

ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 31/01/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 5	10
2	Temperature	°C	SOP-PQT-KT06	58.0
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	<1.0
5	Formaldehyde gas (HCHO)	mg/Nm ³	PD CEN/TS 13649	<0.025

Notes / Remarks:

- Sample taken under Contract No. 50/DPM/VT-TTQT/D-VD dated 10/03/2022.
- Flow rate refers to plant design specifications.
- Subcontractor analysis: Environmental Technology & Occupational Hygiene Consulting Center.

HEAD OF ENVIRONMENTAL ADVISORY / TESTING DIVISION

DIRECTOR / VICE DIRECTOR

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Le Tuan Kiet / Nguyen Xuan Son / Vo Phi Long

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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 01/03/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 5	10
2	Temperature	°C	SOP-PQT-KT06	52.7
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Formaldehyde gas (HCHO)	mg/Nm ³	PD CEN/TS 13649	<1.0

Notes / Remarks:

- Sample taken under Contract No. 50/DPM/VT-TTQT/D-VD dated 10/03/2022.
- Flow rate refers to plant design specifications.
- Subcontractor analysis: Environmental Technology & Occupational Hygiene Consulting Center.

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/03/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	2.0

Notes / Remarks:

- Sample taken under Contract No. 50/DPM/VT-TTQT/D-VD dated 10/03/2022.

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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/06/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 5	<1.0
2	Temperature	°C	SOP-PQT-KT06	43.2
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	18
5	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Flow rate refers to plant design specifications.

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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 31/07/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 5	<1.0
2	Temperature	°C	SOP-PQT-KT06	61.3
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	1.1
5	Formaldehyde gas (HCHO)	mg/Nm ³	PD CEN/TS 13649	<0.025

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: Dai Phu Construction & Environment JSC.

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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/09/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm3	US EPA Method 5	10
2	Temperature	°C	SOP-PQT-KT06	49.6
3	Flow rate	m3/h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH3)	mg/Nm3	JIS K 0099:2020	2.9
5	Formaldehyde gas (HCHO)	mg/Nm3	US EPA Method 0011	<0.0001

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/09/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 5	55
2	Temperature	°C	SOP-PQT-KT06	64.2
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	1.2
5	Formaldehyde gas (HCHO)	mg/Nm ³	PD CEN/TS 13649	<0.025

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: Dai Phu Construction & Environment JSC.

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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 12/10/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	129
2	Temperature	°C	SOP-PQT-KT06	43.1
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	<1.0
5	Formaldehyde gas (HCHO)	mg/Nm ³	PD CEN/TS 13649	<0.025

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 25/11/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	<1.0
2	Temperature	°C	SOP-PQT-KT06	48.3
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	<1.0
5	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/11/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	1.0
2	Temperature	°C	SOP-PQT-KT06	50.4
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	<1.0
5	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 04/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	2.7
2	Temperature	°C	SOP-PQT-KT06	45.3
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	<1.0
5	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	1.8
2	Temperature	°C	SOP-PQT-KT06	44.1
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2020	38

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.

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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas from the prilling tower stack of Phu My Fertilizer Plant
2. **Date of Monitoring:** 26/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	8.7
2	Temperature	°C	QT-KT-008	56.3
3	Flow rate	m ³ /h	Plant design specification reference (*)	763,000
4	Ammonia gas (NH ₃)	mg/Nm ³	JIS K 0099:2004	9.8
5	Formaldehyde gas (HCHO)	mg/Nm ³	US EPA Method 0011	<0.05

Notes / Remarks:

- Sample taken under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.
- Subcontractor analysis: NAVITEK Food & Environmental Testing JSC.

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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas inside stack 10H2001 of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/02/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm3	US EPA Method 05	10
2	Flow rate	m3/h	SOP-PQT-KT06	121,347
3	Sulfur Dioxide (SO2)	mg/Nm3	SOP-PQT-KT01	<2.6
4	Nitrogen Oxides (NOx)	mg/Nm3	SOP-PQT-KT01	20.3

Notes / Remarks:

- Sample collected under Contract No. 50/DPM/VT-TTQT/D-VD dated 10/03/2022.

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1. **Sampling Location:** Exhaust gas inside stack 10H2001 of Phu My Fertilizer Plant
2. **Date of Monitoring:** 30/06/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm3	US EPA Method 05	1.0
2	Flow rate	m3/h	SOP-PQT-KT06	300,049
3	Sulfur Dioxide (SO2)	mg/Nm3	SOP-PQT-KT01	<2.6
4	Nitrogen Oxides (NOx)	mg/Nm3	SOP-PQT-KT01	103.7

Notes / Remarks:

- Sample collected under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.

