BEFORE THE NATIONAL GREEN TRIBUNAL,

Principal Bench, New Delhi

Original Application No. 433/2015

In the Matter of:

Doctors for You **Applicant(s)**

Vs.

MoEF & CC & Ors. **Respondent(s)**

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1.	**Status report** in the matter of O.A No. 433/2015 titled as Doctors for You Vs. MoEF & CC and Ors. in compliance of Hon'ble NGT order dated 03.02.2020.	
2.	**Annexure – I & II** Letter dated 12.03.2020 & email dated 19.02.2020 issued by CPCB to CSIR (Lucknow)-Indian Institute of Toxicology Research regarding Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR.	
3.	**Annexure – III** E-mail dated 14.08.2020, sent to IITR for submission of revised final report.	
4.	**Annexure - IV:** IITR report dated 17.08.2020.	
5.	**Annexure - V:** Hon'ble NGT order dated 03.02.2020.	

(Divya Sinha)
Scientist-E
Central Pollution Control Board,
Parivesh Bhawan, East Arjun Nagar,
Delhi- 110032

Place: Delhi
Date: 20.08.2020

Central Pollution Control Board, Delhi

Dated:18/08/2020

Status report in the matter of Doctors for You Vs MoEF &CC and Ors (OA no. 433/2015)

1.0 Background: -

Hon'ble NGT vide order dated 3rd Feb.,2020 in OA 433/2015 directed as follows

The Learned Counsel for CPCB submits that as per the directions of the Tribunal dated 04.11.2019 the fee amount for testing etc. has been deposited with CISR-IITR, Lucknow. Further, he submits that the institute has started work by collecting samples etc. However, it is submitted by the counsel for the CPCB that the report shall be submitted by the institute by 20.02.2020. The learned counsel is directed to supply a copy of the report in advance to the other side.

2.0 Action Taken Report: -

a) In compliance of aforesaid direction of Hon'ble NGT, IITR-Lucknow submitted the report on "***Whether cigarette and bidi butts fall within the category of toxic waste or not*** " on 3rd March,2020.

b) Report was examined by CPCB and it was observed that it did not include the following

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016

- It did not confirm whether cigarette and bidi butts fall within the category of toxic waste or not.

Accordingly, email dated March 12, 2020 and March 19, 2020 (**Annexure I** and **Annexure II**) was written to IITR.

c) IITR vide letter dated July 09, 2020 submitted the revised report on the matter. However, the report still did not include:

- Analysis of the parameters as per provisions of schedule II of Hazardous and other wastes (management and transboundary movement) Rules, 2016.
- Conclusion regarding toxicity of cigarette/bidi butts.

Vide e-mail dated 14.08.2020, IITR was requested to include the above **(Annexure III).**

d) IITR has submitted the revised report vide e-mail dated August 17, 2020. The report is placed at **Annexure IV**. As per the IITR report, following are the conclusion:

i. The analysis of the cigarette/bidi butts reflect that as per the concentration of various parameters analyzed are lower than the prescribed limits and will not be toxic to human & environment.

ii. Cellulose Acetate is a major component of the cigarette/bidi butts and its degradation studies show that it will persist for a longer duration. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude safety/toxicity of cigarette butts to further correlate with human health risk assessment.

Annexure-I

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

SPEED-POST

F. No. B-11011/UPC-II/MSW/2019-20 Dated: 12-03-2020

To,

Director,
CSIR-Indian Institute of Toxicology Research,
Vishvigyan Bhawan, 31, Mahatma Gandhi Marg,
Post Box No. 80, Lucknow-226001

Kind attention: Dr. K.C. Khulbe, Head-RPBD

Sub: - Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR-reg.

Sir,

Report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR, has been examined and it is observed that report has only focused on analysis of compound as per schedule II of Hazardous and Other Wastes Rules.

