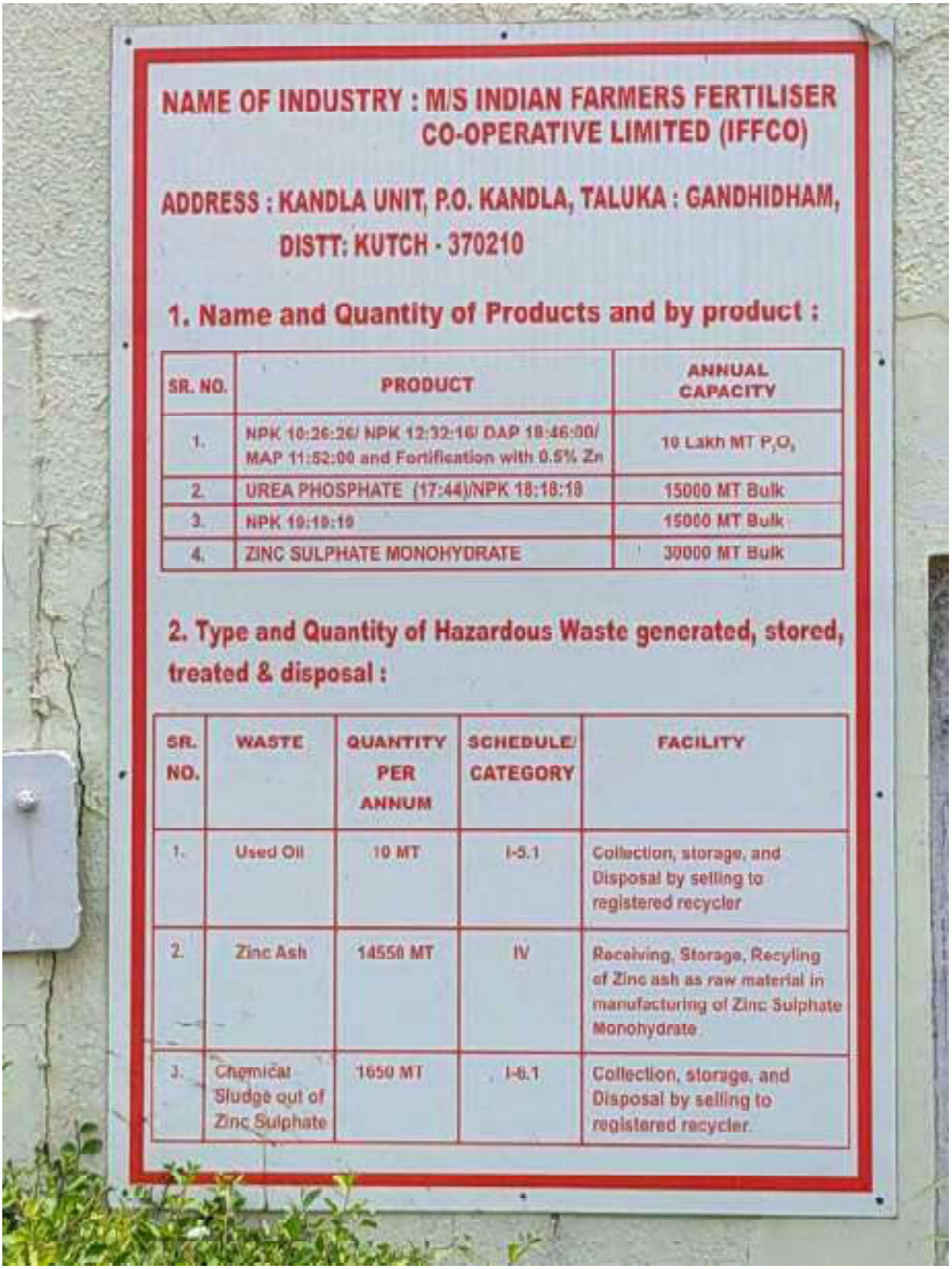
Annexure-VIII

# STATION 2

Annexure-VIII

# STATION 3


Annexure-IX



**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. |

Annexure-IX

**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

Annexure-X

Annexure-X

Annexure-XI

IFFCO
Wholly owned by Cooperatives
KANDLA UNIT

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

**By Registered Post With Acknowledgement**

05/10/2021

**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 September-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,

S Singh. 6/10/21

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

D/C
M.K.
टी. स्वामी

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

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

Annexure-XI

**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: September 21**

**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. |

Annexure-XI

**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>70</td><td>57.29</td></tr>
<tr><td>Ammonia (mg/NM$^3$)</td><td>175</td><td>6</td><td>99</td><td>31.88</td></tr>
<tr><td>Fluoride (mg/NM$^3$)</td><td>10</td><td>0.03</td><td>0.29</td><td>0.12</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)<br>80 (24 Hours) | 15 | 35 | 22.08 |
| 2 | Nitrogen Dioxide ($NO_2$) | 40(Annual)<br>80 (24 Hours) | 13 | 70 | 31.75 |
| 3 | Ammonia (NH3) | 100(Annual)<br>400 (24 Hours) | 54 | 89 | 70.00 |
| 4 | Particulate Matter (size less than 10 µm) PM 10 | 60 (Annual)<br>100 (24 Hours) | 50 | 63 | 56.08 |
| 5 | Particulate Matter (size less than 2.5 µm) PM 2.5 | 40(Annual)<br>60 (24 Hours) | 31 | 43 | 37.50 |

**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

**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: 28/10/2021 (10:38 to 10:53 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. | Between Horton Spheres | Ammonia | Gaseous Analyzer | 1 No. | mg/Nm$^3$ | 2.26 | 35* | OSHA ID-188 | 3 | Complied | | SANDIP PATEL |

* As per OSHA (PEL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

Annexure-XII

**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: 28/10/2021 (11:06 to 11:21 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 $NH_3$ Storage Tank – A | Ammonia | Gaseous Analyzer | 1 No. | mg/$Nm^3$ | 0.36 | 35* | OSHA ID-188 | 4 | Complied | | SANDIP PATEL |

* As per OSHA (PEL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 28/10/2021 (11:36 to 11:51 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 $NH_3$ Storage Tank – B | Ammonia | Gaseous Analyzer | 1 No. | $mg/Nm^3$ | 0.23 | 35* | OSHA ID-188 | 2 | Complied | | SANDIP PATEL |