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ENVIRONMENT MONITORING REPORT

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1. **Sampling Location:** Exhaust gas inside stack 10H2001 of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/09/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	8.6
2	Flow rate	m ³ /h	SOP-PQT-KT06	134,264
3	Sulfur Dioxide (SO ₂)	mg/Nm ³	SOP-PQT-KT01	<2.6
4	Nitrogen Oxides (NO _x)	mg/Nm ³	SOP-PQT-KT01	98.3

Notes / Remarks:

- Sample collected under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.

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1. **Sampling Location:** Exhaust gas inside stack 10H2001 of Phu My Fertilizer Plant
2. **Date of Monitoring:** 12/10/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm ³	US EPA Method 05	50
2	Flow rate	m ³ /h	SOP-PQT-KT06	105,604
3	Sulfur Dioxide (SO ₂)	mg/Nm ³	SOP-PQT-KT01	<2.6
4	Nitrogen Oxides (NO _x)	mg/Nm ³	SOP-PQT-KT01	<1.9

Notes / Remarks:

- Sample collected under Contract No. 117-23/PVFCCo/CUVTTB-TTQT/M-DV dated 29/06/2023.

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Post-treatment industrial wastewater of NPK Plant (at inspection pit prior to connection to Phu My 1 IZ centralized collection system)
- 2. Date of Monitoring:** 06/12/2023 (09:20)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	ND (<3.0)
3	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	6.8
4	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Total Coliform	MPN/100ml	TCVN 6187-2:2020	11 x 10 ²
7	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	23.5
8	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	1.02
9	Total Iron (T-Fe)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	0.053
10	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	ND (<0.050)
11	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
12	pH	-	TCVN 6492:2011	7.7
13	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
14	Temperature	°C	SMEWW 2550B:2023	29.8

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
- Test results are only valid for the analyzed samples at the time and location indicated.

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TEST REPORT

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- 1. Sampling Location:** Post-treatment industrial wastewater of NPK Plant (at inspection pit prior to connection to Phu My 1 IZ centralized collection system)
- 2. Date of Monitoring:** 29/06/2023 (11:00)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
2	pH	-	TCVN 6492:2011	6.9
3	Phenol	mg/l	TCVN 6216:1996	ND (<0.3)
4	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	39
5	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
6	Temperature	°C	SMEWW 2550B:2023	32.2
7	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
8	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	ND (<3.0)
9	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
10	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	19.2
11	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	5.05
12	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	1.25
13	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	ND (<0.050)
14	Total Coliform	MPN/100ml	TCVN 6187-2:2020	23

Notes / Remarks:

