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संयुक्त सचिव

भारत सरकार
पेयजल एवं स्वच्छता मंत्रालय
अ.शा.पत्र संख्या: डब्ल्यू-11011/06/2013-डब्ल्यूक्यू
दिनांक: 13 नवंबर, 2014

विषय: ग्रामीण भारत में सामुदायिक पेयजल शुद्धिकरण संयंत्रों के कार्यान्वयन संबंधी प्रचालनात्मक दिशा निर्देश।

प्रिय महोदया/महोदय,

दिनांक 01.04.2014 की स्थिति के अनुसार आईएमआईएस पर रिपोर्ट की गई सूचना के अनुसार देश में अत्यधिक आर्सेनिक, फ्लोराइड, भारी धातुओं, विषैले तत्वों, कीटनाशकों और उर्वक से प्रभावित लगभग 20,000 जल गुणवत्ता प्रभावित बसावटें हैं जिन्हें अभी सुरक्षित पेयजल उपलब्ध कराया जाना है। अतः मंत्रालय ने इस मामले को गंभीरता से लिया है और इसलिए ऐसी सभी बसावटों में एक चरणबद्ध तरीके से मार्च 2017 से पहले 8-10 एलपीसीडी सुरक्षित पेयजल उपलब्ध कराने का निर्णय लिया है।

2. उपर्युक्त को ध्यान में रखते हुए, ग्रामीण भारत में सुरक्षित पेयजल उपलब्ध कराने के लिए सामुदायिक पेयजल शुद्धिकरण संयंत्रों के कार्यान्वयन संबंधी प्रचालनात्मक दिशा-निर्देश तैयार किए हैं और संलग्न हैं। इसे मौजूदा एनआरडीडब्ल्यूपी के एक अभिन्न अंग के रूप में समझा जाएगा।

3. ऐसे शुद्धिकरण संयंत्र उपलब्ध कराने के लिए एनआरडीडब्ल्यूपी के अंतर्गत राज्यों को 20 प्रतिशत गुणवत्ता निधि जारी की गई थी और एनआरडीडब्ल्यूपी दिशा-निर्देशों के अनुसार एनआरडीडब्ल्यूपी के लिए जारी 5 प्रतिशत गुणवत्ता निधियों का उपयोग किया जा सकता है। इस उद्देश्य के लिए अंतर-राज्य आबंटन मानदंड के अलावा कोई अतिरिक्त आबंटन उपलब्ध नहीं होगा।

4. ऐसी जल गुणवत्ता प्रभावित बसावटों की कुल संख्या तथा चालू वित्तीय वर्ष 2014-15 के दौरान कवर किए जाने वाले न्यूनतम लक्ष्य अनुबंध में उपलब्ध हैं। चालू वित्तीय वर्ष के लिए उल्लिखित न्यूनतम लक्ष्यों से अधिक ऐसे जल शुद्धिकरण संयंत्रों को अनुमोदित करने और उन्हें लगाने पर विचार करने के लिए राज्यों को प्रोत्साहित किया जाता है। ये आँकड़े अनंतिम हैं और अगले वित्तीय वर्ष के लिए लक्ष्यों का निर्णय सभी राज्यों द्वारा आईएमआईएस पर डाटा

अपलोड करने के बाद किया जाएगा। डाटा अद्यतन करने हेतू उच्च प्राथमिकता के आधार पर आवश्यक कार्यवाही की जाए।

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सेवा में,

सभी प्रधान सचिव/ सचिव प्रभारी पेयजल आपूर्ति कार्यक्रम

Operational Guidelines on implementation of Community Drinking Water Purification Plants in Rural India

1.0 Preamble

As on 1/4/2014, there are nearly 78,000 habitations affected with fluoride, arsenic, salinity, nitrate and iron contamination of drinking water in the country, which are yet to be provided safe drinking water. Further, there are many habitations affected with heavy/toxic metals and pesticides/fertilizers for which complete information is not available because there is little testing done or not reported into the IMIS for these emerging parameters.

It is estimated that about 4.72 crore rural people are at risk of consuming unsafe water, as on 1/4/2014. Excess arsenic is still reported by 6 States with an affected population of about 29 lakh. Fluoride contamination is fairly wide spread with an affected population of approximately 1.16 crore. Prolonged consumption of arsenic may lead to arsenicosis (keratosis and melanosis) and cancer while fluoride may cause dental, skeletal and soft tissue fluorosis. In addition, there are problems of uranium, heavy and toxic elements in drinking water sources in many habitations which may cause of variety of diseases including cancer.