However, as per clause 1 of MoU signed between IITR and CPCB *"CSIR-IITR shall collect samples of cigarette and bidi butts and analyze the same and throw light on the status of toxic and other substances in the said samples and place the report before Hon'ble NGT with copies to MOEFCC and CPCB."*

In view of above, the report may be reviewed to include the status of toxic and other substances in the samples of cigarette and bidi butts to meet the objective of study and comments be sent to CPCB within 7 days as next date of hearing is 25th Mar, 2020.

Yours faithfully

Divya Sinha
Addl. Director & I/c, UPC-II

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Ariun Nagar, Delhi-110032
दूरभाष/Tel : 43102030, 2230579

ईट/Website : www.cpcb.nic.in

Annexure-II

Gmail

pankaj agarwal <pankajcpcb@gmail.com>

Final report on "whether cigarette and bidi butts fall within the category of toxic waste or not" submitted by IITR-reg

pankaj agarwal <pankajcpcb@gmail.com> Thu, Mar 19, 2020 at 7:30 PM
To: RPBD IITR <rpbd@iitrindia.org>
Cc: DIVYA SINHA <divyasinha.cpcb@nic.in>, Director IITR <director@iitrindia.org>, divya sinha <divsinha@yahoo.com>

Sir,

I am directed to inform that report is to be reviewed as per provisions of Schedule II of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, **2016**, as mentioned in clause 2.2.1 Collection & Analysis of sample of MOU.
Further the report is also to be reviewed to include status of toxic and other substances present in samples of cigarette and bidi butts to meet the objective of study as per clause 1 of MOU. Letter on the same was emailed to IITR on 12th March,2020.
Comments may be sent by tomorrow as next date of hearing in Hon'ble NGT is on 25th March,2020

regards

Pankaj Agarwal
Scientist "E",
Central Pollution Control Board
(Ministry of Environment, Forests and Climate Change)
Parivesh Bhawan
East Arjun nagar
Delhi- 110032

[Quoted text hidden]

Annexure – III

Email **pagarwal.cpcb@gov.in**

Re: NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

From : rpbd@iitrindia.org Mon, Aug 17, 2020 05:30 PM

Subject : Re: NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not" 1 attachment

To : DIVYA SINHA <divyasinha.cpcb@nic.in>

Cc : director@iitrindia.org, Member Secretary CPCB <mscb.cpcb@nic.in>, Prashant Gargava <prashant.cpcb@gov.in>, Pankaj Agarwal <pagarwal.cpcb@gov.in>

डॉ के सी खुल्बे
वरिष्ठ प्रधान वैज्ञानिक एवं
प्रभारी, आरपीबीडी

सीएसआईआर-आईआईटीआर/998/2020
दिनांक: अगस्त 17, 2020

सेवा में,
डा दिव्या सिन्हा
अतिरिक्त निदेशक एवं प्रमुख यूपीसी-II
केन्द्रीय प्रदूषण नियंत्रण बोर्ड ,
परिवेश भवन, पूर्वी अर्जुन नगर
दिल्ली : 110032

Sub: "Final report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

महोदया,

कृपया संलग्न फ़ाइनल रिपोर्ट (Final report) नंबर सीएसआईआर-आईआईटीआर/998/2020 शीर्षक **"Whether cigarette & bidi butts fall within the category of toxic wastes or not" in compliance of Hon'ble NGT's order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015** आपके रिकार्ड के लिए भेजा जा रहा है।

सीएसआईआर-भारतीय विष विज्ञान अनुसंधान संस्थान, लखनऊ एवं केन्द्रीय प्रदूषण नियंत्रण बोर्ड, नई दिल्ली के मध्य हुए सहमति ज्ञापन के अनुसार इस अध्ययन के अंतर्गत, विभिन्न ब्रांडों की सिगरेट एवं बीड़ी के टुकड़ों (जले हुए और बिना जले हुए) दोनों का केवल अनुसूची II [देखें नियम 3(I)] (वर्ग ए एवं वर्ग बी के कचरा घटकों की सूची) में उल्लिखित रासायनिक /तात्विक संघटक हेतु विश्लेषण किया गया था।