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HEAD OF ENVIRONMENTAL ADVISORY / TESTING DIVISION

DIRECTOR / VICE DIRECTOR

Nguyen Thi Le Hang / Nguyen Thi Hang

Le Tuan Kiet / Nguyen Xuan Son / Vo Phi Long

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Post-treatment wastewater at BA8 tank of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/02/2023 (09:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220D:2017	ND (<30)
3	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
4	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	ND (<3.0)
5	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	ND (<2.0)
6	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
7	Total Coliform	MPN/100ml	TCVN 6187-2:2020	Negative (<3)
8	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.86
9	Total Iron (T-Fe)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2017	0.112
10	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2017	ND (<0.050)
11	pH	-	TCVN 6492:2011	7.4
12	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
13	Temperature	°C	SMEWW 2550B:2017	36.9
14	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2017	ND (<0.3)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Post-treatment wastewater at BA8 tank of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/06/2023 (09:40)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	ND (<2.0)
2	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
3	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	3.7
4	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
5	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	23.2
6	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	1.55
7	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.064
8	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
9	Total Coliform	MPN/100ml	TCVN 6187-2:2020	43 x 10 ²
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Temperature	°C	SMEWW 2550B:2023	37.0
12	pH	-	TCVN 6492:2011	6.8
13	Phenol	mg/l	TCVN 6216:1996	ND (<0.3)
14	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	ND (<0.050)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Post-treatment wastewater at BA8 tank of Phu My Fertilizer Plant
2. **Date of Monitoring:** 07/09/2023 (09:50)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	ND (<2.0)
2	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
3	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	ND (<3.0)
4	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
5	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	22.2
6	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.95
7	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	ND (<0.050)
8	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
9	Total Coliform	MPN/100ml	TCVN 6187-2:2020	15 x 10 ⁴
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Temperature	°C	SMEWW 2550B:2023	37.4
12	pH	-	TCVN 6492:2011	7.6
13	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
14	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	ND (<0.050)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Post-treatment wastewater at BA8 tank of Phu My Fertilizer Plant
2. **Date of Monitoring:** 13/10/2023 (10:00)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	ND (<2.0)
2	Biochemical Oxygen Demand (BOD5 at 20°C)	mg/l	TCVN 6001-1:2021	5.2
3	Total Coliform	MPN/100ml	TCVN 6187-2:2020	23
4	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	14.7
5	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	1.18
6	Total Iron (T-Fe)	mg/l	SMEWW 3125B:2023	ND (<0.050)
7	Copper (Cu)	mg/l	US EPA Method 3015A & SMEWW 3120 B: 2023	ND (<0.050)
8	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
9	pH	-	TCVN 6492:2011	7.2
10	Temperature	°C	SMEWW 2550B:2023	37.2
11	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
12	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
13	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
14	Ammonium (NH4+ as N)	mg/l	TCVN 5988:1995	ND (<1.00)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Surface water 100m upstream of cooling water discharge into Thi Vai River (Coordinates X: 1171521; Y: 421262)
2. **Date of Monitoring:** 28/02/2023 (09:20)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Benzene hexachloride (BHC)	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
2	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
3	pH	-	TCVN 6492:2011	7.4
4	Temperature	°C	SMEWW 2550B:2017	30.0
5	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	6.4
6	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.45
7	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
8	Arsenic (As)	mg/l	ASTM-D2972:15	ND (<0.0100)
9	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2017	1.1
10	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
11	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
12	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	0.51
13	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
14	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.020
15	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2017	ND (<5)
16	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ^{^1}
17	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	23
18	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
19	Lead (Pb)	mg/l	ASTM-D3559:15	ND (<0.0100)
20	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
21	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
22	Cadmium (Cd)	mg/l	ASTM-D3557:17	ND (<0.0023)
23	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3120 B	0.081
26	Total Oil and Grease	mg/l	SMEWW 5520B:2017	ND (<0.3)
27	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
28	Dichlorodiphenyltrichloroethane (DDT)	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
29	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
30	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
31	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	7.9

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Chloride (Cl-)	mg/l	TCVN 6194:1996	14,720
33	Surfactants	mg/l	TCVN 6622-1:2009	ND (<0.01)
34	Total Phenol	mg/l	TCVN 6216:1996	ND (<0.001)
35	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	5.47
36	Gross Alpha Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.021)
37	Gross Beta Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.018)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Surface water 100m upstream of cooling water discharge into Thi Vai River (Coordinates X: 1171521; Y: 421262)
2. **Date of Monitoring:** 30/06/2023 (11:10)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.178
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	15
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.2
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	3.5
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	ND (<0.010)
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	23 x 10 ^{^1}
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	0.263
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.29
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.8
18	pH	-	TCVN 6492:2011	6.5
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	11,099
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ^{^2}
31	Hexavalent Chromium (Cr6 ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	TCVN 6622-1:2009	ND (<0.01)
33	Total Phenol	mg/l	TCVN 6216:1996	ND (<0.001)
34	Gross Alpha Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.021)
35	Gross Beta Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.018)
36	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	4.48

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Surface water 100m upstream of cooling water discharge into Thi Vai River (Coordinates X: 1171521; Y: 421262)
- 2. Date of Monitoring:** 07/09/2023 (10:50)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.21
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	12
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.4
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	3.2
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.030
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	23 x 10 ^{^1}
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.29
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	6.2
18	pH	-	TCVN 6492:2011	7.2
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	11,038
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	0.050
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ^{^2}
31	Hexavalent Chromium (Cr6 ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	SMEWW 5540B&C:2017	ND (<0.03)
33	Total Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)
34	Gross Alpha Radioactivity	Bq/l	TCVN 6053:2011	ND (<0.010)
35	Gross Beta Radioactivity	Bq/l	TCVN 6219:2011	19.5
36	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	3.4
37	Temperature	°C	SMEWW 2550B:2023	32.7

