Item No. 04 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 568/2019
(I.A. No. 126/2020)

(With report dated 17.12.2020)

James Jose, Managing Director,
CGR Hallmarkers Pvt. Ltd. Applicant

Versus

Govt. of India Respondent

Date of hearing: 19.01.2021

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Respondent(s): Ms. Soni Singh, Advocate for CPCB
Mr. Jogy Scaria, Advocate for KSPCB

ORDER

1. The issue for consideration is the need for regulatory regime to check acidic activities in testing of gold. A report was sought from the CPCB and the Kerala State PCB with reference to the allegation that Bureau of Indian Standards (BIS) released acids in the environment while testing gold with a view to check the standards.

2. The matter was last considered on 18.11.2019 in the light of the report of the joint Committee of CPCB and State PCB as follows:-

> *"1…xxx……xxx……xxx*
>
> *2. The report furnished by the joint Committee comprising of the CPCB and the State PCB is that the Committee visited BIS certified gold assaying/hallmarking facility in Ernakulam along with two*

other facilities in Ernakulam on 23rd and 24th August, 2019. Following information was noted:

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a. *Almost all the assay and hallmarking centers are located inside city areas or in busy commercial or business complexes.*
b. ***These units seldom comply with the pollution control norms or have adequate measures to contain toxic fumes or emissions emanating in the process of precious metal assaying by conventional fire assay method.***
c. *There is no emission monitoring systems in these hallmarking centers.*
d. *There are no personal protective equipments available or being used by the personals handling test procedures.*
e. ***Regulatory procedures for the disposal of hazardous residues generated during assaying/testing are not followed in many of the facilities.***
f. *The approved gold hallmarking method is fire assay test, which requires destructive sampling and many of the manufacturer (customers of hallmarking centers) do not prefer sampling of the finished jewellery articles.* ***Due to this spurious hallmarking practices are on rise without conducting standard fire assay test."***

3. The Committee also considered the guidelines dated 02.09.2018 for recognition and operation of hallmarking centers. 851 hallmarking facilities are recognized in Maharashtra, West Bengal, Tamil Nadu and other States. The Committee conducted 'Fire Assay Test' and also considered 'hazardous waste generation' and 'Gold Assay Techniques'. In the hallmarking centers, it was observed that toxic emissions are released.

4. The Committee has made following observations and recommendations:

"7.0. OBSERVATIONS OF THE JOINT COMMITTEE

i. *The testing of the jewellery as well as the marking is done in approved, private assaying & hallmarking centers across the country. Approval and monitoring of such private undertaking are done by BIS. Although, hallmarking gold jewellery is mandatory, it is yet to be implemented. Due to wide acceptance of BIS hallmarking among consumers, fake hallmarking of jewellery is on rise.*

ii. *Most of the hallmarking centers are in the busy commercial areas.*

iii. *Even though there are many techniques available for assaying precious metal with merits and demerits, the conventional fire assay is still the preferred assaying method for higher*

accuracy, repeatability, moderate and comparatively lesser cost of analysis.

iv. The fire assay test does create toxic emissions by way of toxic metal and acidic fumes.

v. The AAS or ICP methods, requires expensive equipments, sample processing by acid digestion and trace amount of sample is lost during analysis.

vi. XRF is a non destructive analysis with moderate cost of analysis and requires flattened sample for accurate analysis.

vii. Spark/ Arc OES is a potential method, almost non destructive in nature and only limitation is the high equipment cot.

8.0 SUGGESTIONS OF THE JOINT COMMITTEE

A. All the gold assaying and hallmarking centers in the country shall obtain the Consent to Establish / Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 & Air (Prevention and Control of Pollution) Act, 1981 of the State Pollution Control Boards / Pollution Control Committees. These units shall also obtain authorization under Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016. The above regulatory requirements shall be made mandatory to all gold assaying/ hallmarking facilities and the same may be incorporated in the BIS guideline for gold assaying and hallmarking. The committee suggested the KSPCB to issue notice to all defaulting units.

B. The lead fumes generated during cupellation and the acidic nitrous fumes generated during the parting acid treatment are to be treated by a proper fumes extraction I treatment system. Technical guidelines shall be formulated for selection, installation and operation of proper exhaust arrangement for fire assay furnace, parting acid chamber and for the fire assay room for proper extraction and treatment of fumes before discharging into atmosphere.

C. Spent cupels containing heavy metals, scrubber water residue containing lead and spent parting acid are the specific hazardous wastes generated during fire assay which need to be disposed properly through authorized waste disposal facilities as per the norms.

