

PETROVIETNAM - PVFCCo

PETROVIETNAM FERTILIZER AND CHEMICALS CORPORATION -
JSC

PHU MY FERTILIZER PLANT

REPORT
ENVIRONMENTAL PROTECTION WORK
IN 2025

PHU MY FERTILIZER PLANT

(ADDRESS: PHU MY I IZ, PHU MY WARD, HO CHI MINH CITY)

Ho Chi Minh City, January 2026

LIST OF ABBREVIATIONS

NNMT	Agriculture and Environment
TCMT	General Department of Environment
TNMT	Natural Resources and Environment
GXN	Confirmation Certificate
GP	License
BR-VT	Ba Ria - Vung Tau
BVMT	Environmental Protection
QCVN	Vietnam National Technical Regulation
CTCP	Joint Stock Company
KCN	Industrial Zone (IZ)
TCT	Corporation
HTXLNT	Wastewater Treatment System
QLCTNH	Hazardous Waste Management
HTQT	Monitoring System

GENERAL INFORMATION

Facility Name: Branch of PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant.

Address: Phu My I Industrial Zone, Phu My Ward, Ho Chi Minh City.

Phone: 0254 3921468 - **Fax:** 0254 3921477.

Legal Representative: Mr. Le Trong Dinh Chi - **Position:** Plant Director.

Business Type: Production and trading of fertilizers and chemicals.

Operation Frequency: Continuous.

Main Products

Production Line	Product/Output	Max Capacity	Unit
NH3 Production	NH3	596,000	tons/year
Urea Production	Urea	923,000	tons/year
UFC85, AF37 Production	UFC85 AF37	16,000 27,000	tons/year

NPK Production	NPK	281,000	tons/year
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Fuel, Electricity, and Water Consumption in 2025 (Table 1)

No.	Fuel, electricity, water	2024 Consumption	2025 Consumption
1	Total NG gas	591 million m3	585 million m3
1.1	NG gas for Raw Material	352 million m3	345 million m3
1.2	NG gas for Fuel	239 million m3	239 million m3
2	Gasoline (Ron 95-III)	3,594 liters	3,457 liters
3	DO Oil	62,858 liters	96,240 liters
4	Supply water	831,660 m3	863,821 m3
5	Total electricity	182,028,232 kWh	186,693,676 kWh
5.1	Self-produced electricity	148,966,730 kWh	159,677,630 kWh
5.2	Purchased electricity (EVN)	33,061,502 kWh	27,572,546 kWh

PART 1: RESULTS OF ENVIRONMENTAL PROTECTION WORKS

1. Wastewater Protection Works

1.1. Wastewater Treatment Systems

The Plant operates 10 wastewater treatment structures and equipment, designed to segregate and centrally treat specific waste streams:

- **Domestic wastewater treatment system (50 m3/day):** Domestic wastewater → Bar screen → Balancing tank BA1 → Oxidation tank BA2A/B → Settling tank → Chlorination → Filtration device FL1 → Clean water tank BA7 → Treated wastewater tank (40-PK-2002/BA8) → Discharge to Phu My I IZ collection system.
- **Oily wastewater treatment system (480 m3/day):** Oily wastewater & boiler blowdown → Collection tank → Gravity oil separation → Coagulation → CPI → Centralized WWTP (680 m3/day).
- **Boiler wastewater treatment system:** Boiler blowdown → Holding tank 10-V-7005 → Heat exchanger 10E7004 → Oily wastewater treatment system.
- **Centralized wastewater treatment system (680 m3/day):** Combined streams → Balancing tank → Denitrification → Buffer tank → MBR tank → Clean water tank 40PK2002/BA8 → Discharge to Phu My I IZ.
- **UFC85/Formaldehyde WWTP (25 m3/day):** UFC85 wastewater → Neutralization tank → Anoxic 1 → Aerobic → Anoxic 2 → MBR → Disinfection → Centralized WWTP (680 m3/day).
- **NPK WWTP (288 m3/day):** NPK wastewater → Oil separation tanks TK1, TK2 → Balancing tank TK3 → DAF TK4, TK5 → Settling tank TK6 → Anaerobic V6 → Anoxic V7 → Aerobic TK9 → Settling TK10 → Disinfection TK11 → Discharge to Phu My I IZ.
- **Cooling water discharge system:** Cooling water → Temperature reduction → Discharge channel to Thi Vai river.
- **EHU tank system:** NPK scrubber wastewater → Balancing → Sludge press → Recirculation to scrubber.

