



इंडियन ऑयल कॉर्पोरेशन लिमिटेड
पाइपलाइन्स प्रभाग : पश्चिमी क्षेत्र पाइपलाइन्स
पी.ओ. वाडीनार, जिला: देवभूमि द्वारका-361 010 (गुजरात)

Indian Oil Corporation Limited
Pipelines Division : Western Region Pipelines
P.O. Vadinar, Dist. : Devbhoomi Dwarka-361 010. (Gujarat)
Fax : 02833 - 256543 Tel. : 02833 - 256984, 256536
Website: www.iocl.com



पाइपलाइन्स प्रभाग :
Pipelines Division :

Ref: WRPL/VDR/TS/1.8.0

Date: 05.06.2020

To,
Regional Officer,
Gujarat Pollution Control Board,
Sardar Patel Bhavan, Rameshwar Nagar,
Jamnagar – 361008

SUB. : Submission of Form- IV & V for Financial year 2019-20.

Dear Sir,

Please find enclosed herewith duly filled Form-4 (format for submission of returns regarding disposal of hazardous waste) & Form-5 (Environmental statement) for the financial year ending 31st March 2020 for further needful please.

Thanking you.

Yours Faithfully,


(Ramesh Kr. Roy)
05/06/2020
Chief Maintenance Manager

Cc.: Gujarat Pollution Control Board,
Paryavaran Bhawan, Sector -10/A,
Gandhinagar – 382 010

सी.आई.एन. : एल23201एमएच1959जीओआई011388

CIN : L23201MH1959GOI011388

पंजीकृत कार्यालय : जी-9, अली यावर जंगमार्ग, बान्द्रा (पूर्व), मुम्बई-400 051 (भारत)
Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai - 400 051 (India)

FORM 4

[See rule 9 (2)]

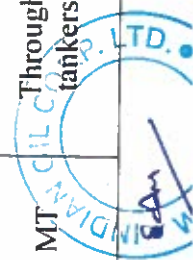
(To be submitted to the State Pollution Control Board)

Format for the submission of returns, regarding disposal of Hazardous Waste**1. Name and address of the Institution:**

**INDIAN OIL CORPORATION LTD.,
SALAYA MATHURA PIPELINE
P. O.: VADINAR
DISTRICT: Devbhoomi Dwarka (Gujarat)
PIN: 361 010**

2. Details of waste disposal operations:

S. No.	Date of issuance of authorization for the disposal of hazardous waste and its reference number	Description of Hazardous Waste			Mode of transportation to the disposal site	Site of Disposal	Brief description of the method of disposal	Date of disposal	Remarks (If any)
		Physical Form and content	Chemical Form	Total Volume of the Hazardous Waste disposed with no. of package					
1	NIL	Liquid and semi liquid	Crude oil sludge	55.8 MT	Through tankers	Bhavnagar	Sold to M/s Fine Refiners Pvt. Ltd., Bhavnagar having authorization for hazardous waste management	Disposed between period 12.03.2020 to 18.03.2020	NIL
2	NIL	Liquid and semi liquid	Crude oil sludge	514.03 MT	Through tankers	Bhavnagar	Sold to M/s Fine Refiners Pvt. Ltd., Bhavnagar having authorization for hazardous waste management	Disposed between period 17.01.2020 to 03.03.2020	NIL
3	NIL	Liquid and semi liquid	Crude oil sludge	492.49 MT	Through tankers	Mehsana	Sold to M/s Alicid Organics Ind. Ltd., Mehsana having authorization for	Disposed between period 10.05.2019	NIL



								hazardous waste management	to	
4	NIL	Liquid and semi liquid	Crude oil sludge	297.88 MT	Through tankers	Mehsana		Sold to M/s Atlas Organics Pvt Ltd, Ahmedabad having authorization for hazardous waste management	Disposed between period 02.04.2019 to 25.04.2019	NIL