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Surface water 100m upstream of cooling water discharge into Thi Vai River (Coordinates X: 1171521; Y: 421262)
- 2. Date of Monitoring:** 13/10/2023 (11:00)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	1.96
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	20
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.1
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	2.6
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.025
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	93 x 10 ^{^1}
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	SMEWW 3125B:2025	0.331
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 7325:2016	6.8
18	pH	-	TCVN 6492:2011	6.8
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	11,257
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	0.104
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ^{^2}
31	Hexavalent Chromium (Cr6 ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	SMEWW 5540B&C:2017	ND (<0.03)
33	Total Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)
34	Gross Alpha Radioactivity	Bq/l	TCVN 6053:2011	ND (<0.010)
35	Gross Beta Radioactivity	Bq/l	TCVN 6219:2011	3.89
36	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	5.1
37	Temperature	°C	SMEWW 2550B:2023	30.8

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
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HEAD OF ENVIRONMENTAL ADVISORY / TESTING DIVISION

DIRECTOR / VICE DIRECTOR

Nguyen Thi Le Hang / Nguyen Thi Hang

Le Tuan Kiet / Nguyen Xuan Son / Vo Phi Long

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Surface water 100m downstream of cooling water discharge into Thi Vai River (Coordinates X: 1171103; Y: 421432)
- 2. Date of Monitoring:** 28/02/2023 (09:40)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Benzene hexachloride (BHC)	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
2	Heptachlor & Heptachlorepoxide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
3	pH	-	TCVN 6492:2011	7.5
4	Temperature	°C	SMEWW 2550B:2017	29.9
5	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	6.3
6	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.43
7	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
8	Arsenic (As)	mg/l	ASTM-D2972:15	ND (<0.0100)
9	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2017	1.1
10	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
11	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
12	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	0.59
13	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
14	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.019
15	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2017	ND (<5)
16	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ^{^1}
17	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	15
18	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
19	Lead (Pb)	mg/l	ASTM-D3559:15	ND (<0.0100)
20	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
21	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
22	Cadmium (Cd)	mg/l	ASTM-D3557:17	ND (<0.0023)
23	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3120 B	0.086
26	Total Oil and Grease	mg/l	SMEWW 5520B:2017	ND (<0.3)
27	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
28	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
29	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
30	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
31	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	7.8

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Chloride (Cl-)	mg/l	TCVN 6194:1996	14,754
33	Surfactants	mg/l	TCVN 6622-1:2009	ND (<0.01)
34	Total Phenol	mg/l	TCVN 6216:1996	ND (<0.001)
35	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	5.79
36	Gross Alpha Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.021)
37	Gross Beta Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.018)

Notes / Remarks:

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HEAD OF ENVIRONMENTAL ADVISORY / TESTING DIVISION

DIRECTOR / VICE DIRECTOR

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Le Tuan Kiet / Nguyen Xuan Son / Vo Phi Long

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Surface water 100m downstream of cooling water discharge into Thi Vai River (Coordinates X: 1171103; Y: 421432)
- 2. Date of Monitoring:** 30/06/2023 (11:20)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.265
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	15
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.4
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	3.5
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	ND (<0.010)
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	24 x 10 ²
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	0.278
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.33
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.2
18	pH	-	TCVN 6492:2011	7.6
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	10,961
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ²
31	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	TCVN 6622-1:2009	ND (<0.01)
33	Total Phenol	mg/l	TCVN 6216:1996	ND (<0.001)
34	Gross Alpha Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.021)
35	Gross Beta Radioactivity	Bq/l	TCVN 8879:2011	ND (<0.018)
36	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	4.37

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
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HEAD OF ENVIRONMENTAL ADVISORY / TESTING DIVISION

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

- 1. Sampling Location:** Surface water 100m downstream of cooling water discharge into Thi Vai River (Coordinates X: 1171103; Y: 421432)
- 2. Date of Monitoring:** 07/09/2023 (11:05)
- 3. Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	ND (<0.100)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	13
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.2
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	3.1
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.039
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	23 x 10 ^{^1}
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	0.0132
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.33
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	6.2
18	pH	-	TCVN 6492:2011	7.2
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	10,968
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	0.050
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ^{^2}
31	Hexavalent Chromium (Cr6 ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	SMEWW 5540B&C:2017	ND (<0.03)
33	Total Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)
34	Gross Alpha Radioactivity	Bq/l	TCVN 6053:2011	ND (<0.010)
35	Gross Beta Radioactivity	Bq/l	TCVN 6219:2011	3.29
36	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	3.1
37	Temperature	°C	SMEWW 2550B:2023	32.6