यह अध्ययन सांकेतिक हैं अत: सुरक्षा निश्चित करने तथा सिगरेट एवं बीड़ी के टुकड़ों (बडस) के सुरक्षित निपटान हेतु दिशा - निर्देश तैयार करने के लिए और अधिक विश्लेषण की आवश्यकता है।

कृपया पावती भेजने की कृपा करें।

धन्यवाद।

भवदीय,

संलग्नक: उपरोक्त। (के सी खुल्बे)

On Fri, Aug 14, 2020 at 5:39 PM DIVYA SINHA <divyasinha.cpcb@nic.in> wrote:

Sir ,

This has reference to the telephonic conversation with you today and other correspondence on the matter.

The report submitted by IITR vide letter dated July 09, 2020 has been examined by CPCB has been

examined and it is observed that the Analysis report of samples is still based on HW(MH & TM) Rules 2008 and not on HW Rules 2016. Also, final conclusion regarding toxicity of cigarette butts/ bidi has not been included in the report.

It is requested that the final report be revised to include the above and the same be mailed to CPCB by Forenoon of August 17, 2020. It may be noted that the matter has been scheduled for hearing on August 19, 2020

Divya Sinha
Divisional Head- UPC II
CPCB

----- Original Message -----
From: "DIVYA SINHA" <divyasinha.cpcb@nic.in>
To: "Pankaj Agarwal" <pagarwal.cpcb@gov.in>
Subject: Fwd: Final report titled "Whethercigarette & bidi butts fall within the category of toxic wastes or not"

--
डॉ. के.सी. खुल्बे
Dr KC Khulbe
प्रमुख, अनुसंधान योजना एवं व्यापार विकास प्रभाग
Head, Research Planning & Business Development Division
सीएसआईआर- भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
विषविज्ञान भवन, 31, महात्मा गांधी मार्ग, लखनऊ-226001, भारत
Vishvigyan Bhawan, 31, Mahatma Gandhi Marg, Lucknow-226001, India
Tel: +91-522-2628228; Fax: +91-522-2628227; www.iitrindia.org

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Final NGT report dt.17.8.2020.pdf
5 MB

From : DIVYA SINHA <divyasinha.cpcb@nic.in> Fri, Aug 14, 2020 05:39 PM

Subject : NGT matter related to report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

To : director@iitrindia.org

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Divisional Head- UPC II
CPCB

सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

डॉ के सी खुल्बे
वरिष्ठ प्रधान वैज्ञानिक एवं
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Sub: "Final report titled "Whether cigarette & bidi butts fall within the category of toxic wastes or not"

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कृपया पावती भेजने की कृपा करें।

धन्यवाद।

भवदीय,
17/8/2020
(के सी खुल्बे)

संलग्नक: उपरोक्त।

Final

report of

"Whether cigarette and bidi butts fall within the category of toxic wastes or not"

In compliance of Hon'ble NGT's order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015

under MoU signed between

Central Pollution Control Board, New Delhi

and

CSIR-Indian Institute of Toxicology Research, Lucknow

August 17, 2020

Preamble:

Cigarette butts (CBs) are the most common type of litter on earth, with an estimated 4.5 trillion discarded annually around the globe. (PLOS ONE | DOI:10.1371/journal.pone.0117393 January 27, 2015) [1]. Most of the CBs are discarded in the dustbins, roadside, beaches or other public places. When disposed of in the environment, they pose a major threat to living organisms and ecosystem health. Smoked CBs besides nicotine, retain many compounds derived from tobacco combustion viz., hydrogencyanide, ammonia, acetaldehyde, formaldehyde, benzene, phenols and pyridines. Some of the studies reported that CBs are toxic to microbes and cladocerans, insects, and fish etc.

