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EXTRAORDINARY

भाग III—खण्ड 4
PART III—Section 4

प्राधिकार से प्रकाशित
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सं. 173] नई दिल्ली, बृहस्पतिवार, मार्च 14, 2024/फाल्गुन 24, 1945
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## राष्ट्रीय बांध सुरक्षा प्राधिकरण

## अधिसूचना

नई दिल्ली, 13 मार्च, 2024

**फा. सं. टीई-32/2/2023-एनडीएसए-एमओडब्ल्यूआर.**—राष्ट्रीय बांध सुरक्षा प्राधिकरण, बांध सुरक्षा अधिनियम, 2021 (2021 का 41) की धारा 54 की उपधारा (2) के खंड (ग), खंड (घ), खंड (ङ), खंड (छ), खंड (ण) और खंड (थ) के साथ पठित उपधारा (1) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, राष्ट्रीय समिति की सिफारिशों पर निम्नलिखित विनियम बनाता है, अर्थात:-

1. **संक्षिप्त शीर्षक और प्रारंभ-** (1) इन विनियमों का संक्षिप्त नाम राष्ट्रीय बांध सुरक्षा प्राधिकरण विनियम, 2023 है।

(2) यह राजपत्र में उनके प्रकाशन की तारीख से लागू होंगे।

**2. परिभाषाएं:-** (1) इन विनियमों में, जब तक कि संदर्भ में अन्यथा अपेक्षित न हो, -

(क) "अधिनियम" से बांध सुरक्षा अधिनियम, 2021 अभिप्रेत है;

(ख) "प्राधिकरण" से अधिनियम की धारा 8 के अधीन स्थापित राष्ट्रीय बांध सुरक्षा प्राधिकरण अभिप्रेत है;

(ग) "धारा" से अधिनियम की धारा अभिप्रेत है।

(2) यहां प्रयुक्त शब्द और अभिव्यक्तियां और जो इन विनियमों में परिभाषित नहीं हैं किंतु अधिनियम में परिभाषित हैं का वही अर्थ होगा जो अधिनियम में उन्हें दिया गया है।

## NATIONAL DAM SAFETY AUTHORITY

## NOTIFICATION

New Delhi, the 13th March, 2024

**F. No. TE-32/2/2023-NDSA-MOWR.**—In exercise of the powers conferred by sub-section (1), read with clauses (c), (d), (e), (g), (o) and (q) of sub-section (2) of section 54 of the Dam Safety Act, 2021 (41 of 2021), the National Dam Safety Authority on the recommendations of the National Committee, hereby makes the following regulations, namely: -

1. **Short title and commencement**. – (1) These regulations may be called the National Dam Safety Authority Regulation, 2023.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. **Definitions: -** (1) In these regulations, unless the context otherwise requires, -

(a) "Act" means the Dam Safety Act, 2021;

(b) "Authority" means the National Dam Safety Authority established under section 8 of the Act;

(c) "section" means section of the Act.

(2) Words and expressions used herein and not defined in these regulations but defined in the Act shall have the meanings respectively assigned to them in the Act.

3. **Maintenance of log books or database.** – (1) Every State Dam Safety Organisation shall maintain a log book or database for each specified dam under their jurisdiction recording therein all activities related to the surveillance and inspection and important events related to dam safety.

(2) The log book for database shall be in digital form containing the following details, namely:-

(a) a cover page containing the name of the dam and the name, phone number and email-id of the officer in-charge along with designation and date of taking charge of the dam;

(b) salient features of the dam and barrage or weir as specified in the tables below, namely: -

**Table A**

| Sl. No. | Title | Details |
|---|---|---|
| (1) | (2) | (3) |
| 1. | Name of Dam | |
| 2. | State | |
| 3. | District | |
| 4. | Nearest Rail Head | |
| 5. | Nearest airport | |
| 6. | Dam owner | |
| 7. | Name of river on which dam is constructed | |
| 8. | Basin | |
| 9. | Location | |
| | (i) latitude | |

