



Dam Safety Act, 2021 National Committee on Dam Safety

Minutes of the 4th Meeting

*12th March 2024
16:00 – 17:30 hours
209, 2nd Floor Conference Room
Central Water Commission, New Delhi*

Minutes of Meeting

The 4th meeting of National Committee on Dam Safety (NCDS) was held on 12th March, 2024 under the chairmanship of Sh. Kushvinder Vohra, Chairman, CWC & NCDS. The meeting was held in virtual mode. The list of participants who attended the meeting is attached as **Annexure-I**.

At the outset of the meeting, Chairman, NCDS and CWC welcomed all the participants in the 4th meeting of NCDS. Chairman of the committee informed the committee members that the main agenda for today's meeting will be finalization of four (04) draft regulations framed by the NDSA under section 54(1) of DSA, 2021. Thereafter, Chairman of the committee asked Member Secretary, NCDS to take up the agenda points. Accordingly, Sh. S.D Sharma, Member Secretary, NCDS presented the power-point presentation on the agenda points stated as per below: -

4.0 Confirmation of minutes of 3rd meeting of NCDS

Member Secretary, NCDS informed that the minutes of the 3rd meeting of NCDS were circulated vide letter No. T-20078/3/2023-DSD-2 dated 05.12.2023. He informed that no comments on the minutes have been received from members of the committee, therefore, the minutes may be considered approved. Accordingly, the minutes of 3rd meeting were approved by the committee.

4.1 Status Regulations to be framed under section 54 of Dam Safety Act

Member Secretary informed that out of 19 regulations are to be framed, out of which 14 have been approved by the committee. 04 regulations will be discussed in this meeting and 01 regulation is under drafting stage.

4.2 Deliberations and Decision

As per agenda items, the detailed deliberations held on the following four (04) regulations:

- A. 54 (2) (a)** “The guidelines, standards, and other directions for achieving the satisfactory level of dam safety assurance under sub-section (1) of section 16”.
- B. 54 (2) (k)** “The data requirements of hydro-meteorological stations in the vicinity of specified dams under sub-section (1) of section 33.
- C. 54 (2) (b)** “The vulnerability and hazard classifications criteria of specified dams under section 17”.
- D. 54 (2) (s)** “The measures necessary to ensure dam safety by every owner of dam other than specified dam under section 46”.

Decision: From the above proposed regulations, 03 regulations i.e. (a), (k) and (s) as per section 54 have been accepted with the minor modification and approved by the committee. The final regulations are enclosed herewith as **Annexure-II**.

Further, the committee suggested that the regulations 54 (2) (b) needs to be reviewed and be placed in the next meeting of NCDS.

Closing remarks by Chairman NCDS

At the end of the meeting, Chairman NCDS appreciated the contribution of the committee members in finalization of three (03) regulations. He mentioned that regulations 54 (2) (b) will be taken up for discussion in the next committee meeting along with new agenda items, if any.

The meeting ended with vote of thanks to the Chair.

List of Participants

S.No.	Name	Designation
Chairman NCDS		
1.	Sh. Kushvinder Vohra	Chairman CWC & Ex-Officio Secretary to the Govt. of India
Representative of Central Government		
2.	Sh. Anil Jain	Chairman, NDSA
3.	Sh. Sanjay Kumar Sibal	Member (D&R), CWC
4.	Sh. M A K P Singh	Member (Hydro), Central Electricity Authority, Ministry of Power
5.	Sh. Manoj Kumar	SJC(PR), DoWR, RD & GR
6.	Dr. Sweta Baidya	Representative of NDMA
7.	Ms. Neetu Chauhan	Director, Geological Survey of India
8.	Dr. K H V Durga Rao	Director, Disaster & Management, NRSC
9.	Sh. Vijayaraghvan	Director, CSIR-NGRI
10.	Sh. M. D. Patel	Chief Engineer, Gujarat WRD
11.	Sh. P K Jha	Engineer-in- Chief, Irrigation Creation, WRD Bihar
12.	Sh. Ratan Kumar	Chief Engineer, Hydrology & SDSO, Andhra Pradesh
13.	Sh. Kiran Singh	Additional Chief Engineer, WRD, Manipur
14.	Sh. Vinay Chauhan	Director Dam, Jaipur, Rajasthan
Specialists in Dam Safety and allied fields		
15.	Sh. D. K. Sharma	Chairman, HPERC
Special Invitees		
16.	Sh. Rakesh Kashyap	Member (Technical), NDSA
17.	Sh. R K Gautam	Director, CWC
Member Secretary		
18.	Sh. S.D. Sharma	Member (Policy & Research), NDSA

03 regulations approved in 4th meeting of NCDS

Regulation 54 (2) (a): *the guidelines, standards and other directions for achieving the satisfactory level of dam safety assurance under sub-section (1) of section 16;*

Section 16 (1): Every State Dam Safety Organisation shall, -

- (a) keep perpetual surveillance;*
- (b) carry out inspections, and*
- (c) monitor the operation and maintenance,*

of all specified dams falling under their jurisdiction to ensure continued safety of such specified dams and take such measures as may be necessary to address safety concerns that are noticed with a view to achieve satisfactory level of dam safety assurance as per such guidelines, standards and other directions on dam safety as may be specified by the regulations

(a) Keep perpetual surveillance.