* As per OSHA (PEL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XII

**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: 28/10/2021 (12:09 to 12:24 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 $NH_3$ Storage Tank – C | Ammonia | Gaseous Analyzer | 1 No. | $mg/Nm^3$ | 0.23 | 35* | OSHA ID-188 | 4 | Complied | | SANDIP PATEL |

* As per OSHA (PEL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

Annexure-XII

## 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: 28/10/2021 (13:21 to 13:36 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 PN Tank 'A' Train | Ammonia | Gaseous Analyzer | 1 No. | mg/Nm$^3$ | 0.28 | 35* | OSHA ID-188 | 2 | Complied | | SANDIP PATEL |

* As per OSHA (PEL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 29/10/2021 (10:32 to 10:47 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. | mg/Nm$^3$ | 0.21 | 35* | OSHA ID-188 | 2 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

**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: 29/10/2021 (10:59 to 11:14 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 PN Tank 'C' Train | Ammonia | Gaseous Analyzer | 1 No. | mg/Nm$^3$ | 0.21 | 35* | OSHA ID-188 | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



Kandla 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

**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: 29/10/2021 (11:32 to 11:47 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. | mg/Nm$^3$ | 0.18 | 35* | OSHA ID-188 | 1 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XII

## 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: 29/10/2021 (12:08 to 12:23 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 'A' Train | Ammonia | Gaseous Analyzer | 1 No. | mg/Nm$^3$ | 0.09 | 35* | OSHA ID-188 | 2 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



Kamla Amrut Industrial Park, Opp. Torrent Pharmaceuticals, Ahmedabad-Mehsana highway
Village: Indrad, Ta. Kadi, Dist. Mehsana

Annexure-XII

**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: 29/10/2021 (12:40 to 12:55 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. | mg/Nm$^3$ | 0.28 | 35* | OSHA ID-188 | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 30/10/2021 (11:27 to 11:43 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. | mg/Nm$^3$ | 1.06 | 35* | OSHA ID-188 | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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Annexure-XII

**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: 30/10/2021 (12:02 to 12:17 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. | mg/Nm$^3$ | 0.78 | 35* | OSHA ID-188 | 2 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

Annexure-XII

## 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: 30/10/2021 (12:38 to 12:53 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. | mg/Nm$^3$ | 0.42 | 35* | OSHA ID-188 | 5 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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Village: Indrad, Ta. : Kadi, Dist. : Mehsana -382715, Gujarat, Mo. : +91-92651 24527 sgt.env@gmail.com

Annexure-XII

**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. | mg/Nm$^3$ | 0.39 | 35* | OSHA ID-188 | 4 | 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: 28/10/2021 (14:39 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. | Air Compressor | Noise | Sound Level Meter | 1 No. | db(A) | 83 | 85 | Electronics Instrument method | 4 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XII

**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: 28/10/2021 (14:58 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. | Ammonia Compressor House | Noise | Sound Level Meter | 1 No. | db(A) | 78 | 85 | Electronics Instrument method | 1 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 30/10/2021 (14:37 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. | Dryer Floor AB Train | Noise | Sound Level Meter | 1 No. | db(A) | 78 | 85 | Electronics Instrument method | 5 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XII

**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: 30/10/2021 (15:23 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. | Dryer Floor CD Train | Noise | Sound Level Meter | 1 No. | db(A) | 82 | 85 | Electronics Instrument method | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

Annexure-XII

**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: 31/10/2021 (16:08 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. | Dryer Floor EF Train | Noise | Sound Level Meter | 1 No. | db(A) | 78 | 85 | Electronics Instrument method | 5 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 28/10/2021 (15:19 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. | HAG (K-1) | Noise | Sound Level Meter | 1 No. | db(A) | 80 | 85 | Electronics Instrument method | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

**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: 28/10/2021 (15:37 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. | HAG (K-II) | Noise | Sound Level Meter | 1 No. | db(A) | 81 | 85 | Electronics Instrument method | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

**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: 29/10/2021 (15:39 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. | Mechanical Workshop | Noise | Sound Level Meter | 1 No. | db(A) | 83 | 85 | Electronics Instrument method | 5 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XII

**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: 29/10/2021 (16:42 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. | Up Plant | Noise | Sound Level Meter | 1 No. | db(A) | 78 | 85 | Electronics Instrument method | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD



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

**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: 29/10/2021 (16:07 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. | WSF Plant | Noise | Sound Level Meter | 1 No. | db(A) | 81 | 85 | Electronics Instrument method | 3 | Complied | | SANDIP PATEL |

* As per NIOSH (REL) Exposure Limit,

SONI GROUP OF TECHNOLOGIES INDRAD

Annexure-XII



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

Annexure-XIII

SONI GROUP OF TECHNOLOGIES

सहकर्यम परिष्करणम् - Lets 3R together

## 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. | SGT/N/10/061/21-22 | Date of Issue | 09/11/2021 |
| Time of Sampling | 15:50 to 16:25 Hrs.<br>20:44 to 22:52 Hrs. | Sample Identification no. | SGT/N/10/061 |
| Sample description | Noise Level | | |
| Sampling By | SGT Team | | |
| Date of Sampling | 28/10/2021 | | |
| 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 | 64.6 | 75 | 62.5 | 70 |
| 2. | Nr. STP | 68.7 | 75 | 67.5 | 70 |
| 3. | Nr. Admin Building | 60.1 | 58.3 | 51.8 | 70 |
| 4. | Nr. Boiler | 72.5 | 75 | 71.8 | 70 |
| 5. | Nr. Training Centre | 62.7 | 75 | 59.2 | 70 |
| 6. | Nr. R & D Lab | 59.7 | 75 | 58.1 | 70 |
| 7. | Nr. Coal Storage Area | 54.7 | 75 | 53.9 | 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**<br>**Chemist**<br>**Tested By** | **Mr. Love Patadiya**<br>**Quality Manager**<br>**Reviewed and Approved By** |

SONI GROUP OF TECHNOLOGIES INDRAD

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

# Water Recharging Pond

**Capacity: 20000 $m^3$**

# Rain water harvesting Pond

**Capacity: 3300 $m^3$**

Annexure-V

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

Annexure-V

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

25/05/09

IFFCO
Wholly owned by Cooperatives
Kandla Unit

## REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

APRIL, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack |
|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ |

STACK EMISSION ANALYSIS

| Date | 01-04-2021 | | | | 02-04-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 66 | 59 | | 59 | 43 | 55 | 25 | 17 |
| $NH_3$ | 24 | 169 | S/D | 39 | 26 | 15 | NA | NA |
| F | 0.3 | 0.21 | | 0.09 | 0.18 | 0.13 | | |

| Date | 08-04-2021 | | | | 09-04-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 56 | 67 | 45 | 50 | 64 | 51 | 27 | 20 |
| $NH_3$ | 36 | 29 | 77 | 51 | 26 | 12 | NA | NA |
| F | 0.24 | 0.2 | 0.19 | 0.07 | 0.14 | 0.1 | | |

| Date | 15-04-2021 | | | | 16-04-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 41 | 70 | 57 | 68 | 64 | 60 | 16 | 10 |
| $NH_3$ | 22 | 60 | 51 | 79 | 22 | 16 | NA | NA |
| F | 0.17 | 0.18 | 0.17 | 0.15 | 0.13 | 0.11 | | |

| Date | 22-04-2021 | | | | 23-04-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 67 | 59 | | 66 | 40 | | 30 | 18 |
| $NH_3$ | 41 | 13 | S/D | 62 | 21 | S/D | NA | NA |
| F | 0.15 | 0.2 | | 0.27 | 0.13 | | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 03-04-2021 | 148 | 24 | 46 | 132 | 95 | 32 | 27 |
| 10-04-2021 | 142 | 43 | 42 | S/D | - | - | - |
| 17-04-2021 | 106 | 82 | 48 | S/D | - | - | - |
| 24-04-2021 | 107 | 84 | 49 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 05-04-2021 | 56 | 31 | 19 | 18 | 63 | 48 | 47 | SW |
| 12-04-2021 | 66 | 37 | 19 | 10 | 62 | 45 | 55 | SW |
| 19-04-2021 | 57 | 39 | 18 | 13 | 73 | 51 | 49 | SW |
| 26-04-2021 | 54 | 37 | 22 | 19 | 66 | 49 | 46 | SW |
| Date | Station - II | | | | | | | |
| 06-04-2021 | 57 | 39 | 29 | 70 | 51 | 52 | 41 | SW |
| 13-04-2021 | 51 | 34 | 26 | 57 | 69 | 54 | 53 | SW |
| 20-04-2021 | 74 | 31 | 21 | 49 | 74 | 51 | 46 | SW |
| 27-04-2021 | 57 | 40 | 35 | 56 | 56 | 49 | 44 | SW |
| Date | Station - III | | | | | | | |
| 07-04-2021 | 54 | 42 | 20 | 17 | 68 | 55 | 43 | SW |
| 14-04-2021 | 58 | 37 | 18 | 16 | 59 | 55 | 51 | NW |
| 21-04-2021 | 60 | 38 | 19 | 19 | 78 | 48 | 42 | NW |
| 28-04-2021 | 52 | 34 | 22 | 20 | 73 | 51 | 50 | NE |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

01/5/21
Jt. General Manager (Technical)

1/5
Chief Manager (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

# REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

MAY, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack | |
|---|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist | |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ | |
| STACK EMISSION ANALYSIS | | | | | | | | |
| Date | 03-05-2021 | | | | 04-05-2021 | | | |
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | | | | 62 | 61 | 42 | 10 | 16 |
| $NH_3$ | S/D | S/D | S/D | 24 | 20 | 18 | NA | NA |
| F | | | | 0.07 | 0.1 | 0.09 | | |
| Date | 10-05-2021 | | | | 11-05-2021 | | | |
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | | 48 | | 62 | 56 | 48 | 27 | 17 |
| $NH_3$ | S/D | 39 | S/D | 100 | 29 | 19 | NA | NA |
| F | | 0.24 | | 0.05 | 0.11 | 0.12 | | |
| Date | 17-05-2021 | | | | 18-05-2021 | | | |
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | | 52 | | 40 | | | 19 | 22 |
| $NH_3$ | S/D | 42 | S/D | 108 | S/D | S/D | NA | NA |
| F | | 0.15 | | 0.06 | | | | |
| Date | 24-05-2021 | | | | 25-05-2021 | | | |
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 69 | 65 | 61 | 61 | 56 | 51 | 30 | 18 |
| $NH_3$ | 69 | 47 | 74 | 47 | 16 | 22 | NA | NA |
| F | 0.36 | 0.21 | 0.31 | 0.37 | 0.13 | 0.11 | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 05-05-2021 | 115 | 24 | 46 | S/D | - | - | - |
| 12-05-2021 | 129 | 43 | 42 | S/D | - | - | - |
| 19-05-2021 | S/D | - | - | S/D | - | - | - |
| 26-05-2021 | 140 | 95 | 55 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 06-05-2021 | 64 | 31 | 18 | 19 | 74 | 48 | 43 | SW |
| 13-05-2021 | 61 | 37 | 18 | 12 | 72 | 45 | 55 | SW |
| 20-05-2021 | 57 | 39 | 20 | 13 | 55 | 48 | 45 | SW |
| 27-05-2021 | 50 | 37 | 22 | 19 | 73 | 55 | 40 | SW |
| Date | Station - II | | | | | | | |
| 07-05-2021 | 54 | 36 | 29 | 70 | 90 | 53 | 49 | SW |
| 14-05-2021 | 51 | 38 | 26 | 57 | 57 | 48 | 50 | SW |
| 21-05-2021 | 51 | 30 | 21 | 49 | 65 | 52 | 51 | SW |
| 28-05-2021 | 54 | 40 | 35 | 56 | 85 | 49 | 53 | SW |
| Date | Station - III | | | | | | | |
| 08-05-2021 | 53 | 42 | 20 | 17 | 89 | 52 | 44 | SW |
| 15-05-2021 | 59 | 37 | 16 | 16 | 73 | 48 | 45 | SW |
| 22-05-2021 | 57 | 31 | 19 | 13 | 82 | 48 | 54 | SW |
| 29-05-2021 | 52 | 30 | 22 | 20 | 65 | 54 | 46 | SW |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

Jt. General Manager (Technical)

Chief Manager (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

# REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

JUNE, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack |
|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ |

STACK EMISSION ANALYSIS

| Date | 01-06-2021 | | | | 02-06-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 45 | 52 | 43 | 61 | 54 | 54 | 13 | 14 |
| $NH_3$ | 91 | 20 | 20 | 21 | 9 | 10 | NA | NA |
| F | 0.2 | 0.2 | 0.05 | 0.05 | 0.11 | 0.14 | | |

| Date | 08-06-2021 | | | | 09-06-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 69 | 46 | 56 | | 70 | 63 | 28 | 10 |
| $NH_3$ | 28 | 33 | 132 | S/D | 21 | 15 | NA | NA |
| F | 0.58 | 0.38 | 0.11 | | 0.12 | 0.15 | | |

| Date | 15-06-2021 | | | | 16-06-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 62 | 42 | 66 | 56 | 51 | 55 | 16 | 19 |
| $NH_3$ | 30 | 31 | 41 | 62 | 13 | 16 | NA | NA |
| F | 0.56 | 0.39 | 0.18 | 0.07 | 0.12 | 0.11 | | |

| Date | 22-06-2021 | | | | 23-06-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 43 | 41 | 65 | 69 | 61 | 45 | 11 | 29 |
| $NH_3$ | 40 | 53 | 91 | 39 | 10 | 17 | NA | NA |
| F | 0.65 | 0.68 | 0.44 | 0.04 | 0.12 | 0.11 | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 03-06-2021 | 123 | 81 | 47 | 139 | 87 | 31 | 25 |
| 10-06-2021 | 80 | 95 | 49 | 145 | 94 | 36 | 23 |
| 17-06-2021 | 114 | 94 | 41 | 127 | 83 | 25 | 18 |
| 24-06-2021 | 93 | 88 | 50 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 04-06-2021 | 56 | 31 | 17 | 15 | 54 | 49 | 40 | SW |
| 11-06-2021 | 63 | 40 | 18 | 16 | 90 | 45 | 54 | SW |
| 18-06-2021 | 57 | 35 | 20 | 13 | 87 | 57 | 54 | SW |
| 25-06-2021 | 51 | 40 | 22 | 19 | 70 | 53 | 45 | SW |
| Date | Station - II | | | | | | | |
| 05-06-2021 | 56 | 34 | 29 | 70 | 79 | 46 | 44 | SW |
| 12-06-2021 | 64 | 40 | 26 | 57 | 69 | 50 | 49 | SW |
| 19-06-2021 | 53 | 30 | 21 | 49 | 66 | 55 | 43 | NE |
| 26-06-2021 | 63 | 40 | 35 | 56 | 89 | 49 | 56 | SW |
| Date | Station - III | | | | | | | |
| 07-06-2021 | 57 | 42 | 20 | 17 | 67 | 52 | 54 | SW |
| 14-06-2021 | 56 | 37 | 15 | 16 | 56 | 53 | 51 | SW |
| 21-06-2021 | 59 | 33 | 19 | 18 | 79 | 48 | 42 | SW |
| 28-06-2021 | 52 | 33 | 22 | 20 | 53 | 49 | 50 | NW |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

02/7/21
Jt. General Manager (Technical)

Chief Manager (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

# REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

JULY, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack |
|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ |

STACK EMISSION ANALYSIS

| Date | 05-07-2021 | | | | 06-07-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 53 | 62 | 44 | 69 | 66 | 58 | 28 | 14 |
| $NH_3$ | 12 | 28 | 50 | 23 | 24 | 16 | NA | NA |
| F | 0.15 | 0.27 | 0.07 | 0.03 | 0.13 | 0.08 | | |

| Date | 12-07-2021 | | | | 13-07-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 40 | 47 | 65 | | 48 | 62 | 27 | 21 |
| $NH_3$ | 38 | 29 | 53 | S/D | 10 | 21 | NA | NA |
| F | 0.07 | 0.23 | 0.18 | | 0.13 | 0.16 | | |

| Date | 19-07-2021 | | | | 20-07-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 68 | 70 | 69 | 55 | 43 | | 11 | 30 |
| $NH_3$ | 46 | 39 | 49 | 20 | 13 | S/D | NA | NA |
| F | 0.08 | 0.19 | 0.06 | 0.14 | 0.16 | | | |

| Date | 26-07-2021 | | | | 27-07-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | | 57 | 65 | | 49 | 50 | 26 | 12 |
| $NH_3$ | S/D | 28 | 31 | S/D | 8 | 9 | NA | NA |
| F | | 0.07 | 0.26 | | 0.2 | 0.02 | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 07-07-2021 | 81 | 80 | 45 | S/D | - | - | - |
| 14-07-2021 | 108 | 93 | 40 | S/D | - | - | - |
| 21-07-2021 | 137 | 91 | 40 | S/D | - | - | - |
| 28-07-2021 | 137 | 85 | 47 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 08-07-2021 | 77 | 31 | 18 | 17 | 61 | 52 | 42 | SW |
| 15-07-2021 | 63 | 33 | 19 | 10 | 67 | 45 | 44 | SW |
| 22-07-2021 | 57 | 39 | 17 | 13 | 65 | 57 | 47 | SW |
| 29-07-2021 | 55 | 43 | 22 | 19 | 54 | 50 | 48 | SW |
| Date | Station - II | | | | | | | |
| 09-07-2021 | 55 | 31 | 29 | 70 | 61 | 52 | 50 | SW |
| 16-07-2021 | 66 | 38 | 26 | 57 | 74 | 49 | 54 | SE |
| 23-07-2021 | 66 | 30 | 21 | 49 | 87 | 49 | 41 | SW |
| 30-07-2021 | 54 | 40 | 35 | 56 | 57 | 50 | 49 | SW |
| Date | Station - III | | | | | | | |
| 10-07-2021 | 52 | 42 | 20 | 17 | 71 | 55 | 47 | SW |
| 17-07-2021 | 50 | 37 | 18 | 16 | 62 | 52 | 48 | SW |
| 24-07-2021 | 58 | 33 | 19 | 19 | 55 | 50 | 54 | SW |
| 31-07-2021 | 52 | 35 | 22 | 20 | 79 | 52 | 46 | SW |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

Jt. General Manager (Technical)

Chief Manager (Laboratory)

IFFCO
Wholly owned by Cooperatives

Kandla Unit

# REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

AUGUST, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack |
|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ |

STACK EMISSION ANALYSIS

| Date | 02-08-2021 | | | | 03-08-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 65 | 51 | 64 | 53 | 41 | 46 | 23 | 26 |
| $NH_3$ | 21 | 25 | 31 | 38 | 19 | 16 | NA | NA |
| F | 0.12 | 0.19 | 0.1 | 0.3 | 0.13 | 0.08 | | |

| Date | 09-08-2021 | | | | 10-08-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 54 | 67 | 48 | 62 | 50 | 64 | 30 | 27 |
| $NH_3$ | 38 | 40 | 110 | 65 | 11 | 21 | NA | NA |
| F | 0.48 | 0.02 | 0.33 | 0.21 | 0.15 | 0.04 | | |

| Date | 16-08-2021 | | | | 17-08-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 64 | 47 | 59 | 40 | 48 | 59 | 23 | 18 |
| $NH_3$ | 31 | 35 | 28 | 46 | 9 | 129 | NA | NA |
| F | 0.13 | 0.02 | 0.07 | 0.17 | 0.12 | 0.09 | | |

| Date | 23-08-2021 | | | | 24-08-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 54 | 43 | 57 | 57 | 61 | 54 | 24 | 26 |
| $NH_3$ | 11 | 20 | 38 | 42 | 7 | 16 | NA | NA |
| F | 0.19 | 0.11 | 0.18 | 0.13 | 0.14 | 0.1 | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 04-08-2021 | 141 | 81 | 45 | S/D | - | - | - |
| 11-08-2021 | 112 | 94 | 48 | S/D | - | - | - |
| 18-08-2021 | 124 | 82 | 53 | S/D | - | - | - |
| 25-08-2021 | 144 | 95 | 52 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 05-08-2021 | 73 | 34 | 21 | 18 | 55 | 54 | 49 | SW |
| 12-08-2021 | 63 | 30 | 18 | 12 | 82 | 45 | 49 | SW |
| 19-08-2021 | 54 | 35 | 22 | 15 | 84 | 57 | 51 | SW |
| 26-08-2021 | 50 | 45 | 28 | 21 | 66 | 47 | 41 | SW |
| Date | Station - II | | | | | | | |
| 06-08-2021 | 53 | 33 | 32 | 72 | 73 | 51 | 43 | SW |
| 13-08-2021 | 63 | 41 | 28 | 59 | 69 | 57 | 49 | SW |
| 20-08-2021 | 75 | 31 | 25 | 51 | 88 | 53 | 52 | SW |
| 27-08-2021 | 50 | 39 | 37 | 49 | 61 | 60 | 41 | SW |
| Date | Station - III | | | | | | | |
| 07-08-2021 | 50 | 41 | 25 | 19 | 60 | 55 | 55 | SW |
| 14-08-2021 | 54 | 39 | 20 | 20 | 58 | 52 | 41 | SW |
| 21-08-2021 | 60 | 35 | 21 | 27 | 84 | 48 | 45 | SW |
| 28-08-2021 | 52 | 33 | 19 | 24 | 77 | 49 | 52 | SW |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

6/9/21
Jt. General Manager (Technical)

6/9
Chief Manager (Laboratory)

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# REPORT OF STACK EMISSION AND AMBIENT AIR QUALITY

SEPTEMBER, 2021

| GPCB Permissible limit | Plant stacks | | | Boiler Stack / Spray Drier - 1&2 | | | Common Stack |
|---|---|---|---|---|---|---|---|
| | PM | $NH_3$ | F | PM | SOx | NOx | Acid Mist |
| | 150 mg/NM³ | 175 mg/NM³ | 10 mg/NM³ | 150 mg/NM³ | 100 ppm | 50 ppm | 50 mg/NM³ |

STACK EMISSION ANALYSIS

| Date | 01-09-2021 | | | | 02-09-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 50 | 63 | 69 | 54 | 54 | 62 | 23 | 18 |
| $NH_3$ | 14 | 19 | 24 | 34 | 7 | 10 | NA | NA |
| F | 0.09 | 0.29 | 0.24 | 0.14 | 0.14 | 0.08 | | |

| Date | 08-09-2021 | | | | 09-09-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 66 | 63 | 41 | 40 | 70 | 43 | 20 | 26 |
| $NH_3$ | 12 | 45 | 41 | 40 | 6 | 7 | NA | NA |
| F | 0.11 | 0.09 | 0.18 | 0.13 | 0.18 | 0.11 | | |

| Date | 15-09-2021 | | | | 16-09-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 63 | 67 | 64 | 67 | 52 | 62 | 18 | 11 |
| $NH_3$ | 64 | 34 | 99 | 98 | 19 | 6 | NA | NA |
| F | 0.08 | 0.03 | 0.18 | 0.05 | 0.12 | 0.11 | | |

| Date | 22-09-2021 | | | | 23-09-2021 | | | |
|---|---|---|---|---|---|---|---|---|
| STACK | A | B | C | D | E | F | DD-2 | DD-3 |
| PM | 53 | 57 | 60 | 58 | 54 | 43 | 27 | 12 |
| $NH_3$ | 30 | 31 | 25 | 79 | 10 | 11 | NA | NA |
| F | 0.11 | 0.09 | 0.03 | 0.11 | 0.13 | 0.05 | | |

| Date | Boiler Stack | | | $ZnSO_4$ Plant | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spray Drier- 1 &2 | | | Common Stack |
| | PM | SOx | NOx | PM | SOx | NOx | Acid Mist |
| 03-09-2021 | 83 | 56 | 21 | S/D | - | - | - |
| 10-09-2021 | 94 | 57 | 16 | S/D | - | - | - |
| 17-09-2021 | 111 | 8 | 19 | S/D | - | - | - |
| 24-09-2021 | 97 | 24 | 16 | S/D | - | - | - |

| GLC for Pollutants | Ambient air (concentration in µg/M³) | | | | | Sound Level | | Wind Direction |
|---|---|---|---|---|---|---|---|---|
| | $PM_{10}$ | $PM_{2.5}$ | SOx | NOx | $NH_3$ | Day | Night | |
| Annual | 60 | 40 | 50 | 40 | 100 | 75 dB | 70 dB | |
| 24 Hrs | 100 | 60 | 80 | 80 | 400 | | | |
| Date | Station - I | | | | | | | |
| 04-09-2021 | 53 | 31 | 21 | 24 | 72 | 54 | 49 | SW |
| 11-09-2021 | 63 | 36 | 21 | 13 | 67 | 45 | 49 | SE |
| 18-09-2021 | 57 | 37 | 15 | 13 | 86 | 57 | 41 | SW |
| 25-09-2021 | 55 | 43 | 21 | 31 | 61 | 48 | 46 | SW |
| Date | Station - II | | | | | | | |
| 06-09-2021 | 50 | 40 | 29 | 70 | 54 | 45 | 41 | SW |
| 13-09-2021 | 63 | 36 | 26 | 57 | 61 | 49 | 49 | NW |
| 20-09-2021 | 56 | 40 | 21 | 49 | 60 | 54 | 45 | SW |
| 27-09-2021 | 60 | 40 | 35 | 56 | 89 | 48 | 41 | SW |
| Date | Station - III | | | | | | | |
| 07-09-2021 | 50 | 42 | 20 | 17 | 77 | 51 | 43 | NW |
| 14-09-2021 | 55 | 37 | 15 | 16 | 59 | 55 | 50 | NW |
| 21-09-2021 | 59 | 35 | 19 | 15 | 65 | 49 | 53 | SW |
| 28-09-2021 | 52 | 33 | 22 | 20 | 89 | 48 | 50 | NW |