3. Data on environment surveillance:

Date of Measurement	Analysis of Ground Water			Analysis of Soil Samples			Analysis of Air Samplings			Analysis of any other samples (Give Details)
	Location of Sampling	Depth of Sampling	Data	Location of sampling	Depth of sampling	Data	Location of sampling	Data	Data	
04.10.2019	Treated waste water collection pond	----	Temp.-26°C, pH-7.8, Colour-Pt.Co.Sc.-20 Suspended Solids-72 mg/l, COD-70 mg/l, BOD-18 mg/l, Oil & Grease-2.5 mg/l	N.A.	N.A.	N.A.	Analysis of ambient air quality near: Admin Building, near control room and near security main gate(Report dated 11.10.2019 enclosed)	Measured Concentration of PM _{2.5} is 18, 20 & 23 µg/m ³	Stack emission of DG sets and Fire Fighting Engines, (report dated 11.10.2019 enclosed)	PM in the range of 49 – 78 mg/Nm ³ , SO ₂ - in the range of 20 – 30 ppm, NOx- in the range of 1.2 – 1.5 ppm



(Ramesh K. Roy)

Chief Maintenance Manager

FORM - V

(See Rule 14)*

From:

Indian Oil Corporation Limited,
(Pipelines Division)
Salaya-Mathura Pipeline,
P.O.: Vadinar,
Dist – Devbhoomi Dwarka (Gujarat),
Pin: 361 010.

To,

Gujarat Pollution Control Board
“Paryavaran Bhavan”,
Sector – 10 A,
GANDHINAGAR – 382 010

Environmental Statement for the financial year ending the 31st March 2020

PART – A

- | | |
|--|--|
| (i) Name and address of the owner/
occupier of the industry operation or
process | Indian Oil Corporation Limited,
(Pipelines Division)
Salaya-Mathura Pipeline,
P.O.: Vadinar, Dist – Jamnagar,
Pin: 361 010. |
| (ii) Industry category -
Primary - (STC Code)
Secondary - (SIC Code) | --- |
| (iii) Production capacity Units | 25.0 MMT per year (Design Capacity) |
| (iv) Year of establishment | 1978 |
| (v) Date of the last Environmental
Statement submitted | 07.06.2019 |

* Submission of Environmental statement is in accordance with the provisions of Rule – 14 of the Environment (Protection). Amendment Rules, 1993 of the Environment (Protection) Act, 1986 (29 of 1986) published vide Notification dated 22-4-1993 G.S.R. 386 (E) in the Gazette of India – Extraordinary- Part – II Section – 3 Subsection (i), No. 155 dated 28-4-1993 by the Ministry of Environment and Forests, Government of India: read with the Notification dated 13-3-1993 G.S.R. 329 (E), of the Gazette of India – Extraordinary Part – II Section – 3 Subsection (i) No. 120 dated 13-3-1993.

“ Every person carrying on an industry, operation or process requiring Consent under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974 (6 of 1974) or under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 (14 of 1981) or both or authorisation under the Hazardous Wastes (Management and Handling) Rules, 1989 Published under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an Environmental Statement for the financial year ending the 31st March in Form V to the concerned State Pollution Control Board on or before the Thirtieth day of September every year beginning 1993”



PART - B

Water and Raw material Consumption:

(1) Water consumption m³/ day:

Process	----
Cooling	280 m ³ /day (Inclusive of fire water makeup)
Domestic	
Others (Fire water make up)	

Name of Products	Process water consumption per unit product output	
	During the previous financial year	During the current financial year
	(1)	(2)

NOT APPLICABLE SINCE NO WATER IS USED FOR PROCESS. WATER USAGE IS ONLY FOR FIRE FIGHTING AND DOMESTIC PURPOSE.

(2) Raw material consumption:

*Name of Raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year

NOT APPLICABLE SINCE PIPELINE SYSTEM IS USED ONLY FOR TRANSPORTATION OF CRUDE OIL

* Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.