| | | |
|---|---|---|
| | (ii) longitude | |
| 10. | Nearest City | |
| 11. | Dam type | |
| 12. | Year of completion | |
| 13. | Dam purpose | |
| 14. | Earthquake zone as per IS 1893 | |
| 15. | Height of the dam (metres) | |
| | (i) above deepest foundation | |
| | (ii) above deepest river bed elevation | |
| 16. | Storage Capacity (million cubic metres) | |
| | (i) gross storage | |
| | (ii) live storage | |
| 17. | Total length of dam (metres) | |
| 18. | Total length and number of overflow blocks | |
| 19. | Total length and number of non-overflow blocks | |
| 20. | Top width of dam (metres) | |
| 21. | Reservoir Surface Area (at full reservoir level) (in square kilometres) | |
| 22. | Reservoir Surface Area (at maximum water level) (in square kilometres) | |
| 23. | Catchment Area (in square kilometres) | |
| 24. | Spillway type | |
| 25. | Spillway gates | |
| | (i) sluice gate type, number and size (width and height) | |
| | (ii) surface crested gate type, number and size (width and height) | |
| 26. | Total spillway capacity (cubic metres per second) | |
| 27. | Design flood adopted (Probable Maximum Flood or Standard Project Flood or any other (cubic metres per second) | |
| 28. | Type of energy dissipater | |
| 29. | Stilling Basin | |
| | (i) floor elevation of stilling basin | |
| | (ii) length | |
| | (iii) width | |
| 30. | Bucket type | |
| | (i) invert elevation | |
| | (ii) lip angle and elevation | |
| | (iii) radius | |
| 31. | Plunge Pool | |
| | (i) bottom elevation | |
| | (ii) length and width | |
| 32. | Important Controlling Elevation (metres) | |

| | | |
|---|---|---|
| (a) | top bund elevation | |
| (b) | maximum water level | |
| (c) | full reservoir level | |
| (d) | Spillway Crest elevation | |
| | (i) sluice type | |
| | (ii) overflow type | |
| (e) | Minimum Draw Down Level | |
| (f) | Lowest river bed elevation | |
| (g) | Deepest foundation elevation | |
| (h) | Top of upstream parapet solid parapet wall reduced level | |
| (i) | Maximum Tail Water Elevation | |
| (j) | Minimum Tail Water Elevation | |
| (k) | Average Tail Water Elevation | |
| 33. | Earthen or Rockfill or Masonry or Concrete Dam | |
| (a) | type | |
| (b) | upstream slope | |
| (c) | downstream slope | |
| (d) | number of berms, width and elevations | |
| (e) | Core | |
| | (i) top elevation | |
| | (ii) upstream slope | |
| | (iii) downstream slope | |
| (f) | Cutoff | |
| | (i) type | |
| | (ii) maximum depth | |
| 34. | Power generation (if applicable) | |
| (a) | Head Race Tunnel Intake structure | |
| | (i) number of intake and type | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge per unit (cubic metres per second) | |
| | (iv) invert elevation | |
| | (v) design head (metres) | |
| (b) | Head Race Tunnel | |
| | (i) number | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (c) | Surge Shaft | |
| | (i) number and type | |
| | (ii) size (metres) and shape | |
| | (iii) top elevation | |

| | | |
|---|---|---|
| | (iv) bottom elevation | |
| | (v) height of surge shaft | |
| | (vi) gate type, number and size (width and height) | |
| (d) | Pressure shaft | |
| | (i) number | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (e) | Unit Pressure Shaft or Penstock | |
| | (i) number | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (f) | Powerhouse | |
| | (i) type (underground or surface) | |
| | (ii) installed capacity (megawatt) | |
| | (iii) number and type of turbine | |
| | (iv) size (width, length and height) | |
| | (v) rated discharge (cubic metres per second) | |
| (g) | Tail Race | |
| | (i) number and type | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge | |
| | (iv) length (metres) | |
| | (v) highest flood level at Tail Race outlet | |
| 35. | Irrigation (if applicable) | |
| (a) | head regulator (left) | |
| | (i) number of bays and size of gate (width, length and height) | |
| | (ii) sill elevation | |
| | (iii) discharging capacity | |
| (b) | head regulator (right) | |
| | (i) number of bays and size of gate (width, length and height) | |
| | (ii) sill elevation | |
| | (iii) discharging capacity | |
| (c) | Gross Command Area (hectares) | |
| (d) | Culturable Command Area (hectares) | |
| (e) | Irrigation Intensity | |
| (f) | Canal | |
| | (i) number and size | |
| | (ii) shape | |
| | (iii) discharge capacity | |
| | (iv) length | |