From the proximate analysis only it cannot be specified if the cigarette and bidi butts fall within the category of toxic wastes or not. In compliance of Hon'ble NGT's order dated 2nd August, 2019 & 12th April, 2019 in OA 433/2015, a Memorandum of Understanding was signed on 30th October, 2019 between Central Pollution Control Board, New Delhi and CSIR-Indian Institute of Toxicology Research, Lucknow. This MoU was aimed to analyse chemical/elemental composition of various brands of cigarettes and bidi butts (both burnt and un-burnt) and to see if they meet the required parameters of Schedule-II as specified under the terms of agreement.

List of Parameters to be analysed as per Schedule II according to MOU between CSIR-IITR and CPCB dated: 30.10.2019

List of Waste Constituents and their code with Concentration Limits as per Schedule II [*See* rule 3(l)] 2016

Name of respective compound and code as per 2016	Concentration mg/L as per 2016	Method Detection Limit
CLASS A		**(mg/Kg)**
A1 Arsenic	5.0	**0.0050**
A3 Cadmium	1.0	**0.0200**
A4 Chromium and/or Chromium (III) compounds	5.0	**0.1064**
A5 Lead	5.0	**0.0345**
A7 Mercury	0.2	**0.0001**
A8 Selenium	1.0	**0.0056**
A9 Silver	5.0	**0.0543**
A20 Benzene	0.5	**30.00**
A21 Benzo (a) pyrene	0.001	**0.050**
A33 Napthalene	5.0	**0.0500**
A43 Alpha HCH	0.001	**0.050**
A45 Beta HCH	0.004	**0.050**
A47 Chlordane	0.03	
A48 Chlorpyrifos	9.0	**0.050**
A49 Delta HCH	0.004	**0.050**
A50 Endosulfan (alpha+beta+sulphate)	0.04	**0.005**

A51 Endrin	0.02	**0.005**
A52 Ethion	0.3	**0.0500**
A53 Heptachlor (and its epoxide)	0.008	**0.0500**
A55 Lindane	0.4	**0.0500**
A56 Malathion	19	**0.0500**
A60 Phorate	0.2	**0.0350**
A63 Beryllium	0.75	**0.0034**
A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds	5.0	**0.1064**
A65 Cobalt	80.0	**0.0995**
A66 Copper	25.0	**0.0723**
A67 Molybdenum	350	**67.2000**
A68 Nickel	20.0	**0.0842**
A73 Aldrin	0.14	**0.010**
A74 Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane(DDD)	0.1	**0.0500** **0.0500** **0.0030**
A75 Dieldrin	0.8	**0.0600**
A78 polychlorinated biphenyls	5.0	**0.0030**
CLASS C		
Class - C (3) Amines	#	**0.0200**
Class-C (4) Anthracene	#	**0.0500**
Class C (5) Aromatic compounds other than those listed in Class A Class C- (30) Organo- Tin Compounds Class C- (31) Organo nitro-and nitroso compound Class –C (33) Phenanthrene	5,000 mg/kg	**0.0030** **0.0080** **0.0025** **0.0500**

Collection of Cigarette and Bidi samples:

Ten different brands of cigarettes and two brands of Bidi were procured in bulk from the local market. The following four types of samples were prepared as follows

1. Burnt Cigarette butts of 10 different brands
2. Unburnt Cigarette butts of 10 different brands
3. Burnt Bidi butts of 2 different brands
4. Unburnt Bidi butts of 2 different brands

A smoking setup for the Cigarette and Bidi was made using the vacuum pump attached to separating funnel holder fitted with thermocol disc having capacity to hold 36 cigarette/ bidi. Through the vacuum the smoke was absorbed in the filtration flask having distilled water. This setup simulated the smoking regime.

The whole setup was installed under a fume hood so as not to pollute the laboratory environment and expose the people therein to the smoke. The safety protocol (lab coat, gloves and safety glasses etc.) was adhered by every personnel involved in the process.