• Settling tank 30-BA-3004 & Neutralization tank 30-PK-1001/BA1.

Table 2: Wastewater Flow Rate

No.	Wastewater Source	2024 Flow (m3)		2025 Flow (m3)	
		Daily Avg	Yearly	Daily Avg	Yearly
1	WW from Centralized WWTP (680 m3/day)	479	174,776	433	158,319
2	WW from NPK WWTP (288 m3/day)	29	10,661	38	14,036
3	Cooling water discharge	85,474	31,198,260	83,387	30,436,363

1.2. Periodic Wastewater Monitoring Results

Table 4: Wastewater Analysis Results at BA8 Tank

Parameter	Unit	Phase 1	Phase 2	Phase 3	Phase 4	IZ Standard	QCVN 40:2011 Col B
Temperature	°C	31.8	31.9	30.2	32.7	45	40
pH	-	7.3	7.1	8.08	7.17	5-10	5.5-9
TSS	mg/l	<5	14	ND	ND	300	100
COD	mg/l	11	13	22	17	800	150
BOD5	mg/l	4	4	6	6	400	50
Total N	mg/l	20.87	12	31	21.4	80	40
Total P	mg/l	1.3	1.7	0.98	1.67	16	6
NH4+ - N	mg/l	1.26	0.8	ND	ND	70	10
Residual Chlorine	mg/l	<0.03	ND	ND	ND	2	2
Phenol	mg/l	0.003	ND	ND	ND	0.1	0.5
Fe	mg/l	0.093	0.28	0.252	ND	20	5
Cu	mg/l	<0.03	ND	0.033	ND	2	2
Mineral Oil	mg/l	<1.2	3.1	ND	ND	15	10
Coliform	MPN/100ml	<1.8	940	140	140	10^8	5,000

Note: ND = Not Detected (KPH). Monitoring data confirms that all parameters in the Plant's industrial wastewater are well below the receiving limits of the Industrial Zone and QCVN 40:2011/BTNMT (Column B).

2. Air Emission Protection Works

Table 11: Emission Streams and Maximum Flow Rates

No.	Emission Stream	Max Flow (m3/h)	Annual Volume (m3)
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1	UFC85/Formaldehyde stack	5,000	43,800,000
2	NPK dust/emission treatment stack	310,000	2,715,600,000
3	NPK packaging bag filter stack 01	15,000	131,400,000
4	NPK packaging bag filter stack 02	15,000	131,400,000
5	Auxiliary boiler stack 10B8001/SK1	155,716	1,364,072,160
6	Waste heat boiler stack 10B9001/SK1	377,903	3,310,430,280
7	Gas turbine stack 10GT9001	-	-
8	Primary reformer stack 10H2001	443,734	3,887,109,840
9	NPK boilers stack 80SK4003	7,000	61,320,000

2.2. Periodic Air Emission Monitoring Results (Prill Tower)

Table 15: Air Emission Monitoring Results at Prill Tower

Phase	Temperature (°C)	Flow Rate (m3/h)	Total Dust (mg/Nm3)	HCHO (mg/Nm3)	NH3 (mg/Nm3)
Phase 1	62	763,000	22	ND	ND
Phase 2	63	763,000	20	ND	ND
Phase 3	65	763,000	27	ND	ND
Phase 4	65.3	763,000	44	ND	ND
Phase 5	62	763,000	40	ND	ND
Phase 6	60	763,000	40	ND	2.7
QCVN Limits	-	-	160	20	40

3. Monitoring of Other Environmental Components

Thi Vai River Water Quality (Upstream & Downstream)

Monitored 4 times/year for 36 parameters (pH, TSS, COD, BOD5, DO, nutrients, heavy metals, pesticides, radioactivity, coliform). All recorded results comply with relevant standards.