**Note:**
(a) Stack Emission Analysis represented at Standard conditions of 25°C temperature, 760 mm Hg pressure & 0% moisture.
(b) Dedusting Systems(DD): DD-2 & DD-3 are at PH section.
(c) GPCB approved Ambient Air Stations for Ground Level Concentration pollutants measurements are:
Station-I at Ammonia Atmospheric Tank, Station-II at R&D laboratory & Station-III at Training center
(d) Common HAG stack is in line form Mar-15 for Spray drier 1&2.

Jt. General Manager (Technical)

Chief Manager (Laboratory)

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# LABORATORY

Date: 11.05.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of IFFCO PLANT
B) Date & Time : 15.04.2021 09:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | | 7.6 |
| 2 | BOD (3 days at 27 °C) | 20 mg/l | 17 |
| 3 | Suspended Solids | 30 mg/l | 27 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.7 |

Note: Tertiary treated sewage water is used in the plant and Horticulture.

Sectional Head (Laboratory)

P.E

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Kandla Unit

# LABORATORY

Date: 04.06.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of TOWNSHIP
B) Date & Time : 17-05-21 07:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | 6.5 - 9.0 | 7.7 |
| 2 | BOD (5 days at 20 °C) | 30 mg/l | 27 |
| 3 | Total Suspended Solids | 100 mg/l | 58 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.6 |

Note: Treated sewage used for horticulture purpose.

Sectional Head (Laboratory)

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Kandla Unit

Date: 09.07.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of IFFCO PLANT
B) Date & Time : 14.06.2021 09:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | | 7.5 |
| 2 | BOD (3 days at 27 °C) | 20 mg/l | 17 |
| 3 | Suspended Solids | 30 mg/l | 27 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.7 |

Note: Tertiary treated sewage water is used in the plant and Horticulture.

09/07/21

Sectional Head (Laboratory)

P.E

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Kandla Unit

Date: 11.08.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of IFFCO PLANT
B) Date & Time : 20.07.2021 09:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | | 7.7 |
| 2 | BOD (3 days at 27 °C) | 20 mg/l | 18 |
| 3 | Suspended Solids | 30 mg/l | 25 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.6 |

Note: Tertiary treated sewage water is used in the plant and Horticulture.

11/8

Sectional Head (Laboratory)

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Kandla Unit

Date: 08.09.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of IFFCO PLANT
B) Date & Time : 17.08.2021 09:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | | 7.8 |
| 2 | BOD (3 days at 27 °C) | 20 mg/l | 16 |
| 3 | Suspended Solids | 30 mg/l | 27 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.7 |

Note: Tertiary treated sewage water is used in the plant and Horticulture.

Sectional Head (Laboratory)

P.E

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Kandla Unit

Date: 12.10.2021

## ANALYSIS REPORT

A) Sample Particulars : Treated Domestic Sewage of IFFCO PLANT
B) Date & Time : 20.09.2021 09:00 Hrs
C) Location : STP Outlet
D) Analysis

| S.NO. | CHARACTERISTICS | GPCB PERMISSIBLE LIMIT | RESULT |
|---|---|---|---|
| 1 | pH | | 7.9 |
| 2 | BOD (3 days at 27 °C) | 20 mg/l | 18 |
| 3 | Suspended Solids | 30 mg/l | 28 |
| 4 | Residual Chlorine | Minimum 0.5 mg/l | 0.7 |

Note: Tertiary treated sewage water is used in the plant and Horticulture.

12/10
Sectional Head (Laboratory)

PE

IFFCO Wholly owned by Cooperatives Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Ammonia in working environment**

Date: 26-Apr-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average ppm |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | NEAR PN TANK A TRAIN | Ammonia | UNIPHOS | 1 | - | 14 |
| 2 | NEAR PN TANK B TRAIN | | | 1 | - | 28 |
| 3 | NEAR PN TANK C TRAIN | | | 1 | - | 14 |
| 4 | NEAR PN TANK D TRAIN | | | 1 | - | 28 |
| 5 | NEAR GRANULATOR A TRAIN | | | 1 | - | 16 |
| 6 | NEAR GRANULATOR B TRAIN | | | 1 | - | 13 |
| 7 | NEAR GRANULATOR C TRAIN | | | 1 | - | 17 |
| 8 | NEAR GRANULATOR D TRAIN | | | 1 | - | 16 |
| 9 | NEAR GRANULATOR E TRAIN | | | 1 | - | 19 |
| 10 | NEAR GRANULATOR F TRAIN | | | 1 | - | 15 |
| 11 | NEAR $NH_3$ STORAGE TANK A | | | 1 | - | 10 |
| 12 | NEAR $NH_3$ STORAGE TANK B | | | 1 | - | 10 |
| 13 | NEAR $NH_3$ STORAGE TANK C | | | 1 | - | 9 |
| 14 | BETWEEN HORTON SPHERS | | | 1 | - | 5 |

Note: **The Average ppm readings are an average of 4 readings in nearby area.**

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| 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) |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | 13 |
| - | - | 1 | | | RAJESH M. PATEL |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |

26/4

Sectional Head (Laboratory)

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Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** **: As per column no 2**

**Raw materials, by-products and finished products involving in the process** **: Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** **: Sound level in working environment**

Date: 26-Apr-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average dB |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | MECHANICAL WORKSHOP | Noise | Sound Level Meter | 4 | - | 36 |
| 2 | DRYER FLOOR AB TRAIN | | | 4 | - | 76 |
| 3 | DRYER FLOOR CD TRAIN | | | 4 | - | 75 |
| 4 | DRYER FLOOR EF TRAIN | | | 4 | - | 73 |
| 5 | AMMONIA COMPRESSOR HOUSE | | | 4 | - | 87 |
| 6 | AIR COMPRESSOR | | | 4 | - | 88 |
| 7 | HAG (K-I) | | | 4 | - | 86 |
| 8 | HAG (K-II) | | | 4 | - | 87 |
| 9 | UP PLANT | | | 4 | - | 85 |
| 10 | WSF PLANT | | | 4 | - | 85 |

| TWA concentration (As given in Second schedule) | Reference method | No of workers exposed at the location Being monitored | Remarks | Signature of person taking samples | Name (in block letter) |
|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 |
| - | - | 30 | | | RAJESH M. PATEL |
| | | 4 | | | |
| | | 4 | | | |
| | | 4 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 4 | | | |
| | | 6 | | | |