Preparation of cigarette / bidi butt for Toxicity Characteristic Leaching Procedure (TCLP):

- Unburnt butt sample of the cigarette and bidi was prepared by cut just above the filter in the case of cigarette only, whereas in bidi approximately same length was cut.
- Burnt Cigarette and Bidi butts sample were prepared by subjecting them to the smoking set. In all, approximately 300 cigarettes/bidis were burnt individually using this setup for each brand to yield approximately 65 g of each cigarette/bidi butt samples.
- Leachates of the burnt and unburnt butt samples were prepared (in triplicate) following the TCLP of USEPA (Method 1311 of July 1992) .
- Once the leachates for each brand of cigarette/bidi butts was prepared, it was extracted, and the final extracts were analysed on sophisticated analytical instruments and quantified using reference standards is given in table 1.

Table 1. Details of extraction methods and instruments

Name of the analyte	Extraction method	Instrument Used	Make and model
CLASS A			
A2 Arsenic A3 Cadmium A8 Selenium	Filtrated leachate	AAS	PE, PinAAcle 900F
A5 Lead A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A9 Silver A65 Cobalt A66 Copper A67 Molybdenum A68 Nickel A63 Beryllium	Filtrated leachate	AAS	Analytic Jena, Zeenit 700
A7 Mercury	Filtrated leachate	DMA	Milstone, DMA 80
A20 Benzene	LLE	GC-FID	Agilent, 7890A
A21 Benzo (a) pyrene A33 Napthalene	LLE	HPLC	WATERS 1525, PDA
A43 Alpha HCH A45 Beta HCH A47 Chlordane A48 Chlorpyrifos A49 Delta HCH A50 Endosulfan (alpha+beta+sulphate) A51 Endrin A52 Ethion A53 Heptachlor (and its epoxide) A55 Lindane A56 Malathion A60 Phorate A73 Aldrin A74 Dichlorodiphenyltrichloroethane(DDT), Dichlorodiphenyldichloroethylene(DDE), Dichlorodiphenyldichloroethane(DDD) A75 Dieldrin	LLE	GC-MS/MS	Thermo scientific, Trace 1300, TSQ 8000EvoMS
A78 Polychlorinated biphenyls	LLE	GLC-micro ECD	Agilent, 7890B
CLASS C			
C (4) Anthracene C (33) Phenanthrene	LLE	HPLC	WATERS 1525, PDA
C (3) Amines C (5) Aromatic compounds other than those listed in Class A, C- (30) Organo- Tin Compounds	LLE	LC-MS/MS	Sciex, API 4000
C- (31) Organo nitro-and nitroso compound	LLE	GC-MS/MS	Thermo scientific, Trace 1300, TSQ 8000EvoMS

Conclusion:

The level of individual chemical analytes in TCLP leachates for Class A and Class C are reported as the mean concentration of triplicate for each sample in mg/L or Below Detection Limit (BDL)

Class A:

- The class A chemicals concentration in unburnt cigarette butts were detected in the concentration range of BDL-0.001 mg/L for mercury, BDL-1.071mg/L for copper and BDL-0.263 mg/L for nickel, while all other chemicals were BDL, whereas in unburnt bidi butts all were BDL. **(Annexure-I)**
- The class A chemicals in burnt cigarette butts were detected in the range of BDL-0.028 mg/L for cadmium, BDL-0.062 mg/L for selenium, BDL-0.065 mg/L for endosulfan, BDL-2.808 mg/L for copper, BDL-0.087 mg/L for nickel, BDL-0.016 mg/L for polychlorinated biphenyls whereas in burnt bidi butts were in the range of 0.022-0.028 mg/L for cadmium, BDL-0.008 mg/L for selenium, 0.084-0.115 mg/L for copper **(Annexure-II)**
- The levels found for class A chemicals (reported in the Annexure I and II) were below their respective concentration limit, as per schedule II 2016 except endosulfan was found higher in one brand of cigarette

Class C:

- The class C chemicals in unburnt cigarette butts were detected in the concentration range of BDL-0.012 mg/kg for organotin compounds and BDL-0.024 mg/kg for organo nitro and nitroso compounds, whereas in unburnt bidi butts were in the range of 0.039-0.041 mg/kg for organotin compounds. **(Annexure-III)**
- The class C chemicals in burnt cigarette butts were in the range of BDL-0.323 mg/kg for aromatic compounds, BDL-0.025 mg/kg for organotin compounds, BDL-0.067 mg/kg for organo nitro and nitroso compounds and BDL-0.009 mg/kg for phenanthrene whereas in burnt bidi butts were in the range of BDL-0.035 mg/kg for aromatic compounds and 0.122-0.173 mg/kg for organo nitro and nitroso compounds. **(Annexure-IV)**
- The levels found for class C analytes (reported in the Annexure III and IV) were below their respective concentration limit as per schedule II 2016.

Other additional chemicals analysed for unburnt and burnt cigarette and bidi butts are also listed separately in **(Annexure V).**

The level of class A and C chemicals listed in schedule II is lower than the prescribed limit in the small sample size. The cigarette butt material is non-degradable, and this may be considered during the formulation of the waste disposal plan.

The levels of chemicals listed in class 'A' of schedule II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value, except the endosulfan (in one brand). The levels of chemicals listed in class 'C' of Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change were either below the level of detection or many fold lower than the threshold value. In summary, the levels of class 'A' and 'C' chemicals listed in Schedule-II 2016 Government of India Ministry of Environment, Forest and Climate Change are lower than the prescribed limits under the experimental conditions with limited sample size. The analysis reflects that the concentrations detected will not be toxic to the human and environment. Cellulose acetate is a major component (95%) of the cigarette butts along with the wrapping paper and rayon. In general, the toxicity data are not available for cellulose acetate. Whatever studies carried out so far, reported cellulose acetate non-toxic up to 5000 mg/ Kg body weight in subchronic studies of 96 days through oral administration in rat models [2]. The degradation studies carried out on cigarette butts shown only 37.8% degradation in two years in the soil under ambient conditions [1]; hence it will persist in soil for a longer duration. The data are not available on the cigarette butts or cellulose acetate (a major component of cigarette butts) mediated human health risk assessment and toxic responses, and response on microflora in the soil. The degradation studies under natural environmental conditions and laboratory simulating conditions will be required to conclude the safety/ toxicity of cigarette butts to further correlate with human and environmental health risk assessment. Recycling of cellulose acetate after recovery from the cigarette butts may be suggested as one among the immediate solution to the problem until the degradation and safety data are generated.

Citation

1. G Bonanomi, G Incerti, G Cesarano, SA Gaglione, V Lanzotti (2015) Cigarette butt decomposition and associated chemical changes assessed by 13^C CPMAS NMR. PLoS ONE 10(1):e0117393. doi:10.1371/journal.pone.0117393
2. W.C.Thomas, L.F.McGratha, K.A.Baarsona, C.S.Auletta, W.Daly, R.F.McConnell (1991). Subchronic oral toxicity of cellulose acetate in rats. Food and Chemical Toxicology.29(7), 1991, 453-458.

1. The report pertains to the sample tested only.
2. This report shall not be used or produced in fragments.
3. This report shall not be used for any other purpose than declared by the sponsor.
4. IITR is not a regulatory and certifying agency; hence no part of this report should be used for legal purposes under any circumstances.