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Surface water 100m downstream of cooling water discharge into Thi Vai River (Coordinates X: 1171103; Y: 421432)
2. **Date of Monitoring:** 13/10/2023 (11:15)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	2.63
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	17
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.1
4	Nitrate (NO ₃ ⁻ as N)	mg/l	TCVN 6494-1:2011	2.4
5	Phosphate (PO ₄ 3 ⁻ as P)	mg/l	TCVN 6202:2008	0.020
6	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
7	Escherichia coli (E.coli)	MPN/100ml	TCVN 6187-2:2020	43 x 10 ^{^1}
8	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
9	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
10	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
11	Total Iron (T-Fe)	mg/l	SMEWW 3125B:2025	0.301
12	Total Oil and Grease	mg/l	SMEWW 5520B:2023	ND (<0.3)
13	Aldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
14	DDT	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
15	Heptachlor & Heptachlorepoide	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Dissolved Oxygen (DO)	mg/l	TCVN 7325:2016	6.9
18	pH	-	TCVN 6492:2011	7.0
19	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Nitrite (NO ₂ ⁻ as N)	mg/l	TCVN 6494-1:2011	ND (<0.020)
21	Chloride (Cl ⁻)	mg/l	TCVN 6194:1996	10,354
22	Dieldrin	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
23	BHC	µg/l	US EPA 8270D/3510C/3630C	ND (<0.020)
24	Total Chromium (Cr)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
25	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
26	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B	0.103
27	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
28	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
29	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B	ND (<0.050)
30	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ^{^2}
31	Hexavalent Chromium (Cr6 ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
32	Surfactants	mg/l	SMEWW 5540B&C:2017	ND (<0.03)
33	Total Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)
34	Gross Alpha Radioactivity	Bq/l	TCVN 6053:2011	ND (<0.010)
35	Gross Beta Radioactivity	Bq/l	TCVN 6219:2011	1.32
36	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	4.5
37	Temperature	°C	SMEWW 2550B:2023	30.6

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Inlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/02/2023 (09:50)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Cadmium (Cd)	mg/l	ASTM-D3557:17	ND (<0.0023)
2	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	ND (<0.020)
3	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	0.170
4	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2017	ND (<5)
5	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2017	0.3
6	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
7	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
8	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
9	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
10	Arsenic (As)	mg/l	ASTM-D2972:15	ND (<0.010)
11	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
12	Barium (Ba)	mg/l	US EPA 3015A & US EPA 200.8	ND (<0.025)
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.3
14	pH	-	TCVN 6492:2011	7.3
15	Temperature	°C	SMEWW 2550B:2017	30.0
16	Cyanide (CN-)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Lead (Pb)	mg/l	ASTM-D3559:15	ND (<0.010)
18	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ⁴
19	Biochemical Oxygen Demand (BOD5)	mg/l	TCVN 6001-1:2021	ND (<3.0)
20	Ammonium (NH4+ as N)	mg/l	TCVN 6179-1:1996	0.47
21	Residual Chlorine	mg/l	HACH Method 8021	0.07
22	Hexavalent Chromium (Cr6+)	mg/l	TCVN 6658:2000	ND (<0.010)
23	Trivalent Chromium (Cr3+)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
24	Sulfide (S2-)	mg/l	SMEWW 4500 S2-D:2017	ND (<0.12)
25	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
26	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
27	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	13
28	Fluoride (F-)	mg/l	SMEWW 4500-F-B&D:2017	1.2

TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Inlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/06/2023 (11:20)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	31
2	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
3	Cyanide (CN-)	mg/l	TCVN 6181-1996	ND (<0.008)
4	Residual Chlorine	mg/l	HACH Method 8021	0.04
5	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	0.4
6	Sulfide (S ²⁻)	mg/l	SMEWW 4500 S ²⁻ -D:2023	ND (<0.12)
7	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
8	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
9	Total Coliform	MPN/100ml	TCVN 6187-2:2020	15 x 10 ²
10	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.23
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.3
13	pH	-	TCVN 6492:2011	6.6
14	Temperature	°C	SMEWW 2550B:2023	34.3
15	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.1
16	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
17	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.096
18	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.43
19	Lead (Pb)	mg/l	ASTM-D3559:D-15	0.0146
20	Barium (Ba)	mg/l	US EPA 3015A & SMEWW 3120B: 2023	ND (<0.030)
21	Trivalent Chromium (Cr ³⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
22	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
23	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
24	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
25	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
26	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Arsenic (As)	mg/l	ASTM-D2972:C-15	0.218
28	Hexavalent Chromium (Cr ⁶⁺)	mg/l	TCVN 6658:2000	ND (<0.010)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Tin (Sn)	mg/l	SMEWW 3111B:2017	ND (<0.03)
30	Total Phenol	mg/l	TCVN 6216:1996	ND (<0.001)
31	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	4.39