PART - C

Pollution discharged to environment/ unit of output (Parameter as specified in the consent issued)

Pollutants	Quantity of pollutant discharged (mass/ day)	Concentrations of pollutants in discharges (mass / volume)	Percentage of variation from prescribed standards with reason
(a) Water	100 M ³ / day	Oil & grease < 10 mg/lit. Other parameters within specified norms	Within specified parameters.
(b) Air (EMISSION BY ENGINES)*			
(i) PM	Not measured	49-78 mg / Nm ³	The emissions are within specified parameters in the consent
(ii) SO ₂	Not measured	20-30 ppm	
(iii) NO _x	Not measured	1.2-1.5 ppm	

* Emergency/ backup equipment (DG Sets & Fire Fighting Engines) in standby only. As per Report of stack emission measurement dated 11.10.2019

PART - D HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management and Handling) Rules, 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
(a) From Process	NIL	NIL
(b) From Pollution control facilities	NIL	NIL

No hazardous waste generated from process or from pollution control facilities. Sludge from tank maintenance works disposed through authorised agencies is 1360 MT for current financial year 2019-20 and 809 MT for previous financial year 2018-19.

PART - E SOLID WASTE

	Total Quantity (kg)	
	During the previous financial year	During the current financial year
(a) From Process	NIL	NIL
(b) From Pollution control facilities	NIL	NIL
(c) (1) Quantity recycled or reutilised within the unit	NIL	NIL
(2) Sold	NIL	NIL
(3) Disposed	NIL	NIL



PART - F

Please specify the characterisation (in terms of consumption and quantity) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Sludge is sold to registered agency having authorization for hazardous waste management.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- NIL -

PART - H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

We have implemented Environmental Management System as per international Standard ISO-14001 with a view to achieve continual improvement in environmental performance and pollution prevention.

PART - I

Any other particulars for improving the quality of the environment.

We have implemented ISO 14001 standard in our installation which include

1. Tree plantation in the installation.
2. Awareness programme for employees and contractors working in the installation.



(Signature of a person carrying out an industry, operation or process)

Name: Ramesh Kr. Roy

Designation: Chief Maintenance Manager

Address: Indian Oil Corporation Limited,

(Pipelines Division)

Salaya-Mathura Pipeline,

P.O.: Vadinar, Dist – Dev Bhoomi

Dwarka,

Pin: 361 010.

ANNEXURE-I

QUALITY OF WATER

The quantity of domestic wastewater in the pump station area is very low (estimated to be within 10 kl/day). At Vadinar, water separated in the crude oil storage tanks after settling period is drained and taken to the OWS (Oil water separator) for separating suspended oil contents, if any. Average quantity of such water discharged at Vadinar is around 100KL/Day at present. This may vary and depend on load port quality assurance while tanker loading operation.



TEST REPORT OF STACK EMISSION ANALYSIS

(VIth Quarter; October - 2019 to December - 2019)

Handwritten:
11/10/2019

To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village : Vadinar, District: Devbhoomi Dwarka, (Gujarat.)	Report No. : CCS/RJT/IOCLVI-10-2019/106 Report Date : 11/10/2019 Customer's Reference : Work Order No. 25582835 Sample Description : Stack Emission Sample Packing/Seal : Plastic Bottles & Thimbles
---	--

Stack Description	Fire Fighting Engine # 1	Fire Fighting Engine # 2	Fire Fighting Engine # 3	Fire Fighting Engine # 4
Date of Sample Collection	---	---	04/10/2019	04/10/2019
Duration of Sampling (Minutes)	---	---	20	20
Stack Temperature at Sampling Point (°C)	---	---	123	128
Ambient Temperature (°C)	---	---	29	29
Avg. Velocity of Flue Gases (m/sec.)	---	---	14.17	14.32
Flow Rate of PM (LPM)	---	---	22	22
Avg. Gaseous Flow Rate (LPM)	---	---	02	02

Sr. No.	Parameters	Unit	Permissible Limit	Results			
				Fire Fighting Engine # 1	Fire Fighting Engine # 2	Fire Fighting Engine # 3	Fire Fighting Engine # 4
1.	Particulate Matter (PM)	mg/Nm ³	150	---	---	50	53
2.	Sulphur Dioxide (SO ₂)	ppm	100	---	---	20	23
3.	Oxides of Nitrogen (NO _x)	ppm	50	---	---	1.2	1.3
4.	Carbon Monoxide (CO)	ppm	---	---	---	2.2	2.4