The National Rural Drinking Water Programme (NRDWP) funds for supplying "safe" water in contaminated areas are being utilized by the States as a policy mostly for alternate safe Piped Water Supply (PWS) schemes including Multi-village schemes (MVS) (i.e., from far away safe surface sources) the gestation period of such MVS projects is about 4-5 years. Since the rural people cannot be put to risk due to consumption of unsafe drinking water in the interim period as also whereas all such Multi-Village Schemes carrying safe water from far away surface sources require a span of 4-5 years and involve huge funds, hence, it is proposed to provide safe drinking water community water purification plants or through piped water supply schemes from alternate safe drinking water sources before March' 2017 in a phased manner with priority to cover habitations with highest level of contamination, especially fluoride, arsenic, uranium, hexavalent chromium, pesticides/ fertilizers.

2.0 Implementation issues

2.1 Project description & its components

The scheme intends to tackle water quality affected habitations in a time-bound manner through provision of safe drinking water atleast 8-10 lpcd (meant for drinking and cooking purposes only) through installation of community drinking water purification plants. The State Governments may insist provision for a 10 year Operation & Maintenance (O & M) by the Contractor for whom the work is awarded.

2.2 Process of implementation

As per the Scheme, all States are required to prepare individual "District Water Quality Plans" on a projectised mode for only those districts, covering the entire district in the country affected by above-mentioned water quality problems for which separate DPRs shall be prepared and include based on type of water quality problem, quantum of the problem, population affected, technology proposed, detailed model, viability, methodology, reject management, O&M protocol, etc.. This Plan shall then be submitted to the State Level Scheme Sanctioning Committee (SLSSC) for approval. Use of solar based water treatment plants will be prioritized wherever situation demands.

Each Detailed Project Report (DPR) shall invariably cover the following aspects :-

- a) Pre-treatment protocol
- b) Operation & Maintenance protocol
- c) Post treatment protocol &
- d) Reject management protocol

The following issues have to be addressed during implementation of community drinking water purification plants:-

- ❖ The States shall tender out the project to private developer through a transparent process duly examining suitability of technology for removal/reduction of specific contaminants and take up 10 years O&M responsibility by the private developer.
- ❖ The technological options to treat specific contaminants are left to the States to decide. However, the technologies should necessarily be vetted by a reputed organization such as CSIR Laboratory like NEERI-Nagpur, CSMCRI-Bhavnagar, BARC-Mumbai, Bureau of Indian Standards, IITs and other national level reputed institutions dealing with drinking water quality. The Ministry of Drinking Water & Sanitation is willing to assist the States by constituting a High level Technical Committee chaired by Prof. Dr. R.A.Mashelkar (Ex DG-CSIR) and to provide a suggestive list of applicable technologies for various contaminants. Further, the International Centre for Drinking Water Quality (ICDWQ) being set up at Kolkata and/or through other national level institutions shall help the State Governments in identifying technologies and setting up/ finalizing operation and maintenance & technology protocols, if needed.
- ❖ **It is the responsibility of the SLSSC to approve the technology for different contaminants.**
- ❖ Contractor deployed/selected shall take up O&M from day-1 of the date of commissioning including trial run period and will be continued for 10 years.
- ❖ Funds to be utilized for installing these plants shall include only the Plant infrastructure including electrical connections and shed/low cost building only.

No other costs shall be charged from the 25% Water Quality funds released to the States under NRDWP.

- ❖ The private developer will be allowed to charge 10 paise per litre for the year 1 to 3, 20 paise per litre for 4th to 6th year and 30 paise per litre for years 7-10 to meet O&M costs (electricity charges, care taking, membrane replacement, etc.). He will retain these collections with himself in order to meet O&M costs.
- ❖ The tender shall be evaluated on the basis of private developer asking least capital support from the Government.
- ❖ Tubewell/ piped water supply will be the responsibility of the State (through NRDWP coverage funds, whereas the building will be the responsibility of the developer. If building or other services are provided by State Governments, this will be mentioned in the tender document so that the developer can quote accordingly and real price discovery takes place.
- ❖ Bank guarantee shall be given by the Contractor for 100% capital cost to be valid for 2 years period to ensure Contractor does not run away and that the plant functions satisfactorily for the designated 10 year O&M period including train run period.
- ❖ It is not possible to exactly firm up the estimates due to existence of various technologies and that it may not be uniform across the country. SLSSC shall have to take a view in this regard while approving projects/plants.
- ❖ All habitations affected with excess fluoride, arsenic, heavy/toxic metals and pesticides/fertilizers shall be accorded highest priority and safe drinking water (8-10 lpcd) shall be ensured through installation of community water purification plants or through piped water supply from alternate safe drinking water sources by March' 2017. **No relaxation in this regard is allowed by the Ministry.** Annual Action plan showing minimum number of such water quality affected habitations is given in Annexure. However, States are encouraged to sanction and implement more number of such habitations, well before March' 2017.