26/4

Sectional Head (Laboratory)

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Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Ammonia in working environment**

Date: 20-May-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average ppm |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | NEAR PN TANK A TRAIN | Ammonia | UNIPHOS | 1 | - | 19 |
| 2 | NEAR PN TANK B TRAIN | | | 1 | - | 14 |
| 3 | NEAR PN TANK C TRAIN | | | 1 | - | 22 |
| 4 | NEAR PN TANK D TRAIN | | | 1 | - | 19 |
| 5 | NEAR GRANULATOR A TRAIN | | | 1 | - | 16 |
| 6 | NEAR GRANULATOR B TRAIN | | | 1 | - | 19 |
| 7 | NEAR GRANULATOR C TRAIN | | | 1 | - | 17 |
| 8 | NEAR GRANULATOR D TRAIN | | | 1 | - | 11 |
| 9 | NEAR GRANULATOR E TRAIN | | | 1 | - | 10 |
| 10 | NEAR GRANULATOR F TRAIN | | | 1 | - | 18 |
| 11 | NEAR $NH_3$ STORAGE TANK A | | | 1 | - | 10 |
| 12 | NEAR $NH_3$ STORAGE TANK B | | | 1 | - | 7 |
| 13 | NEAR $NH_3$ STORAGE TANK C | | | 1 | - | 8 |
| 14 | BETWEEN HORTON SPHERS | | | 1 | - | 8 |

Note: **The Average ppm readings are an average of 4 readings in nearby area.**

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| 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) |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | 13 |
| - | - | 1 | | | NILESH P SHAH |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |

Sectional Head (Laboratory)

IFFCO Wholly owned by Cooperatives Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Sound level in working environment**

Date: 20-May-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average dB |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | MECHANICAL WORKSHOP | Noise | Sound Level Meter | 4 | - | 37 |
| 2 | DRYER FLOOR AB TRAIN | | | 4 | - | 72 |
| 3 | DRYER FLOOR CD TRAIN | | | 4 | - | 80 |
| 4 | DRYER FLOOR EF TRAIN | | | 4 | - | 70 |
| 5 | AMMONIA COMPRESSOR HOUSE | | | 4 | - | 90 |
| 6 | AIR COMPRESSOR | | | 4 | - | 86 |
| 7 | HAG (K-I) | | | 4 | - | 85 |
| 8 | HAG (K-II) | | | 4 | - | 87 |
| 9 | UP PLANT | | | 4 | - | 86 |
| 10 | WSF PLANT | | | 4 | - | 86 |

| TWA concentration (As given in Second schedule) | Reference method | No of workers exposed at the location Being monitored | Remarks | Signature of person taking samples | Name (in block letter) |
|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 |
| - | - | 30 | | | NILESH P SHAH |
| | | 4 | | | |
| | | 4 | | | |
| | | 4 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 4 | | | |
| | | 6 | | | |

22/5

Sectional Head (Laboratory)

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Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** **: As per column no 2**

**Raw materials, by-products and finished products involving in the process** **: Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** **: Ammonia in working environment**

Date: 17-Jun-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average ppm |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | NEAR PN TANK A TRAIN | Ammonia | UNIPHOS | 1 | - | 17 |
| 2 | NEAR PN TANK B TRAIN | | | 1 | - | 20 |
| 3 | NEAR PN TANK C TRAIN | | | 1 | - | 19 |
| 4 | NEAR PN TANK D TRAIN | | | 1 | - | 22 |
| 5 | NEAR GRANULATOR A TRAIN | | | 1 | - | 14 |
| 6 | NEAR GRANULATOR B TRAIN | | | 1 | - | 14 |
| 7 | NEAR GRANULATOR C TRAIN | | | 1 | - | 17 |
| 8 | NEAR GRANULATOR D TRAIN | | | 1 | - | 17 |
| 9 | NEAR GRANULATOR E TRAIN | | | 1 | - | 13 |
| 10 | NEAR GRANULATOR F TRAIN | | | 1 | - | 18 |
| 11 | NEAR $NH_3$ STORAGE TANK A | | | 1 | - | 8 |
| 12 | NEAR $NH_3$ STORAGE TANK B | | | 1 | - | 5 |
| 13 | NEAR $NH_3$ STORAGE TANK C | | | 1 | - | 8 |
| 14 | BETWEEN HORTON SPHERS | | | 1 | - | 6 |

Note: **The Average ppm readings are an average of 4 readings in nearby area.**

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| 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) |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | 13 |
| - | - | 1 | | Shah N.P | NILESH SHAH |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |

18/6

Sectional Head (Laboratory)

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Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : As per column no 2

**Raw materials, by-products and finished products involving in the process** : Phosphoric acid, Ammonia, NP/ NPK fertilisers

**Particulars of sampling** : Sound level in working environment

Date: 17-Jun-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average dB |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | MECHANICAL WORKSHOP | Noise | Sound Level Meter | 4 | - | 39 |
| 2 | DRYER FLOOR AB TRAIN | | | 4 | - | 69 |
| 3 | DRYER FLOOR CD TRAIN | | | 4 | - | 74 |
| 4 | DRYER FLOOR EF TRAIN | | | 4 | - | 73 |
| 5 | AMMONIA COMPRESSOR HOUSE | | | 4 | - | 85 |
| 6 | AIR COMPRESSOR | | | 4 | - | 86 |
| 7 | HAG (K-I) | | | 4 | - | 85 |
| 8 | HAG (K-II) | | | 4 | - | 89 |
| 9 | UP PLANT | | | 4 | - | 90 |
| 10 | WSF PLANT | | | 4 | - | 90 |

| TWA concentration (As given in Second schedule) | Reference method | No of workers exposed at the location Being monitored | Remarks | Signature of person taking samples | Name (in block letter) |
|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 |
| - | - | 30 | | Shalini | NILESH SHAH |
| | | 4 | | | |
| | | 4 | | | |
| | | 4 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 4 | | | |
| | | 6 | | | |

18/6

Sectional Head (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Ammonia in working environment**