NOTE: Methods of Analysis Followed:

- (1) PM: IS 11255 (Part - I) (2) SO₂: IS 11255 (Part - II) 1985
(3) NO_x: IS 11255 (Part - VII) 1999 (4) CO: IS 5182 (Part - X) 1976

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Comet Consultancy Services,



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Analyst

TEST REPORT OF STACK EMISSION ANALYSIS

(VIth Quarter, October – 2019 to December – 2019)

<p><i>Analysis 11/10/2019</i></p> <p>To The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village: Vadnar, District: Devbhoomi Dwarka (Gujarat.)</p>	<p>Report No. : CCS/RJT/OCL/VI-10-2019/157 Report Date : 11/10/2019 Customer's Reference : Work Order No. 25582835 Sample Description : Stack Emission Sample Packing/Seal : Plastic Bottles & Thimbles</p>
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Stack Description	Fire Fighting Engine # 5	Fire Fighting Engine # 6	Fire Fighting Engine # 7	Fire Fighting Engine # 8
Date of Sample Collection	04/10/2019	04/10/2019	04/10/2019	04/10/2019
Duration of Sampling (Minutes)	20	20	20	20
Stack Temperature at Sampling Point (°C)	124	131	133	128
Ambient Temperature (°C)	29	30	30	30
Avg. Velocity of Flue Gases (m/sec)	15.12	15.37	16.05	15.11
Flow Rate of PM (LPM)	22	22	23	22
Avg. Gaseous Flow Rate (LPM)	02	02	02	02

Sr. No.	Parameters	Unit	Permissible Limit	Results			
				Fire Fighting Engine # 5	Fire Fighting Engine # 6	Fire Fighting Engine # 7	Fire Fighting Engine # 8
1	Particulate Matter (PM)	mg/Nm ³	150	56	59	50	49
2	Sulphur Dioxide (SO ₂)	ppm	100	23	25	20	25
3	Oxides of Nitrogen (NO _x)	ppm	50	12	13	12	13
4	Carbon Monoxide (CO)	ppm	—	22	24	22	23

NOTE: Methods of Analysis Followed:

- (1) PM IS 11255 (Part - I) (2) SO₂ IS 11255 (Part - II) 1985
(3) NO_x IS 11255 (Part - VII) 1999 (4) CO IS 5182 (Part - X) 1976


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Analyst

TEST REPORT OF STACK EMISSION ANALYSIS

(VIth Quarter, October - 2019 to December - 2019)

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 18/10/19

To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village : Vadinar, District: Devbhoomi Dwarka.(Gujarat.)	Report No. : CCS/RJT/IOCL/VI-10-2019/108 Report Date : 11/10/2019 Customer's Reference : Work Order No.:25582835 Sample Description : Stack Emission Sample Packing/Seal : Plastic Bottles & Thimbles
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Stack Description	Fire Fighting Engine # 9	Fire Fighting Engine # 10
Date of Sample Collection	04/10/2019	04/10/2019
Duration of Sampling (Minutes)	20	20
Stack Temperature at Sampling Point (°C)	130	124
Ambient Temperature (°C)	30	30
Avg. Velocity of Flue Gases (m/sec.)	15.18	15.43
Flow Rate of PM (LPM)	23	23
Avg. Gaseous Flow Rate (LPM)	02	02

Sr. No.	Parameters	Unit	Permissible Limit	Results	
				Fire Fighting Engine # 9	Fire Fighting Engine # 10
1.	Particulate Matter (PM)	mg/Nm ³	150	55	50
2.	Sulphur Dioxide (SO ₂)	ppm	100	21	22
3.	Oxides of Nitrogen (NO _x)	ppm	50	1.2	1.3
4.	Carbon Monoxide (CO)	ppm	---	2.5	2.2