Ansari 17/08/2020

Dr Nasreen Ghazi Ansari
Co-PI

ANNEXURE -I

List of Waste Constituents	Concentration Limit*	Concentration in different brands of unburnt cigarette and bidi (mg/L)											
Class A	**mg/L**	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
A1 Arsenic	5.0	BDL	BDL	BDL	BDL	BDL	BDL	0.015	BDL	BDL	BDL	BDL	BDL
A3 Cadmium	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A5 Lead	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A7 Mercury	0.2	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A8 Selenium	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A9 Silver	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A20 Benzene	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A21 Benzo (a) pyrene	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A33 Napthalene	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A43 Alpha HCH	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A45 Beta HCH	0.004	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A48 Chlorpyrifos	9.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A49 Delta HCH	0.004	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A50 Endosulfan (alpha+beta+sulphate)	0.04	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A51 Endrin	0.02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A52 Ethion	0.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A53 Heptachlor (and its epoxide)	0.008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A55 Lindane	0.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

A56 Malathion	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A60 Phorate	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A63 Beryllium	0.75	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A65 Cobalt	80.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A66 Copper	25.0	BDL	0.6138	0.0961	BDL	0.8325	BDL	BDL	BDL	1.071	BDL	BDL	BDL
A67 Molybdenum	350	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A68 Nickel	20.0	BDL	BDL	0.263	BDL	BDL	0.0643	BDL	BDL	BDL	BDL	BDL	BDL
A73 Aldrin	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A74	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dichlorodiphenyltrichloroethane (DDT),		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane(DDD)		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A75 Dieldrin	0.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A78 polychlorinated biphenyls	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

***Concentration limit as per schedule II, 2016**
BDL: Below detection limit
C: Cigarette and B: Bidi

ANNEXURE - II

List of Waste Constituents	Concentration Limit*	Concentration in different brands of burnt cigarette and bidi (mg/L)											
Class A	**mg/L**	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
A1 Arsenic	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A3 Cadmium	1.0	0.028	0.024	BDL	0.031	BDL	BDL	BDL	BDL	0.0233	0.0233	0.022	0.026
A4 Chromium and/or Chromium (III) compounds and A64 Chromium (VI), A4 Chromium and/or Chromium (III) compounds	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A5 Lead	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A7 Mercury	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A8 Selenium	1.0	0.062	0.007	0.007	0.007	0.009	BDL	0.006	BDL	BDL	0.006	BDL	0.008
A9 Silver	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A20 Benzene	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A21 Benzo (a) pyrene	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A33 Napthalene	5.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A43 Alpha HCH	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A45 Beta HCH	0.004	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A48 Chlorpyrifos	9.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A49 Delta HCH	0.004	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A50 Endosulfan (alpha+beta+sulphate)	0.04	0.065	BDL	BDL	BDL	BDL	0.047	BDL	BDL	BDL	BDL	BDL	BDL
A51 Endrin	0.02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A52 Ethion	0.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A53 Heptachlor (and its epoxide)	0.008	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A55 Lindane	0.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A56 Malathion	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A60 Phorate	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

A63 Beryllium	0.75	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A65 Cobalt	80.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A66 Copper	25.0	1.307	2.808	2.534	0.628	0.840	0.115	BDL	0.477	0.603	1.246	0.084	0.115
A67 Molybdenum	350	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A68 Nickel	20.0	BDL	BDL	BDL	BDL	0.058	0.087	BDL	BDL	BDL	BDL	BDL	BDL
A73 Aldrin	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A74 Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane(DDD)	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A75 Dieldrin	0.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
A78 polychlorinated biphenyls	5.0	BDL	BDL	0.003	BDL	0.004	BDL	0.016	BDL	BDL	BDL	BDL	BDL

***Concentration limit as per schedule II, 2016**
BDL: Below detection limit
C: Cigarette and B: Bidi

ANNEXURE - III

List of Waste Constituents	Concentration Limit*	Concentration in different brands of unburnt cigarette and bidi (mg/Kg)											
Class C	**mg/Kg**	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
C (3) Amines	#	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C (4) Anthracene	#	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C (5) Aromatic compounds other than those listed in Class A	5000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C- (30) Organo- Tin Compounds		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.012	0.010	0.039	0.041
C- (31) Organo nitro-and nitroso compound		0.006	0.008	0.008	BDL	0.009	0.024	BDL	BDL	BDL	BDL	BDL	BDL
C- (33) Phenanthrene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