3.0 Financial terms & Release of funds

The choice of technology shall always be vested with the State Governments and there could be variation in unit cost at the time of actual tendering. The year-wise Central share requirement (50% of total projected cost) for the next 3 years of implementation is tabulated below.

Funds released to the State Governments from the 25% Water Quality funds under NRDWP shall only be utilized for installation of these community water purification plants. Similarly potable water can be supplied through piped water schemes from alternate safe drinking water sources or through uncontaminated deep tubewells. For implementation of these schemes, SLSSC may decide funding modalities.

Arsenic, Fluoride and Heavy Metals contamination in India - Action Plan and Targets for Coverage under NRDWP

Annexure

Sl. No.	Name of State/ UT	Fluoride	Arsenic	Manganese	Copper	Aluminium	Mercury	Uranium	Lead	Cadmium	Chromium	Selenium	Zinc	Total habitations	Action Plan for Annual targets		
				No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations	No. of Habitations		No. of Habitations	2014-15	2015-16
1	ANDHRA PRADESH	745	0	4	0	0	0	0	0	0	0	0	0				
2	BIHAR	893	357	2	0	0	0	0	0	0	0	0	0	749	166	333	250
3	CHATTISGARH	132	0	8	0	1	0	0	0	0	0	0	0	1252	278	556	417
4	GUJARAT	62	0											141	31	63	47
5	HARYANA	15	0	17	0	0	0	0	0	0	0	0	0	62	14	28	21
6	HIMACHAL PRADESH	0	0	6	0	0	0	0	0	0	0	0	0	32	7	14	11
7	JAMMU AND KASHMIR	2	0	2	1	5	0	0	0	0	0	0	0	6	1	3	2
8	JHARKHAND	12	0	1	2	3	0	0	0	0	0	0	0	10	3	4	3
9	KARNATAKA	1122	12	2	2	2	0	0	0	0	0	0	0	18	4	8	6
10	KERALA	102	0	20	0	1	0	0	0	0	0	0	0	1140	253	507	380
11	MADHYA PRADESH	1055	0	12	1	7	0	0	0	0	0	0	0	123	27	55	41
12	MAHARASHTRA	307	0	22	1	2	0	0	0	0	0	0	0	1075	239	478	358
13	ODISHA	279	0	0	0	0	0	0	0	0	0	0	0	332	74	148	111
14	PUNJAB	1	1	3	0	26	0	143	94	12	0	0	0	279	62	124	93
15	RAJASTHAN	7670	0	13	1	3	0	0	0	0	0	3	0	283	63	126	94
16	TAMIL NADU	0	0	23	0	0	0	0	0	0	0	0	0	7687	1708	3416	2562
17	TELANGANA	1174	0	3	0	0	0	0	0	0	2	0	0	25	6	11	8
18	UTTAR PRADESH	180	73	7	3	1	0	0	0	0	0	0	0	1177	262	523	392
19	UTTARAKHAND	2	0	1	1	1	0	0	0	0	0	0	0	264	59	117	88
20	WEST BENGAL	251	0	399	0	0	0	0	0	0	0	0	0	5	1	2	2
21	ASSAM	128	424	570	2	1	0	0	0	0	0	0	0	650	144	289	217
22	MANIPUR	0	0	2	0	1	0	0	0	0	0	0	0	1125	250	500	375
23	TRIPURA	0	0	433	0	0	0	0	0	0	0	0	0	3	1	1	1
TOTAL		14132	1991	1550	14	54	0	143	94	12	2	3	0	17995	4000	7998	5997

- 1) Data pertains to all Financial year since 2010-2011. Arsenic, Manganese, Copper & Aluminium count shown here also from 2010-2011 onward.
- 2) The figures indicated are as reported by States into IMIS as on 1/4/2014. There could be more habitations which may emerge with chemical contamination after testing in State/ district/ sub-divisional water quality testing laboratories
- 3) The targets indicated above State-wise are the minimum number of habitations. All States are encouraged to take up more water quality affected habitations well before 2016-17.