NOTE: Methods of Analysis Followed:

- (1). PM: IS 11255 (Part - I) (2). SO₂: IS 11255 (Part - II) 1985
 (3). NO_x: IS 11255 (Part - VII) 1999 (4). CO: IS 5182 (Part - X) 1976

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TEST REPORT OF STACK EMISSION ANALYSIS

(VIth Quarter; October - 2019 to December - 2019)

<p><i>Mansid</i> 18/10/19</p> To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village : Vadinar, District: Devbhoomi Dwarka (Gujarat.)	Report No. : CCS/RJT/ICCL/VI-10-2019/109 Report Date : 11/10/2019 Customer's Reference : Work Order No. 25522335 Sample Description : Stack Emission Sample Packing/Seal : Plastic Bottles & Thimbles
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Stack Description	HT D.G. # 1 (2000 KVA)	HT D.G. # 2 (2000 KVA)	HT D.G. # 3 (2000 KVA)	HT D.G. # 4 (2000 KVA)
Date of Sample Collection	04/10/2019	04/10/2019	04/10/2019	04/10/2019
Duration of Sampling (Minutes)	20	20	20	20
Stack Temperature at Sampling Point (°C)	220	216	223	223
Ambient Temperature (°C)	29	30	30	30
Avg. Velocity of Flue Gases (m/sec.)	20.15	19.90	20.35	20.11
Flow Rate of PM (LPM)	23	23	23	23
Avg. Gaseous Flow Rate (LPM)	02	02	02	02

Sr. No.	Parameters	Unit	Permissible Limit	Results			
				HT D.G. # 1 (2000 KVA)	HT D.G. # 2 (2000 KVA)	HT D.G. # 3 (2000 KVA)	HT D.G. # 4 (2000 KVA)
1.	Particulate Matter (PM)	mg/Nm ³	150	78	75	70	76
2.	Sulphur Dioxide (SO ₂)	ppm	100	25	28	30	25
3.	Oxides of Nitrogen (NO _x)	ppm	50	1.2	1.3	1.4	1.5
4.	Carbon Monoxide (CO)	ppm	—	2.2	2.4	2.3	2.5

NOTE: Methods of Analysis Followed:

- (1). PM: IS 11255 (Part - I) (2). SO₂: IS 11255 (Part - II) 1985
 (3). NO_x: IS 11255 (Part - VII) 1999 (4). CO: IS 5182 (Part - X) 1976

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TEST REPORT OF STACK EMISSION ANALYSIS

(VIth Quarter; October - 2019 to December - 2019)

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18/10/19

To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village : Vadinar, District : Devbhoomi Dwarka (Gujarat)	Report No. : CCS/RJT/IOCL/VI-10-2019/110 Report Date : 11/10/2019 Customer's Reference : Work Order No.:25582835 Sample Description : Stack Emission Sample Packing/Seal : Plastic Bottles & Thimbles
---	---

Stack Description	LT D.G. # 1 (1000 KVA)	LT D.G. # 2 (1000 KVA)	LT D.G. # 3 (1000 KVA)
Date of Sample Collection	—	04/10/2019	04/10/2019
Duration of Sampling (Minutes)	—	20	20
Stack Temperature at Sampling Point (°C)	—	178	185
Ambient Temperature (°C)	—	30	30
Avg. Velocity of Flue Gases (m/sec.)	—	18.92	18.63
Flow Rate of PM (LPM)	—	21	21
Avg. Gaseous Flow Rate (LPM)	—	02	02

Sr. No.	Parameters	Unit	Permissible Limit	Results		
				LT D.G. # 1 (1000 KVA)	LT D.G. # 2 (1000 KVA)	LT D.G. # 3 (1000 KVA)
1.	Particulate Matter (PM)	mg/Nm ³	150	—	69	61
2.	Sulphur Dioxide (SO ₂)	ppm	100	—	26	23
3.	Oxides of Nitrogen (NO _x)	ppm	50	—	1.4	1.3
4.	Carbon Monoxide (CO)	ppm	—	—	2.4	2.1