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Inlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 07/09/2023 (10:10)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.18
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	16
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.2
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.068
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.36
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	31.4
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	4.7
14	pH	-	TCVN 6492:2011	6.9
15	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
16	Residual Chlorine	mg/l	Hach Method 8021	0.01
17	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
18	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
19	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
20	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
21	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.010)
22	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
23	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
25	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
26	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Total Coliform	MPN/100ml	TCVN 6187-2:2020	Negative (<3)
28	Barium (Ba)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.030)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Tin (Sn)	mg/l	EPA Method 200.7	ND (<0.03)
30	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	22.2
31	Phenol	mg/l	SMEWW 5530B&C:2017	0.0060

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Inlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 13/10/2023 (10:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	2.23
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	22
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.1
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.044
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	SMEWW 3125B:2023	0.488
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	31.3
13	Dissolved Oxygen (DO)	mg/l	TCVN 7325:2016	6.5
14	pH	-	TCVN 6492:2011	6.5
15	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
16	Residual Chlorine	mg/l	Hach Method 8021	ND (<0.01)
17	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
18	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
19	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
20	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
21	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
22	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
23	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	0.090
24	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
25	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
26	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Total Coliform	MPN/100ml	TCVN 6187-2:2020	23
28	Barium (Ba)	mg/l	US EPA 3015A & EPA 200.8	ND (<0.030)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Tin (Sn)	mg/l	SMEWW 3113B:2017	0.029
30	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	5.8
31	Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Inlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/11/2023 (10:15)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 6179-1:1996	0.542
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	74
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.9
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.24
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.C:2023	ND (<5)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3125B: 2023	1.27
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	31.3
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.4
14	pH	-	TCVN 6492:2011	6.5
15	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
16	Residual Chlorine	mg/l	Hach Method 8021	ND (<0.01)
17	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
18	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
19	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
20	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
21	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
22	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
23	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	0.115
24	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
25	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
26	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Total Coliform	MPN/100ml	TCVN 6187-2:2020	23
28	Barium (Ba)	mg/l	US EPA 3015A & EPA 200.8	ND (<0.030)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Tin (Sn)	mg/l	SMEWW 3113B:2017	0.031
30	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	2.8
31	Phenol	mg/l	SMEWW 5530B&C:2017	ND (<0.002)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 27/02/2023 (11:10)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	17
2	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
3	Fluoride (F-)	mg/l	SMEWW 4500-F-B&D:2017	1.2
4	Hexavalent Chromium (Cr6+)	mg/l	TCVN 6658:2000	ND (<0.010)
5	Trivalent Chromium (Cr3+)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
6	Sulfide (S2-)	mg/l	SMEWW 4500 S2-D:2017	ND (<0.12)
7	Color	mg/l Pt	TCVN 6185:2015	5
8	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220D:2017	ND (<30)
9	Ammonium (NH4+ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
10	Arsenic (As)	mg/l	ASTM-D2972:15	ND (<0.010)
11	Total Coliform	MPN/100ml	TCVN 6187-2:2020	46 x 10 ¹
12	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
13	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	ND (<0.020)
14	Biochemical Oxygen Demand (BOD5)	mg/l	TCVN 6001-1:2021	ND (<3.0)
15	Lead (Pb)	mg/l	ASTM-D3559:15	ND (<0.010)
16	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	0.256
17	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
18	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
19	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
20	Cadmium (Cd)	mg/l	ASTM-D3557:17	ND (<0.0023)
21	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2017	ND (<0.050)
22	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
23	Barium (Ba)	mg/l	US EPA 3015A & US EPA 200.8	ND (<0.025)
24	Cyanide (CN-)	mg/l	TCVN 6181-1996	ND (<0.008)
25	pH	-	TCVN 6492:2011	7.1
26	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.1
27	Temperature	°C	SMEWW 2550B:2017	34.4
28	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2017	ND (<0.3)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
30	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	3.56
31	Tin (Sn)	mg/l	SMEWW 3111B:2017	ND (<0.03)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 30/06/2023 (12:10)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	28
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.4
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.058
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	0.0179
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.52
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	35.0
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	6.6
14	pH	-	TCVN 6492:2011	7.3
15	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181-1996	ND (<0.008)
17	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
18	Color	mg/l Pt	TCVN 6185:2015	6
19	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
20	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
21	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
22	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
23	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
25	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
26	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
28	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ²

