भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड
भारत सरकार का उपक्रम
कोच्चि रिफ़ाइनरी

BHARAT PETROLEUM CORPORATION LIMITED
A Govt. of India Enterprise
Kochi Refinery

KR.HSE.ENV.05.HSSE.HECCR/02/2022/ EC No.J-11011/78/96-IA-II
15.12.2022

To

The Additional Principal Chief conservator of Forests (C)
Ministry of Environment, Forest & Climate Change
4th Floor, E&F Wings, Kendriya sadan, Koramangala
Bangalore-560 034

Dear Sir,

Sub: Submission of Half yearly compliance report on Environmental Clearance issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC)

Ref: EC No.J-11011/78/96-IA-II dated. 05.03.1997 issued for the Project **"Installation of Diesel Hydro De-Sulphurisation (DHDS)** project M/s Bharat Petroleum Corporation Ltd - Kochi Refinery (Formerly Cochin Refineries Ltd)".

Please find enclosed the compliance reports on the various conditions laid down by MoEF &CC, pertaining to the half year period from **1st April 2022 to 30th September 2022** for the said project.

Thanking you,

Very truly yours
For BPCL Kochi Refinery

Ramachandran, M.K
General Manager in Charge (HSE)

Encl: 1.Six Monthly Compliance Report
Cc:

1. The Member Secretary
   Central Pollution Control Board
   Parivesh Bhawan
   East Arjun Nagar
   Delhi - 110 032

2. The Member Secretary
   Kerala State Pollution Control Board
   Plamoodu Junction
   Pattom Palace
   Thiruvananthapuram - 695 004

Compliance Status of Environmental Clearance conditions for installation of Diesel Hydro Desulphurisation (DHDS) project accorded by J-11011/78/96-IA-II dated 05.03.1997

Status of the project: Project commissioned in 2000

ITEM NO.	ITEM DESCRIPTION	Status as on 30.09.2022
1	All conditions stipulated by MoEF & CC while according approval for Capacity Expansion Project	Complied
2	No expansion or modernization of the Plant should be carried out without approval of the MoEF & CC	Complied.
3	The project authority must strictly adhere to the stipulations laid down by the Kerala State Pollution Control Board and the State Govt.	Complied
4	The total SO_2 emission from BPCL Kochi Refinery including DHDS Project should not exceed the norm of 1607 Kg./hr. (Refer MoEF& CC vide letter No.J-110/1/78/96.IA.II dated 9th February,1999)	Complied; It has been reduced to 1579 kg/hr. as per latest EC for MS block project.
5	The existing ETP should be adequately augmented or additional treatment facilities should be provided to accommodate the additional effluent load from DHDS project before commissioning the project to ensure that the treated effluent meets the MINAS standard.	New ETP has been commissioned along with the DHDS Project and New ETP with higher capacity also erected as part of IREP (Integrated Refinery Expansion Project).
6	Time bound action plan for disposal of oil sludge / recovery of oil and design details of the solid waste disposal pit should be furnished to the Ministry within a period of 3 months.	Complied. A scheme for the recovery of oil from accumulated sludge has been implemented. All the accumulated sludge at that point of time was processed and currently there is no accumulated stock of oily sludge. Sludge is being processed in Delayed Coker Unit, which has been commissioned as part of IREP

		project. A secured landfill facility for storing hazardous wastes was commissioned in March, 2005 and also we have rate contract with KEIL (Kerala Enviro Infrastructure limited), a PCB approved installation for the Hazardous waste disposal in Kerala.
7	SRU having an efficiency of more than 99% should be installed.	Complied. Additional Sulphur Recovery units with newer technology and higher efficiency of 99.9% have been commissioned as part of later projects viz. CEMP - II and IREP.
8	The ground water quality should be monitored and the report should be submitted to the Ministry every six months.	Complied. Ground water quality report attached as **Annexure I**.

