

**For BIS Use Only****BUREAU OF INDIAN STANDARDS  
AGENDA OF 28<sup>th</sup> MEETING**

<b>TITLE OF THE COMMITTEE</b>	<b>DAY AND DATE</b>	<b>TIME VENUE</b>
Geological Investigations & Subsurface Exploration Sectional Committee	06 Dec 2024, Friday	10:30 AM NEEPCO, Shillong (Physical Mode)
<b>Chairperson:</b> Dr. P.C. Nawani, In Personal Capacity	<b>Member Secretary:</b> Ajay Meena Sc B/Assistant Director BIS	

**ITEM 0 WELCOME BY THE CHAIRPERSON****ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING**

The last (27th) Sectional Committee meeting of WRD 05 was held on 19 May 2023, and the minutes, as approved by the Chairman, were circulated to the members via email on 01 May 2024. No comments have been received.

The Committee may CONFIRM the minutes as circulated.

**ITEM 2 COMPOSITION OF THE COMMITTEE**

**2.1** The current composition of WRD 05 is provided in ANNEX-1.

The Committee may NOTE.

**2.2** The following nominations were received for co-option into the Committee.

<b>Sl. No.</b>	<b>Organization</b>	<b>Nominations</b>

1.	IIT(ISM)	Shri Lohit Kumar Nainegal, Assistant Professor Dr. Avinash Kumar Singh, Assistant Professor
2.	IIT INDORE	Shri Manish Kumar Goyal, Professor
3.	CSIR- CBRI	Dr. D.P. Kanungo, Chief Scientist Geotechnical Engineering & Geohazards Group, Principal Member Dr. Anindya Pain, Alternate member

The Committee may NOTE.

**2.3** Shri Shyam Lal Kapil to co-opt in the personal capacity, Upon his retirement from NHPC. An email is sent to NHPC for new nomination; however, the nomination is awaited. The fresh nominations have been received from NHPC

1. Shri Vachaspati Pandey, GM (Geology) — Principal Member
2. Shri Prashant Rai. DGM (Geology) — Alternate Member
3. Smt. Shweta, Deputy Manager (Geophysics) — Alternate Member

The Committee may NOTE.

**2.4** In the last meeting, the Chairperson recommended that the Member Secretary follow up with the heads of the following organizations, which have consistently missed the last three meetings.

Sl. No.	Organizations	Status
1.	J&K STATE POWER DEVELOPMENT CORPORATION LIMITED	The request for fresh nomination has been sent via email. The reply is awaited.
2.	NARMADA CONTROL AUTHORITY, INDORE	The request for fresh nomination has been sent via email. The reply is awaited.
3.	UTTARAKHAND JAL VIDYUT NIGAM LTD., DEHRADUN	The following nominations have been received. Shri Suresh Chandra Baluni, Director Project

		Dr. Harish Bahuguna, DGM (Geology)
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The Committee may NOTE.

**2.5** In the last meeting, the Chairperson suggested to the Member Secretary to write an email to CVPPPL, requesting a nomination to increase the representation from Jammu & Kashmir. The request for the nomination has been sent to the organization. The reply is awaited.

The Committee may NOTE

### **ITEM 3 TITLE, SCOPE & PROGRAMME OF WORK**

The present Title, Scope and Programme of work of WRD 5 Sectional Committee are given in ANNEX 2.

The Committee may NOTE.

### **ITEM 4 DOCUMENT UNDER WIDE CIRCULATION**

#### **4.1 IS 7422 (Part 1) : 1974 Symbols and Abbreviations for use in Geological Maps Selections and Subsurface Exploratory Logs Part 1 Abbreviations**

As deliberated in the last meeting, the modified draft received from GSI is wide circulated under document no. 21364 by waiving off P- Draft.

The comment of GSI is sent to CWC for clarification.

The committee may NOTE and DISCUSS.

#### **4.2 IS 13216: 1991 Code of Practice for Geological Exploration for Reservoir Sites (Doc. No. WRD05/19982)**

The committee decided in the last meeting of the sectional committee to place the draft document under wide circulation as it was already completed the 'P' Draft circulation. The member secretary, sent the document in the wide circulation vide 28-09-2022.

As agreed during last meeting (item 5.6), the comment of CWC is incorporated in the WC draft.

The comment received from Dr. Sanjay Rana, Managing Director, PARSON overseas pvt. Ltd.:

“Geophysical investigations play a major role for exploration of reservoir sites. In the present document it has been passingly mentioned at couple of places, without giving references. I am enclosing the commented document herewith and would love to discuss it further in the next meeting, the issues identified by Dr. Sanjay Rana are highlighted in ANNEX - 3 ”

The Committee may **DISCUSS**.

#### **ITEM 5 DOCUMENT UNDER PUBLICATION**

##### **5.1 IS 7422 (Part 2) : 1974 Symbols and Abbreviations for use in Geological Maps Selections and Subsurface Exploratory Logs Part 2 Igneous Rocks (Doc. No. WRD 05/21365 )**

The document is under printing.

The Committee may NOTE.

##### **5.2 IS 7422 (Part 3) : 1974 Symbols and Abbreviations for use in Geological Maps Selections and Subsurface Exploratory Logs Part 3 Sedimentary Rocks (Doc. No. WRD 05/21366 )**

The document is under printing.