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Barium (Ba)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.030)
30	Tin (Sn)	mg/l	EPA Method 200.7	ND (<0.03)
31	Total Organic Carbon (TOC)	mg/l	TCVN 6634:2000	4.04

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 31/07/2023 (12:25)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	15
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.5
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.078
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.31
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	38.3
13	pH	-	TCVN 6492:2011	6.3
14	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
15	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
16	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
17	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
18	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
19	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
20	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
21	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
22	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
23	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
25	Total Coliform	MPN/100ml	TCVN 6187-2:2020	43 x 10 ⁴

Notes / Remarks:

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Le Tuan Kiet / Nguyen Xuan Son / Vo Phi Long

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 07/09/2023 (10:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	16
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.5
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.065
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	TCVN 6177:1996	0.53
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	37.8
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.2
14	pH	-	TCVN 6492:2011	7.2
15	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
17	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
18	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
19	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
20	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
21	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
22	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
23	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
25	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
26	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
28	Total Coliform	MPN/100ml	TCVN 6187-2:2020	Negative (<3)

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Barium (Ba)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.030)
30	Tin (Sn)	mg/l	SMEWW 3113B:2017	0.010
31	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	3.8

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 13/10/2023 (11:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	20
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	1.2
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.071
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	SMEWW 3125B:2023	0.420
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	36.3
13	Dissolved Oxygen (DO)	mg/l	TCVN 7325:2016	7.4
14	pH	-	TCVN 6492:2011	7.1
15	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
17	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
18	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
19	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
20	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
21	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
22	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
23	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	0.052
25	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
26	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
28	Total Coliform	MPN/100ml	TCVN 6187-2:2020	23

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Barium (Ba)	mg/l	US EPA 3015A & EPA 200.8	ND (<0.030)
30	Tin (Sn)	mg/l	EPA Method 200.7	ND (<0.03)
31	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	4.5

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Outlet cooling water of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/11/2023 (10:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Ammonium (NH ₄ ⁺ as N)	mg/l	TCVN 5988:1995	ND (<1.00)
2	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	31
3	Fluoride (F ⁻)	mg/l	SMEWW 4500-F-B&D:2023	2.1
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	0.20
5	Chemical Oxygen Demand (COD)	mg/l	SMEWW 5220.D:2023	ND (<30)
6	Lead (Pb)	mg/l	ASTM-D3559:D-15	ND (<0.0100)
7	Arsenic (As)	mg/l	ASTM-D2972:C-15	ND (<0.0100)
8	Mercury (Hg)	mg/l	TCVN 7877:2008	ND (<0.0010)
9	Total Iron (T-Fe)	mg/l	US EPA 3015A & SMEWW 3125B: 2023	0.645
10	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
11	Biochemical Oxygen Demand (BOD ₅)	mg/l	TCVN 6001-1:2021	ND (<3.0)
12	Temperature	°C	SMEWW 2550B:2023	35.2
13	Dissolved Oxygen (DO)	mg/l	TCVN 12026:2018	7.4
14	pH	-	TCVN 6492:2011	7.1
15	Phenol	mg/l	TCVN 6216:1996	ND (<0.10)
16	Cyanide (CN ⁻)	mg/l	TCVN 6181:1996	ND (<0.008)
17	Residual Chlorine	mg/l	TCVN 6225-3:2011	ND (<0.90)
18	Color	mg/l Pt	TCVN 6185:2015	ND (<5)
19	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
20	Sulfide (S ₂ ⁻)	mg/l	SMEWW 4500 S ₂ -D:2023	ND (<0.12)
21	Hexavalent Chromium (Cr ₆ ⁺)	mg/l	TCVN 6658:2000	ND (<0.010)
22	Trivalent Chromium (Cr ₃ ⁺)	mg/l	Ref: TCVN 6658:2000 / SMEWW 3120B	ND (<0.050)
23	Zinc (Zn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
24	Manganese (Mn)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	0.063
25	Cadmium (Cd)	mg/l	ASTM-D3557:D-17	ND (<0.0023)
26	Nickel (Ni)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
27	Copper (Cu)	mg/l	US EPA 3015A & SMEWW 3120 B: 2023	ND (<0.050)
28	Total Coliform	MPN/100ml	TCVN 6187-2:2020	24 x 10 ^{^1}