**Table B**

| Sl. No. | Title | Details |
|---|---|---|
| (1) | (2) | (3) |
| 1. | Name of Barrage or Weir | |
| 2. | State | |
| 3. | Barrage owner | |
| 4. | River on which barrage is constructed | |
| 5. | Basin | |
| 6. | Location | |
| | (i) latitude | |
| | (ii) longitude | |
| 7. | Nearest City | |
| 8. | Year of completion | |
| 9. | Earthquake zone as per IS 1893 | |
| 10. | Height of the Barrage (metres) (above deepestfoundation) | |
| 11(a) | Number of Under Sluice Bays | |
| | (i) crest or sill elevation | |
| | (ii) gate size (width and height) | |
| | (iii) length | |
| 11(b) | Number of Spillway Bays | |
| | (i) crest or sill elevation | |
| | (ii) gate size (width and height) | |
| | (iii) length | |
| 12. | Design discharge capacity (cubic metres per second) | |
| 13. | Design Flood adopted (Probable Maximum Flood or Standard Project Flood or any other (cubic metres per second) | |
| 14. | Energy Dissipater | |
| | Details of Stilling Basin: | |
| | (i) length | |
| | (ii) width | |
| | (iii) top elevation | |
| | (iv) top of training wall | |
| | (v) length of downstream apron | |
| 15. | Details of cut off | |
| | (i) bottom elevation of upstream cut off | |
| | (ii) bottom elevation of downstream cut off | |
| 16. | Barrage parameters | |
| (a) | number and width of piers | |
| (b) | number and width of double Piers | |
| (c) | total water way (metres) | |

| | | |
|---|---|---|
| (d) | clear water way (metres) | |
| (e) | upstream floor level | |
| (f) | downstream floor level | |
| (g) | pond level (metres) | |
| (h) | highest flood level (metres) | |
| (i) | river bed elevation (metres) | |
| (j) | top of bridge at barrage (metres) | |
| (k) | maximum tail water level (metres) | |
| (l) | Afflux | |
| (m) | Freeboard | |
| (n) | Flare out wall | |
| | (i) length | |
| | (ii) top Level | |
| | (iii) width | |
| (o) | Flank out wall | |
| | (i) length | |
| | (ii) top level | |
| | (iii) width | |
| (p) | Upstream Guide Bund | |
| | (i) length | |
| | (ii) top level | |
| | (iii) width | |
| (q) | Afflux Bund | |
| | (i) length | |
| | (ii) top Level | |
| | (iii) width | |
| (r) | Downstream Guide Bund | |
| | (i) length | |
| | (ii) top Level | |
| | (iii) width | |
| (s) | Top of Abutments | |
| 17. | Divide Wall | |
| | (i) upstream - length, width and elevation | |
| | (ii) downstream - length, width and elevation | |
| 18 (a) | Head Regulator (Left) | |
| | (i) number of bays | |
| | (ii) number and width of pier | |
| | (iii) length | |
| | (iv) size of gate (width and height) | |
| | (v) s ill level | |

| | | |
|---|---|---|
| | (vi) discharging capacity | |
| | (vii) top of head regulator | |
| (b) | Canal | |
| | (i). full supply level of canal | |
| | (ii) discharge capacity of canal | |
| | (iii) bed level of canal | |
| 19 (a) | Head Regulator (Right) | |
| | (i) number of bays | |
| | (ii) number and width of pier | |
| | (iii) length | |
| | (iv) size of gate (width and height) | |
| | (v) sill level | |
| | (vi) discharging capacity | |
| | (vii) top of head regulator | |
| (b) | Canal | |
| | (i) full supply level of canal | |
| | (ii) discharge capacity of canal | |
| | (iii) bed level of canal | |
| 20 | Protection works | |
| | (i) length of upstream concrete block works | |
| | (ii) length of downstream concrete blockworks | |
| | (iii) length of upstream loose stoneprotection (apron) works | |
| | (iv) length of downstream loose stone protection (apron) works | |
| | (v) safe exit gradient | |
| 21 | Fish Ladder Provided (Yes or NO)<br>* If yes, provide details in separate sheet | |
| 22 | Navigation Lock (Yes or NO)<br>* If yes, provide details in separate sheet | |
| 23 | Irrigation Parameters | |
| | (i) Gross Command Area (hectares) | |
| | (ii) Culturable Command Area (hectares) | |
| | (iii) Irrigation Intensity | |
| 24. | Power generation (if applicable) | |
| (a) | Head Race Tunnel Intake structure | |
| | (i) number of intake and type | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge per unit (cubic metres per second) | |
| | (iv) invert elevation | |
| | (v) design head (metres) | |