D. The conventional fire assay method requires, sample to be scraped/ cut out of the sample and thus it is not an acceptable choice for the finished jewellery articles. Moreover, the use of hazardous materials like lead and parting acids during assaying, also make this method

less preferable though it is a robust method for assaying. Due to the above constraints, alternate instrumental methods with low pollution foot print shall be explored.

E. AAS and ICP methods require expensive equipments and elaborate sample processing in the form of acid digestion during analysis. As in many other countries XRF can be adopted for assaying and hallmarking, but the only limitation is the requirement of flat/ flattened sample.

F. Spark or Arc OES is a potential method for precious metal assaying which is almost non-destructive method with minimum or no sample processing. This method is already used in many metal industries to test the purity of alloys and metals."

5. Learned counsel for the CPCB as well as the State PCB support the above suggestions. We see no reason why the same be not acted upon.

6. In view of the above, ***the CPCB needs to update the existing guidelines on the subject so that environmental norms are met in the process. The updated guidelines may be notified to all the State PCBs/PCCS within one month and compliance may be duly monitored thereafter. The compliance report may be furnished by all the State PCBs/PCCs to the CPCB. The CPCB may furnish consolidated report before the next date*** *by email at judicial-ngt@gov.in. It is made clear that in case of non-compliance at any level, this Tribunal may have to take coercive measures including imposition of environmental compensation on the concerned regulatory authority.****"***

3. Accordingly, CPCB has filed further report dated 04.11.2020 followed by an updated report dated 17.12.2020 as follows:-

*"****2.0 Action taken by CPCB***

i. CPCB formulated the ***"Guidelines for Gold Assaying Hallmarking Centres****" in consultation with constituted Expert Group comprising of representatives of Bureau of Indian Standards (BIS), Shri N.K. Verma, Ex -Additional Director, and CPCB, Delhi. The guidelines were also consulted with Indian Association of Hallmarking Centres through video conferencing. The copy of Guidelines for Gold Assaying & Hallmarking Centres is attached at* ***Annexure-II.***

ii. The Guidelines were uploaded on CPCB website with link:

https://cpcb.nic.in/openpdffile.php?id=TGF0ZXN0RmlsZS9fMTYwMzM1MzE0M 19tZWRpYXBob3RvNTM2OC5wZGY=

iii. *The Guidelines were circulated to all the SPCBs/PCCs vide CPCB letter dated 09.10.2020 for their implementation and to provide the Status of Compliance. The Copy of CPCB letter dated 09.10.2020 is attached at* ***Annexure-III****.*

3.0 Consolidated Report of Status of Compliance by SPCBs/PCCs:

The compliance status report of implementation of Gold Assaying Hallmarking Centres received from following 26 SPCBs/PCCs.

Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himanchal Pradesh, Jammu & Kashmir, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand, Chandigarh, Delhi & Puducherry.

i. *The summary of compliance status as submitted by these 26 SPCBs/PCCs, are compiled and given in* ***Table 1****.*

ii. *The overall observations/findings of the compliance status report as submitted by 26 SPCBs/PCCs are as follow:*

a. *Guidelines have been uploaded by SPCBs/PCCs on their websites. Mizoram SPCB had though uploaded the environmental guidelines on their website, but intimated that there are no Gold Assaying and Hallmarking Centers in the state. Sikkim SPCB has intimated that as per the BIS list of hallmarking centres in eastern region, no Hallmarking centres have been set up in the state of Sikkim. Chandigarh PCC have not uploaded the guidelines on their website but it is intimated that all the Gold Assaying & Hallmarking centres exist in the U.T. have been directed to apply for the consents.*

b. *SPCBs/PCCs have either sent communications to their Regional offices for implementation of the Guidelines or issued notices to Gold Assaying & Hallmarking Centres to submit the compliance of the Guidelines.*

c. *Jammu & Kashmir SPCB has published public notice in the newspaper for obtaining CTE/CTO by Gold Assaying & Hallmarking Centres under Water Act, 1974 & Air Act, 1981. Assam SPCB has also made publication in the newspaper on 14.11.2020 for implementation and compliance of Guidelines formulated by CPCB.*

d. *CPCB is pursuing with the remaining SPCBs/PCCs to submit the implementation status of Guidelines in their states/UTs."*

4. In view of the above, this application is disposed of with a direction that the guidelines of CPCB may be duly followed by all State PCBs/PCCs which may be monitored by CPCB in accordance with law.

The application is disposed of.

Pending I.A. No. 126/2020 also stands disposed of in view of the order passed in main matter.

A copy of this order be forwarded to the CPCB, all the State PCBs/PCCs by e-mail.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. Nagin Nanda, EM

January 19, 2021
O.A. No. 568/2019
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