State Dam Safety Organisations, through dam owners or any other means, shall keep perpetual visual surveillance to observe various anomalies including cracks in the body of the dam or abutment, unusual seepage, deflection in the dam body, and problems related to hydro-mechanical equipment etc. for the safety as per the operation and maintenance manual for the said dam.

(b) Carry out inspections.

State Dam Safety Organisations, through dam owners or any other means, shall carry out the following inspections as stated below:

- i) Pre and Post-monsoon inspections under clause 31(1) of the Dam Safety Act, 2021 as per the guidelines framed under regulation 54(2)(h);
- ii) Inspections during / after every 1 in 50 year return period flood for barrages and 1 in 100 year return period flood for dams, immediately after earthquake which causes any structural damage to the project or any such natural calamities like Glacial Lake Outburst Flood (GLOF), Landslide Lake Outburst Flood (LLOF), Avalanches etc. under clause 31(2) of the Dam Safety Act, 2021;
- iii) If any sign of distress or any unusual behaviour is noticed in the dam body or any of its appurtenant structure for whatsoever reason as per the guidelines framed under regulation 54(2)(h).

For this purpose, stipulations at sub-section (3) of section 31 shall also be followed by project authorities.

Further, an inspection shall be conducted before the reservoir's initial filling as per clause 27(2) of the Dam Safety Act, 2021.

(c) Monitoring the operation and maintenance

Monitoring of operation and maintenance of each specified dam shall be carried out as per the provisions of Operation and Maintenance manual of the said dam. A continuous flow of information from dam owners to SDSO shall be ensured for this purpose.

Regulation 54(2) (k): *The data requirements of hydro-meteorological stations in the vicinity of specified dams under sub-section (1) of section 33.*

Section 33(1)

Every owner of a specified dam shall establish a hydro-meteorological station in the vicinity of each specified dam capable of recording such data as may be specified by the regulations.

Hydro-Meteorological Station

Hydro-Meteorological Station for measuring the following inputs shall be established near dam vicinity:

- i. Rainfall (Precipitation),
- ii. Water level,
- iii. Discharge,
- iv. Temperature,
- v. Humidity,
- vi. Evaporation,
- vii. Wind velocity and direction,
- viii. Snowfall, as applicable.

The frequency of data measurement through the appropriate instruments shall be once a day or more depending upon the requirement. The instruments are to be placed at the dam site or at around 250 m radius from any abutment. The discharge measurement at the dam site should be through a well calibrated and updated (every 2 years) rating curve.

Note: *In addition to the above, as specified in the clause 35 (1) of Dam Safety Act, 2021, every owner of the specified dams shall install well-designed instrumentation network for inflow forecasting and flood warning.*

Regulation 54(2)(s): *the measures necessary to ensure dam safety by every owner of dam other than specified dams under section 46.*

- A) Every dam owner other than specified dams shall undertake measures necessary to ensure dam safety and comply with the state government's extant rules issued in this regard.
- B) A “specified dam” as per the Dam Safety Act–2021 (DSA 2021) (Section 4 (x)) means a dam constructed before or after the commencement of this Act and which is—

- (i) Above fifteen metres in height, measured from the lowest portion of the general foundation area to the top of the dam or
 - (ii) between ten metres to fifteen metres in height and satisfies at least one of the following, namely: —
 - (a) the length of the crest is not less than five hundred metres or
 - (b) the capacity of the reservoir formed by the dam is not less than one million cubic metres or
 - (c) the maximum flood discharge dealt with by the dam is not less than two thousand cubic metres per second or
 - (d) the dam has especially difficult foundation problems or
 - (e) the dam is of unusual design.
- C) (i) All dams not covered in the above definition of specified dams would be “non-specified dams”.
- (ii) Under section 53 (2) (g) of DSA 2021, the state government may make rules by notification for dam safety measures for dams other than specified dams.
- D) All non-specified dam owners shall undertake necessary measures to ensure dam safety and comply with the measures specified by the state government rules as per para “C” above.