Annexure – 1

DATA ON STACK EMISSIONS FROM BPCL KOCHI REFINERY (Old Refinery including CEMP - II)														
PERIOD - 1st April 2022 to 30th September 2022														
Sl.no.	STACK / UNIT	No. of samples analysed	Permitted emission Nm3/hr.	Particulate matter mg/Nm3			Sulphur dioxide mg/Nm3			Emission rate Nm3/hr.			Percentage compliance	
				min	max	Avg.	min	max	avg	min	max	avg	SPCB	MoEF
1	KH 1 B	4	45000	7.3	64.21	36.55	22.30	360.83	191.23	22953	35250	28424.5	100	100
2	NH2/HH1	3	102000	8.2	72.19	49.07	226.28	234.31	230.30	48438	72221	57888.0	100	100
3	FH1	4	25000	6.5	37.25	21.04	204.42	212.27	208.35	22719	24235	23728.0	100	100
4	FH3/COB	4	150000	9.4	60.28	37.41	49.70	141.70	108.82	83261	99308	90688.8	100	100
5	UB10	4	136000	22.7	63.82	42.09	598.31	822.00	727.83	21825	92643	45984.8	100	100
6	UB9	4	70000	20.5	67.23	45.42	521.37	823.66	672.52	28870	61493	40328.3	100	100
7	DSX 002	4	35000	19.4	63.84	43.75	293.20	841.93	587.49	25171	29613	27934.5	100	100
8	DDH I	4	27000	17.6	40.41	30.31	345.50	688.02	572.31	23336	26447	25260.3	100	100
9	CH21	4	130000	9.2	30.27	18.63	180.60	375.96	278.48	11478	100688	73204.3	100	100
10	CH22	4	35000	7.9	71.34	37.60	103.60	312.55	203.18	25924	34017	30115.8	100	100
11	UB7	2	150000	23.6	46.95	35.28	5.20	195.36	100.28	111963	113958	112960.5	100	100
12	CPP/HRSG	2	277900	23.2	47.38	35.29	44.50	263.99	154.25	151717	161184	156450.5	100	100
13	BITUROX	3	23000	12.3	30.24	21.85	44.50	271.08	190.04	14174	18726	15804.3	100	100
14	CH 223	4	51000	6.2	35.86	19.68	125.80	357.79	240.64	46378	68555	53869.8	100	100
15	GT2 HRSG	3	427000	20.4	45.88	33.69	7.80	74.17	31.69	122021	254712	176200.0	100	100
16	UB 11	4	158000	23.84	33.20	27.10	586.00	813.94	693.70	68787	110376	85715.3	100	100
17	NHTCCR	2	118000	15.4	59.82	37.61	2.61	232.00	117.31	104483	119375	111929.0	100	100
18	VHH 02	3	72000	20.82	28.32	24.25	310.33	327.35	318.84	48356	70327	56972.0	100	100
19	DSX-301	4	22000	24.8	58.17	43.15	83.80	1127.35	691.46	12668	14310	13784.3	100	100
20	UB8	4	70000	31.4	70.34	53.30	416.20	890.61	689.18	29524	52588	39999.8	100	100

BHARAT PETROLEUM CORPORATION LIMITED
KOCHI REFINERY

HSE DEPARTMENT

KR.HSE.SAFE.05.SLMR.SKP

02.07.2022

Sub: Noise level at Boundary Wall.

Noise level at various locations near the boundary wall inside the refinery was measured on 02.07.2022 at **NIGHT TIME**. The observed values are given below.

Sl. No.	Location	Sound level	Remarks
1.	South of tankYT-30 (Near to Parking)	56	-
2.	Near T T gate (PDPP gate)	61	-
3.	South of Project warehouse	59	-
4.	220 KV line crossing near rain water harvesting pond	52	-
5.	DHDS Tower No- 1	55	
6.	Rear side of DHDS fire station	53	-
7.	Near Chalikkara gate	56	-
8.	Near TK-25	55	
9.	East of MS Block	57	-
10.	South of DHDS Flare	59	-
11.	Near NHT-CCR-AAQMS (Near MSBP boundary)	60	
12.	West of tank YT-902(DHDS)	53	-
13.	Rear side of PIBU office(opp. IPTC)	50	-
14.	Bottling plant entrance from refinery(IPTC Road)	59	-
15.	North of LNG skid (GT-2 Road end)	61	-
16.	Near IREP gate	60	-
17.	DCU	63	-
18.	South of UB-12	63	-
19.	North of VGO labour amenity building	58	-
20.	Behind IREP site office	60	-
21.	Below Coke Conveyor area near railway gate(PWC 4)-offline	49	Conveyor Offline
22.	Below Coke Conveyor area near railway gate- RLS-1	45	Conveyor Offline
23.	Below Coke Conveyor area near outlet A –RLS-2	47	Conveyor Offline
24.	Drum Plant gate	56	-

Smit Kumar Pal
Manager (Safety)

To: DGM (F&S) (r) GM (HSE) I/C

BHARAT PETROLEUM CORPORATION LIMITED
KOCHI REFINERY

HSE DEPARTMENT

KR.HSE.SAFE.05.SLMR.SKP 21.09.2022

Sub: Noise level at Boundary Wall.

Noise level at various locations near the boundary wall inside the refinery was measured on 21.09.2022 at day time. The observed values are given below.

Sl. No.	Location	Sound level	Remarks
1.	South of tankYT-30 (Near to Parking)	62	-
2.	Near T T gate (PDPP gate)	63	-
3.	South of Project warehouse	59	-
4.	220 KV line crossing near rain water harvesting pond	57	-
5.	DHDS Tower No- 1	56	
6.	Rear side of DHDS fire station	59	-
7.	Near Chalikkara gate	61	-
8.	Near TK-25	60	
9.	East of MS Block	61	-
10.	South of DHDS Flare	60	-
11.	Near NHT-CCR-AAQMS (Near MSBP boundary)	61	
12.	West of tank YT-902(DHDS)	50	-
13.	Rear side of PIBU office(opp. IPTC)	57	-
14.	Bottling plant entrance from refinery(IPTC Road)	61	-
15.	North of LNG skid (GT-2 Road end)	64	-
16.	Near IREP gate	61	-
17.	DCU	63	-
18.	South of UB-12	60	-
19.	North of VGO labour amenity building	62	-
20.	Behind IREP site office	61	-
21.	Below Coke Conveyor area near railway gate(PWC 4)-offline	60	Conveyor Offline
22.	Below Coke Conveyor area near railway gate- RLS-1	63	Conveyor Offline
23.	Below Coke Conveyor area near outlet A –RLS-2	64	Conveyor Offline
24.	Drum Plant gate	60	-