| | | |
|---|---|---|
| (b) | Head Race Tunnel | |
| | (i) number | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (c) | Surge Shaft | |
| | (i) number and type | |
| | (ii) size (metres) and shape | |
| | (iii) top elevation | |
| | (iv) bottom elevation | |
| | (v) height of surge shaft | |
| | (vi) gate type, number and size (width and height) | |
| (d) | Pressure Shaft | |
| | (i) number of pressure shaft | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (e) | Unit Pressure Shaft or Penstock | |
| | (i) number of pressure shaft | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge for each (cubic metres per second) | |
| (f) | Powerhouse | |
| | (i) type (underground or surface) | |
| | (ii) installed capacity (megawatt) | |
| | (iii) number and type of turbine | |
| | (iv) power house size (width, length and height) | |
| | (v) rated discharge (cubic metres per second) | |
| (g) | Tail Race | |
| | (i) number and type | |
| | (ii) size (metres) and shape | |
| | (iii) design discharge | |
| | (iv) length (metres) | |
| | (v) highest flood level at Tail Race Tunnel outlet | |

(c) the periodicity and the observations or recording of the items as specified in the table below, namely: -

**Table**

| Sl. No | Item | Periodicity |
|---|---|---|
| (1) | (2) | (3) |
| 1. | Reservoir Water Level (metres) | On hourly basis in monsoon season. On daily basis in non-monsoon season. |
| 2. | Reservoir Inflow (cubic metres per second) | On daily basis. In monsoon season, observation at more frequent intervals. |
| 3. | Discharge or Outflow (cubic metres per second) | On daily basis. In monsoon season, |

| | | |
|---|---|---|
| | | observation at more frequent intervals. |
| 4. | Seepage (litre per minute) | On daily basis |
| 5. | Leakage through body of the dam (litre per minute) | On daily basis |
| 6. | Average Rainfall (millimetre) during the day in the catchment Area or Sub catchment Area or Dam site | On daily basis |
| 7. | Any other relevant items | |

(d) record of the maintenance works as specified in the table below, namely: -

**Table**

| Sl. No. | Details | Date and time of recording |
|---|---|---|
| (1) | (2) | (3) |
| 1. | Any repairs or modifications or rehabilitation or addition work being carried out. | |
| 2. | Any repairs or modifications or rehabilitation or addition work planned in future along with date or period. | |

(e) record of the incidents or failures or unusual events as specified in the table below, namely: -

**Table**

| Sl. No. | Details | Date and time of incidents or failures or unusual events |
|---|---|---|
| (1) | (2) | (3) |
| 1. | any structural damage to the dam and the appurtenant structure; | |
| 2. | any unusual readings of any instrument in the dam; | |
| 3. | any unusual seepage or leakage through the dam body; | |
| 4. | any unusual change in the seepage or leakage regime; | |
| 5. | any boiling or artesian condition noticed below the dam; | |
| 6. | any sudden stoppage or unusual reduction in seepage or leakage from the foundation or body of the dam or any of its galleries; | |
| 7. | any malfunction or inappropriate operation of gates; | |
| 8. | any issue observed due to electrical fault or malfunctioning of panels or equipment; | |
| 9. | occurrence of flood, the peak of which exceeds the available flood discharge capacity of the dam or seventy per cent. of the approved design flood; | |
| 10. | occurrence of flood, which resulted in encroachment on the available freeboard, or the approved design freeboard; | |
| 11. | any unusual erosion in the near vicinity up to five hundred meters downstream of the spillway or waste-weir; | |

| | | |
|---|---|---|
| 12. | Any unusual seismic event; | |
| 13. | any other relevant items. | |

(f) brief details of inspections as specified in the table below, namely: -

**Table**

| Sl. No. | Details of inspections | Description or Remarks |
|---|---|---|
| (1) | (2) | (3) |
| 1. | date of inspection; | |
| 2. | details of team members who inspected; | |
| 3. | observations of inspection team; | |
| 4. | remedial measures suggested by team; | |
| 5. | timelines within which the recommended work are to be completed; | |
| 6. | review of past dam rehabilitation works suggested, executed within time frame assigned mentioning the status or quality of the works; | |
| 7. | date of next inspection; | |
| 8. | any other relevant items. | |