

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:2955  
ANSWERED ON:30.07.2014  
TESTING OF GANGA RIVER WATER  
Noor Smt. Mausam

**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) whether the Government is aware of a report published by the Department of Atomic Energy's National Centre for Compositional Characterization of Materials in Hyderabad regarding water samples tested by them from the Ganga river containing carcinogens;
- (b) if so, the details thereof;
- (c) whether the Government has directed the department for additional verification and reconfirmation of the same report which states that water contains Chromium 6, in 1ng/ml, which is almost 50 times the permissible limit;
- (d) if so, the facts in this regard; and
- (e) the measures taken by the Government to address the issue immediately?

**Answer**

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE  
(DR. JITENDRA SINGH):

(a)&(b) Yes, Sir. Government is aware of the findings of National Centre for Compositional Characterisation of Materials (NCCCM) on the chromium content in Ganga water.

NCCCM is a laboratory under the Department of Atomic Energy, Government of India, specialised in trace and ultra trace detection of impurities in materials. The centre provides this important analytical service to users in public and private sectors.

NCCCM has recently developed a specialised technique for trace detection of chromium (Cr) in water. A unique feature of this technique is that it can measure two different chemical species of Chromium, known as Cr(III) and Cr(VI), individually in contrast to the many other techniques, which measure total chromium [Cr(III) +Cr(VI)]. This aspect is important because, out of the total chromium present in water, Cr(VI) alone is carcinogenic in nature at trace levels. The technique has been used to measure chromium in some water samples, namely, tap water, ground water, waste effluent water etc. A sample of Ganga water, collected during the Kumbh Mela (Allahabad, January 2013), was also tested to find Cr(VI) content at about 1 ppb (1 microgram/liter = 1 nanogram/ml). The permissible limit, or maximum contamination level (MCL), is an enforceable standard, which currently is at 50 ppb for Cr(VI) in drinking water, as per the Bureau of Indian Standards (BIS) and World Health Organisation (WHO). Thus, the contamination level found in the tested sample by NCCCM is below the permissible limit.

The Environmental Health Hazard Assessment office of a State in USA had proposed in 2011 the Public Health Goal (PHG) of 0.02 ppb (0.02 microgram/liter) limit for Cr(VI) in drinking water. The PHG reflects the envisaged risk from long-term continuous exposure to a contaminant, and cannot be used to estimate risks from short term exposure. Further, the currently adopted limit for Cr(VI) contamination in that State is 10 ppb.

(c) No, Sir.

(d) Does not arise in view of (c)

(e) Based on the inputs from Ministry of Environment and Forests as mentioned in the answer to (b) the concentration of CR(VI) measured by NCCCM, is 2% of the permissible approved limit, even so, the Government of Uttar Pradesh is taking measures to clean up the river Ganga and to address the issue of chromium in the waste water from the tanneries. The Government of India under Ganga Action Plan (GAP) has financed a chromium recovery unit at Jajmau, for collection and recovery of chromium bearing effluent. Further, Government of Uttar Pradesh is preparing a project proposal for installation of a CETP including Chromium Recovery Unit for the cluster of tanneries for the precipitation and recovery of chromium from the tannery wastewater.