4. Solid and Normal Industrial Waste Management

Table 29: Domestic Solid Waste

Waste Type	Volume (tons/year)	Volume (tons/day)	Receiving Unit
Domestic waste (cans, glass containers, office waste, etc.)	149.09	0.408	Tan Thanh Urban Services JSC

Table 30: Normal Industrial Solid Waste

Waste Type	Volume (kg/day)	Volume (kg/year)	Receiving Unit
WWTP Sludge (non-hazardous)	64	23,350	PEDACO Green Environment JSC
Cooling water system sludge	2,830.7	1,033,190	
Ion exchange resins from water treatment	51.8	18,900	
Waste concrete	51.8	18,910	
Waste packaging wood	24.3	8,860	
Damaged wooden pallets, scrap wood	277.9	101,450	
Plastic packaging (non-hazardous)	758.5	276,854	
Total Normal Industrial Waste	4,352.4	1,588,609	

5. Hazardous Waste Management

Hazardous waste generated at the Plant is segregated at the source, stored in designated orange bins, and transferred weekly to the central Hazardous Waste Storage Area. PEDACO Green Environment JSC is contracted for the collection, transport, and treatment.

Table 31: Hazardous Waste Generation

Waste Name	HW Code	Volume (kg/year)	Treatment Method
Absorbents, filter materials, wiping cloths, protective clothing contaminated by hazardous substances	18 02 01	40,632	Incineration
Spent catalysts containing hazardous components	19 08 04	38,248	Landfill
Waste engine, gear and lubricating oils	17 02 04	8,270	Recycle/Incinerate
Hard plastic packaging waste	18 01 03	3,683	Recycle/Incinerate
Fluorescent tubes and other mercury-containing waste	16 01 06	407	Dismantling/ Incineration
Total Hazardous Waste		146,270	

6. Environmental Incident Prevention and Response

The Plant proactively maintains prevention and response plans, including the chemical incident response plan (approved by the Ministry of Industry and Trade), environmental incident response plans, and emergency operational procedures. In 2025, no environmental incidents occurred during the Plant's operations.

7. Remediation of Inspection Requirements

In 2025, the Plant hosted 4 inspection delegations from regulatory bodies (Department of Agriculture and Environment, Police, MoAE). No violations or fines were recorded regarding environmental protection compliance.

PART 2: CONCLUSION

In 2025, Phu My Fertilizer Plant fully complied with environmental protection laws and the Plant's commitments. Specifically:

- **Environmental Monitoring:** Conducted environmental monitoring properly per regulations. All monitoring results were well within the permissible limits of standard regulations.
- **Waste Management:** Successfully collected, classified, and stored waste properly. Waste was securely transferred to licensed contractors equipped for appropriate treatment.
- **Automatic Monitoring Systems (AMS):** Effectively operated and managed continuous automatic monitoring systems for cooling water and air emissions (stacks 70-SK-2001 of NPK Plant and 20-SK-2201 of UFC85 Plant) according to procedural requirements. Conducted required calibration, comparative monitoring, reporting, and incident remediations appropriately.

The Plant remains resolutely committed to actively protecting the environment, continuously improving discharge quality, and ensuring full compliance with environmental regulations as mandated by law.

Recipients:

- Ministry of Agriculture and Environment;
- HCMC Dept of Agriculture & Environment;
- HCMC EPZA;
- Phu My Ward People's Committee;
- IZICO;
- Plant Director (for reporting);
- Safety Board (for reporting);
- Archives (VT, ATSKMT, NTL).

**ON BEHALF OF THE DIRECTOR
DEPUTY DIRECTOR OF THE BRANCH**

NGUYEN QUANG SON

Signed: Jan 14, 2026 15:06:22