NOTE: Methods of Analysis Followed:

- (1) PM: IS 11255 (Part - I) (2) SO₂: IS 11255 (Part - II) 1985
(3) NO_x: IS 11255 (Part - VII) 1999 (4) CO: IS 5182 (Part - X) 1976


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Analyst

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

(VIth Quarter; October - 2019 to December - 2019)

Handwritten:
11/10/19

To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village : Vadinar, District: Devbhoomi Dwarka (Gujarat.)	Report No. : CCS/RJT/IOCL/VI-10-2019/112 Report Date : 11/10/2019 Customer's Reference : Work Order No.:25582835 Sample Description : Ambient Air Quality Sample Packing/Seal : Plastic Bottles & Filter Papers
--	---

Date of Sample collection	04/10/2019
Dominant Wind Direction (From)	SW
Average Wind Speed	3 to 13 km/hrs.
Average Gaseous Flow Rate	0.5 LPM
Ambient Temperature	28 °C
Relative Humidity	58 %

Sr. No.	Parameters	Unit	Permissible Limit	Near Admn. Building	Near Control Room	Near Security Main Gate
1.	Particulate Matter (PM _{2.5})	µg/m ³	60	18	20	23
2.	Particulate Matter (PM ₁₀)	µg/m ³	100	29	33	38
3.	Oxides Of Sulphur (SO _x)	µg/m ³	80	8.9	9.6	11.6
4.	Oxides of Nitrogen (NO _x)	µg/m ³	80	11.7	12.0	14.2
5.	Carbon Monoxide (CO)	µg/m ³	02	0.56	0.62	0.65
6.	Benzene	µg/m ³	05	0.28	0.30	0.33
7.	Benzo(a)pyrene (BaP)	µg/m ³	01	0.04	0.04	0.05

NOTE: Methods of Analysis Followed:

- (1) PM_{2.5}: IS 5182 (Part - XXIII)
- (2) PM₁₀: IS 5182 (Part - XXIII) 2006
- (3) SO₂: IS 5182 (Part - II) 1969
- (4) NO_x: IS 5182 (Part - VI) 1975
- (5) CO: IS 5182 (Part - X) 1976
- (6) Benzene: Gas Chromatography based continuous Analyser
- (7) Benzopyrene: Solvent Extraction followed by GC analysis

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Analyst

TEST REPORT OF WATER ANALYSIS

(VIth Quarter; October - 2019 to December - 2019)

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18/10/19.

To, The Senior Manager, Indian Oil Corporation Limited, Western Region Pipelines, (SMPL Shed), Village: Vadinar, District: Devbhoomi Dwarka (Gujarat)	Report No. : CCS/RJT/IOCL/VI-10-2019/113 Report Date : 11/10/2019 Customer's Reference : Work Order No.:25582835 Sample Description : Oil Water Separator Outlet Sample Packing/Seal : Plastic Bottles
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Sr. No.	Parameters	Unit	Permissible Limit	Results
1.	Date of Sample Collection	----	----	04/10/2019
2.	Method of Sample Collection	----	----	"Grab"
3.	pH	pH Units	6.5 to 8.5	7.80
4.	Temperature	Deg. C	40	26
5.	Colour	Pt. Co. Scale	100	20
6.	Total Suspended Solids	mg/l	100	72
7.	Oil & Grease	mg/l	10	2.5
8.	Ammonical Nitrogen	mg/l	50	3.9
9.	Biochemical Oxygen Demand	mg/l	30	18
10.	Chemical Oxygen Demand	mg/l	100	70
11.	Chlorides	mg/l	600	410
12.	Sulphates	mg/l	1000	142
13.	Total Dissolved Solids	mg/l	2100	1595
14.	Percent Sodium	%	60	42

Test Method :

Reference Standard Methods for the Examination of Water & Waste Water - Prepared & Published Jointly by American Public Health Association, American Water Works Association & Water Env. Federation (22nd Edition - 2012).

Comet Consultancy Services,



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A/R
Analyst