Date: 16-Jul-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average ppm |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | NEAR PN TANK A TRAIN | Ammonia | UNIPHOS | 1 | - | 27 |
| 2 | NEAR PN TANK B TRAIN | | | 1 | - | 10 |
| 3 | NEAR PN TANK C TRAIN | | | 1 | - | 29 |
| 4 | NEAR PN TANK D TRAIN | | | 1 | - | 10 |
| 5 | NEAR GRANULATOR A TRAIN | | | 1 | - | 17 |
| 6 | NEAR GRANULATOR B TRAIN | | | 1 | - | 14 |
| 7 | NEAR GRANULATOR C TRAIN | | | 1 | - | 14 |
| 8 | NEAR GRANULATOR D TRAIN | | | 1 | - | 12 |
| 9 | NEAR GRANULATOR E TRAIN | | | 1 | - | 17 |
| 10 | NEAR GRANULATOR F TRAIN | | | 1 | - | 19 |
| 11 | NEAR $NH_3$ STORAGE TANK A | | | 1 | - | 10 |
| 12 | NEAR $NH_3$ STORAGE TANK B | | | 1 | - | 10 |
| 13 | NEAR $NH_3$ STORAGE TANK C | | | 1 | - | 5 |
| 14 | BETWEEN HORTON SPHERS | | | 1 | - | 6 |

Note: **The Average ppm readings are an average of 4 readings in nearby area.**

IFFCO
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Kandla Unit

| 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) |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | 13 |
| - | - | 1 | | | RAJESH M. PATEL |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |

21.1.17

Sectional Head (Laboratory)

IFFCO Wholly owned by Cooperatives Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** **: As per column no 2**

**Raw materials, by-products and finished products involving in the process** **: Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** **: Sound level in working environment**

Date: 16-Jul-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average dB |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | MECHANICAL WORKSHOP | Noise | Sound Level Meter | 4 | - | 36 |
| 2 | DRYER FLOOR AB TRAIN | | | 4 | - | 66 |
| 3 | DRYER FLOOR CD TRAIN | | | 4 | - | 75 |
| 4 | DRYER FLOOR EF TRAIN | | | 4 | - | 69 |
| 5 | AMMONIA COMPRESSOR HOUSE | | | 4 | - | 87 |
| 6 | AIR COMPRESSOR | | | 4 | - | 86 |
| 7 | HAG (K-I) | | | 4 | - | 89 |
| 8 | HAG (K-II) | | | 4 | - | 86 |
| 9 | UP PLANT | | | 4 | - | 87 |
| 10 | WSF PLANT | | | 4 | - | 86 |

| TWA concentration (As given in Second schedule) | Reference method | No of workers exposed at the location Being monitored | Remarks | Signature of person taking samples | Name (in block letter) |
|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 |
| - | - | 30 | | | RAJESH M. PATEL |
| | | 4 | | | |
| | | 4 | | | |
| | | 4 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 4 | | | |
| | | 6 | | | |

Sectional Head (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Ammonia in working environment**

Date: 17-Sep-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average ppm |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | NEAR PN TANK A TRAIN | Ammonia | UNIPHOS | 1 | - | 15 |
| 2 | NEAR PN TANK B TRAIN | | | 1 | - | 27 |
| 3 | NEAR PN TANK C TRAIN | | | 1 | - | 24 |
| 4 | NEAR PN TANK D TRAIN | | | 1 | - | 16 |
| 5 | NEAR GRANULATOR A TRAIN | | | 1 | - | 13 |
| 6 | NEAR GRANULATOR B TRAIN | | | 1 | - | 20 |
| 7 | NEAR GRANULATOR C TRAIN | | | 1 | - | 20 |
| 8 | NEAR GRANULATOR D TRAIN | | | 1 | - | 12 |
| 9 | NEAR GRANULATOR E TRAIN | | | 1 | - | 20 |
| 10 | NEAR GRANULATOR F TRAIN | | | 1 | - | 11 |
| 11 | NEAR $NH_3$ STORAGE TANK A | | | 1 | - | 9 |
| 12 | NEAR $NH_3$ STORAGE TANK B | | | 1 | - | 5 |
| 13 | NEAR $NH_3$ STORAGE TANK C | | | 1 | - | 8 |
| 14 | BETWEEN HORTON SPHERS | | | 1 | - | 7 |

Note: **The Average ppm readings are an average of 4 readings in nearby area.**

IFFCO
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Kandla Unit

| 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) |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | 13 |
| | | 1 | | | RAJESH M. PATEL |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |
| | | 1 | | | |

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Sectional Head (Laboratory)

IFFCO
Wholly owned by Cooperatives
Kandla Unit

**FORM NO. 37**

(Prescribed under Rule 12-B)

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

**Name of the Department / Plant.** : **As per column no 2**

**Raw materials, by-products and finished products involving in the process** : **Phosphoric acid, Ammonia, NP/ NPK fertilisers**

**Particulars of sampling** : **Sound level in working environment**

Date: 17-Sep-2021

| Sr. No. | Location /operation mentioned | Identified contaminant | sampling Instrument Used | Air borne Contamination | | Average dB |
|---|---|---|---|---|---|---|
| | | | | Number of Samples | Range | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | MECHANICAL WORKSHOP | Noise | Sound Level Meter | 4 | - | 41 |
| 2 | DRYER FLOOR AB TRAIN | | | 4 | - | 70 |
| 3 | DRYER FLOOR CD TRAIN | | | 4 | - | 76 |
| 4 | DRYER FLOOR EF TRAIN | | | 4 | - | 66 |
| 5 | AMMONIA COMPRESSOR HOUSE | | | 4 | - | 85 |
| 6 | AIR COMPRESSOR | | | 4 | - | 85 |
| 7 | HAG (K-I) | | | 4 | - | 89 |
| 8 | HAG (K-II) | | | 4 | - | 88 |
| 9 | UP PLANT | | | 4 | - | 90 |
| 10 | WSF PLANT | | | 4 | - | 86 |

| TWA concentration (As given in Second schedule) | Reference method | No of workers exposed at the location Being monitored | Remarks | Signature of person taking samples | Name (in block letter) |
|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 |
| - | - | 30 | | Patel | RAJESH M. PATEL |
| | | 4 | | | |
| | | 4 | | | |
| | | 4 | | | |
| | | 2 | | | |
| | | 2 | | | |
| | | 4 | | | |
| | | 6 | | | |

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Sectional Head (Laboratory)