***Concentration limit as per schedule II, 2016**
 # Limit not defined in schedule II, 2016
BDL: Below detection limit
C: Cigarette and B: Bidi

ANNEXURE - IV

List of Waste Constituents	Concentration Limit*	MDL	Concentration in different brands of burnt cigarette and bidi (mg/Kg)											
Class C	**mg/Kg**	**(mg/Kg)**	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
C (3) Amines	#	**0.0200**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C (4) Anthracene	#	**0.0500**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C (5) Aromatic compounds other than those listed in Class A	5000	**0.0030**	0.032	0.044	0.069	0.007	0.087	BDL	0.323	0.015	BDL	0.011	0.035	0.031
C- (30) Organo- Tin Compounds		**0.0080**	0.024	0.013	0.016	0.020	0.015	0.018	0.018	BDL	0.025	0.023	BDL	BDL
C- (31) Organo nitro-and nitroso compound		**0.0025**	0.013	0.017	BDL	0.107	0.043	0.038	0.056	0.010	0.067	0.144	0.173	0.122
C- (33) Phenanthrene		**0.0500**	0.009	BDL	BDL	BDL	0.055	BDL	BDL	BDL	BDL	BDL	BDL	BDL

***Concentration limit as per schedule II, 2016**
 # Limit not defined in schedule II, 2016
BDL: Below detection limit
C: Cigarette and B: Bidi

List of Waste Constituents*	MDL	Concentration in different brands of unburnt cigarette and bidi (mg/L)											
	(mg/L)	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
Chrysene, benzo(a)anthracene, fluoranthene, benzo(K)fluoranthene, indeno(1,2,3-cd) pyrene and benzo(ghi) perylene	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Halogenated compounds of aromatic rings, e.g. polychlorinated biphenyls, polychloroterphenyls and their derivatives & Halogenated aromatic	0.0030	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Organochlorine	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Organo phosphorus	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

List of Waste Constituents*	MDL	Concentration in different brands of burnt cigarette and bidi (mg/L)											
	(mg/L)	C1	C2	C3	C4	C5	C 6	C7	C 8	C9	C10	B1	B2
Chrysene, benzo(a)anthracene, fluoranthene, benzo(K)fluoranthene, indeno(1,2,3-cd) pyrene and benzo(ghi) perylene	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Halogenated compounds of aromatic rings, e.g. polychlorinated biphenyls, polychloroterphenyls and their derivatives & Halogenated aromatic	0.0030	BDL	BDL	0.0035	BDL	0.0044	BDL	0.017	BDL	BDL	BDL	BDL	BDL
Organochlorine	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Organo phosphorus	0.0500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

*Additional Chemical parameter analysed
MDL: Method Detection Limit
BDL: Below detection limit

Item No. 06 Court No. 2

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No.433/2015

Doctors for You Applicant(s)

Versus

MoEF& CC & Ors. Respondent(s)

Date of hearing: 03.02.2020

CORAM:
HON'BLE MR. JUSTICE RAGHUVENDRA S. RATHORE, JUDICIAL MEMBER
HON'BLE DR. SATYAWAN SINGH GARBYAL, EXPERT MEMBER

For Applicant(s) Mr. Jaideep Singh, Mr. Kartik Dabas, Ms. Eysha Marysha and Ms. Disha Sachdeva, Advocates

For Respondent(s) Mr. Rajkumar, Advocate

ORDER

The Learned Counsel for CPCB submits that as per the directions of the Tribunal dated 04.11.2019 the fee amount for testing etc. has been deposited with CISR-IITR, Lucknow. Further, he submits that the institute has started work by collecting samples etc. However, it is submitted by the counsel for the CPCB that the report shall be submitted by the institute by 20.02.2020. The learned counsel is directed to supply a copy of the report in advance to the other side.

List this matter on 2nd March, 2020.

Raghuvendra S. Rathore, JM

Dr. Satyawan Singh Garbyal, EM

MN