Smit Kumar Pal
Manager (Safety)

To: DGM (F&S) (r) GM (HSE) I/C

QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 70
Date of Sample: 12.4.2022
Date of Testing: 20.4.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH	-	IS 3025 (P:11)	7.6	6.5 – 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
	Metals				
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	23	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.09	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	4	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.2	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit
MDL: Minimum Detection Limit

S.Mahamed Iqbal
Manager (Quality Control)

Bharat Petroleum

QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 43
Date of Sample: 20.5.2022
Date of Testing: 27.5.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH		IS 3025 (P:11)	7.9	6.5 – 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
	Metals				
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	18	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.06	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	5	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit
MDL: Minimum Detection Limit

S.Mahamed Iqbal
Manager (Quality Control)

QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 57
Date of Sample: 11.6.2022
Date of Testing: 22.6.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH		IS 3025 (P:11)	7.5	6.5 – 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
	Metals				
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	17	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.08	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	7	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit
MDL: Minimum Detection Limit

S.Mahamed Iqbal
Manager (Quality Control)

Bharat Petroleum

QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 7
Date of Sample: 30.7.2022
Date of Testing: 2.8.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH	-	IS 3025 (P:11)	7.8	6.5 – 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
	Metals				
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	14	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.08	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	5	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit
MDL: Minimum Detection Limit

S.Mahamed Iqbal
Manager (Quality Control)

QUALITY CONTROL DEPARTMENT
BPCL-KOCHI REFINERY, AMBALAMUGAL

BOREWELL WATER TEST REPORT

Bore well No. 24
Date of Sample: 19.8.2022
Date of Testing: 26.8.2022

KR.TECH.QC.26.DRINK.WATR

Sl No:	Test Parameters	Unit	Method	Result	Acceptable limit
5	pH	-	IS 3025 (P:11)	7.3	6.5 – 8.5
15	Oil	mg/L	IS 3025 (P:39)	nil	nil
	Metals				
16	Silver (as Ag)	mg/L	IS13428 Annexe J	BDL (MDL=0.005)	0.1 (Max)
17	Aluminium (as Al)	mg/L	IS 3025 (P:55)	BDL(MDL=0.002)	0.03 (Max)
18	Boron (as B)	mg/L	IS 3025 (P:57)	BDL(MDL=0.01)	0.5 (Max)
19	Barium (as Ba)	mg/L	IS13428 Annexe F	BDL(MDL=0.01)	0.7 (Max)
20	Calcium (as Ca)	mg/L	IS 3025 (P:40)	12	75 (Max)
21	Cadmium (as Cd)	mg/L	IS 3025 (P:41)	BDL(MDL=0.001)	0.003 (Max)
22	Chromium (as Cr)	mg/L	IS 3025 (P:52)	BDL(MDL=0.01)	0.05 (Max)
23	Copper (as Cu)	mg/L	IS 3025 (P:42)	BDL(MDL=0.01)	0.05 (Max)
24	Iron (as Fe)	mg/L	IS 3025 (P:53)	0.08	0.3 (Max)
25	Magnesium (as Mg)	mg/L	IS 3025 (P:46)	4	30 (Max)
26	Manganese (as Mn)	mg/L	IS 3025 (P:59)	BDL(MDL=0.01)	0.1 (Max)
27	Nickel (as Ni)	mg/L	IS 3025 (P:54)	BDL(MDL=0.01)	0.02 (Max)
28	Molybdenum (as Mo)	mg/L	IS 3025 (P:02)	BDL(MDL=0.002	0.07 (Max)
29	Lead (as Pb)	mg/L	IS 3025 (P:47)	BDL(MDL=0.01)	0.01 (Max)
30	Zinc (as Zn)	mg/L	IS 3025 (P:49)	0.1	5 (Max)
31	Arsenic (as As)	mg/L	IS 3025 (P:37)	BDL(MDL0.005)	0.01 (Max)
32	Mercury (as Hg)	mg/L	IS 3025 (P:48)	BDL(MDL0.0001)	0.001(Max)
33	Selenium (as Se)	mg/L	IS 3025 (P:56)	BDL(MDL=0.001)	0.1 (Max)
34	Antimony (as Sb)	mg/L	APHA:3113B	BDL(MDL=0.001)	Max0.1

BDL: Below Detection Limit
MDL: Minimum Detection Limit

S.Mahamed Iqbal
Manager (Quality Control)