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
29	Barium (Ba)	mg/l	US EPA 3015A & EPA 200.8	ND (<0.030)
30	Tin (Sn)	mg/l	EPA Method 200.7	ND (<0.03)
31	Total Organic Carbon (TOC)	mg/l	SMEWW 5310C:2017	3.8

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Soil sample at UFC85 storage tank area of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/06/2023 (11:00)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Arsenic (As)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<15.0)
2	Cadmium (Cd)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<1.5)
3	Lead (Pb)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	27.8
4	Zinc (Zn)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	278.0
5	Copper (Cu)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	54.6

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Soil sample at facility perimeter corner near bulk urea area of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/06/2023 (11:00)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Lead (Pb)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<15.5)
2	Zinc (Zn)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	182.0
3	Copper (Cu)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	23.6
4	Arsenic (As)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<15.0)
5	Cadmium (Cd)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<1.5)

Notes / Remarks:

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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Soil sample at UFC85 storage tank area of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/11/2023 (09:00)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Arsenic (As)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<15.0)
2	Cadmium (Cd)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	3.8
3	Lead (Pb)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	23.4
4	Zinc (Zn)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	58.4
5	Copper (Cu)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<12.0)

Notes / Remarks:

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- ND: Not Detected below method detection limit.
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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Soil sample at facility perimeter corner near bulk urea area of Phu My Fertilizer Plant
2. **Date of Monitoring:** 29/11/2023 (08:50)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Arsenic (As)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<15.0)
2	Cadmium (Cd)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	1.8
3	Lead (Pb)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	24.0
4	Zinc (Zn)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	84.8
5	Copper (Cu)	mg/kg dry wt	US EPA Method 3051A & US EPA 200.7	ND (<12.0)

Notes / Remarks:

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- ND: Not Detected below method detection limit.
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TEST REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Domestic wastewater post-treatment from transformer station of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/12/2023 (09:30)
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Sulfide (S ²⁻)	mg/l	SMEWW 4500 SD:2023	ND (<0.12)
2	Biochemical Oxygen Demand (BOD ₅ at 20°C)	mg/l	TCVN 6001-1:2021	ND (<3.0)
3	Total Suspended Solids (TSS)	mg/l	TCVN 6625:2000	17
4	Total Phosphorus (T-P)	mg/l	TCVN 6202:2008	2.15
5	Total Coliform	MPN/100ml	TCVN 6187-2:2020	11 x 10 ²
6	Total Dissolved Solids (TDS)	mg/l	SOP-PQT-44	377.5
7	pH	-	TCVN 6492:2011	7.6
8	Total Nitrogen (T-N)	mg/l	TCVN 6638:2000	ND (<10.0)
9	Mineral Oil and Grease	mg/l	SMEWW 5520B&F: 2023	ND (<0.3)
10	Surfactants	mg/l	SMEWW 5540B&C:2017	ND (<0.03)

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Generator exhaust emissions at transformer station of Phu My Fertilizer Plant
2. **Date of Monitoring:** 06/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Total Particulate Matter (PM)	mg/Nm3	US EPA Method 5	7.5
2	Temperature	°C	SOP-PQT-KT06	139.4
3	Nitrogen Oxides (NOx)	mg/Nm3	SOP-PQT-KT01	970.1
4	Sulfur Dioxide (SO2)	mg/Nm3	SOP-PQT-KT01	<2.6
5	Noise Level	dBA	TCVN 7878:2018	81.3

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
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ENVIRONMENT MONITORING REPORT

Official Technical Translation & Environmental Compliance Record

1. **Sampling Location:** Generator exhaust emissions at transformer station of Phu My Fertilizer Plant
2. **Date of Monitoring:** 26/12/2023
3. **Customer / Client:** PetroVietnam Fertilizer and Chemicals Corporation - JSC - Phu My Fertilizer Plant

4. Analytical / Measurement Results:

No.	Parameter / Analysis Norm	Unit	Method / Equipment	Result
1	Nitrogen Oxides (NOx)	mg/Nm ³	QT-KT-008	184.05

Notes / Remarks:

- Sample collected and analyzed by CEMRB according to official service contract.
- ND: Not Detected below method detection limit.
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