The Committee may NOTE.

##### **5.3 IS 7422 (Part 4) : 1985 Symbols and Abbreviations for use in Geological Maps Selections and Subsurface Exploratory Logs Part 4 Metamorphic Rocks (Doc. No. WRD 05/21369 )**

The document is under printing.

The Committee may NOTE.

**5.4 IS 7422 (Part 5) : 1992 Symbols and Abbreviations for use in Geological Maps Selections and Subsurface Exploratory Logs Part 5 Lime Symbols for Formation Contacts and Structural Features (Doc. No. WRD 05/21370 )**

The document is under printing.

The Committee may NOTE.

**ITEM 6 DOCUMENT UNDER P-DRAFT CIRCULATION**

**6.1 IS 15681: 2006 Geological Exploration by Geophysical Method Seismic Refraction Code of Practice (First Revision)**

In the last meeting, the committee decided to circulate the comments received from Dr. Sanjay Rana draft document among the members.

The comments are attached at **Annex 4**.

No further comments are received.

The Committee may DECIDE.

**6.2 IS 15736: 2007 Geological exploration by Geophysical Method (Electrical Resistivity) – Code of Practice**

In the last meeting, the committee decided to circulate the comments received from Dr. Sanjay Rana draft document among the members, the comments are attached at **Annex 5** for your reference.

No further comments were received.

The Committee may DECIDE.

## **ITEM 7 COMMENTS ON PRINTED STANDARDS**

### **7.1 IS 6955: 2008 Subsurface exploration for earth and rockfill dams - Code of practice (First Revision)**

1. Dr. Gopal Dhawan IN PERSONAL CAPACITY, (Convenor)
2. Shri. Sanjay Rana M/S PARSAN OVERSEAS LTD
3. Shri P K Gajbhiye GSI
4. Shri Shyam Lal Kapil NHPC FARIDABAD
5. Shri Imran Sayeed IN PERSONAL CAPACITY

The panel deliberated the comments received on IS 6955 and incorporated in the document. The draft document is attached at Annex 6.

The comments marked in green are from UJVNL, Red are from CWPRS and Yellow are from NHPC.

The Committee may NOTE and DISCUSS.

## **ITEM 8 STANDARDS NEED TO BE TRANSFER TO WRD FROM MED**

1. IS 7974 (Part 1) - Graphical symbols for use on detailed maps, plans and geological cross sections: Part 1 general rules of representation
2. IS 7974 (Part 2) - Graphical symbols for use on detailed maps, plans and geological cross sections: Part 2 representation of sedimentary rocks
3. IS 7974 (Part 3) - Graphical symbols for use on detailed maps, plans and geological cross sections: Part 3 Representation of magnetic rocks

## **ITEM 8 STANDARDS DUE FOR REVIEW**

### **ITEM 9 PRE – 2000 STANDARDS**

### **ITEM 10 ANY OTHER BUSINESS**

**ANNEX-A**  
(Clause 2.1)

**COMPOSITION OF GEOLOGICAL INVESTIGATIONS AND SUBSURFACE EXPLORATION SECTIONAL COMMITTEE, WRD 5**

**Scope:** Standardization of criteria for choice of methods, investigations and testing of subsurface strata and recommendations for collection and presentation of data

Last meetings 3		25 <sup>th</sup> meeting - 21 July 2022	26 <sup>th</sup> meeting - 22 Sept 2022	27 <sup>th</sup> meeting – 19 May 2023		
SL. NO.	NAME OF THE ORGANIZATION	REPRESENTED BY	MEETINGS ATTENDED			
			25 <sup>th</sup>	26 <sup>th</sup>	27 <sup>th</sup>	
1.	IN PERSONAL CAPACITY, GURGAON	DR. P.C. NAWANI ( <b>Chairperson</b> )	Y	Y	Y	
2.	AECS ENGINEERING & GEOTECHNICAL SERVICES PVT. LIMITED, NOIDA	DR. TANU RAGHUVANSHI (MANAGER LABORATORY) MR. SANJEEV TREHAN (DIRECTOR (Alternate))	Y	X	X	
3.	AFCONS INFRASTRUCTURE LIMITED, MUMBAI	DR. SUNIL BASARKAR, GM (DESIGNS) DR. LAKSHMANA RAO MANTRI, ASSISTANT GENERAL MANAGER (DESIGN) (Alternate)	Y	Y	Y	
4.	AIMIL LIMITED, NEW DELHI	SHRI LAXMIDHAR MOHAPATRA SHRI HEMAN MANCHANDA (Alternate)	Y	Y	Y	
5.	CSIR - CENTRAL BUILDING RESEARCH INSTITUTE, ROORKEE	SHRI D. P. KANUNGO, CHIEF SCIENTIST GEOTECHNICAL	Y	X	X	

		ENGINEERING & GEOHAZARDS GROUP  ANINDYA PAIN, PRINCIPAL SCIENTIST, GEOTECHNICAL ENGINEERING & GEOHAZARDS GROUP (Alternate)			
6.	CSIR - CENTRAL INSTITUTE FOR MINING AND FUEL RESEARCH, DHANBAD	DR J. K. MOHNOT, CHIEF SCIENTIST & SCIENTIST-IN-CHARGE  SHRI ASHOK KUMAR SINGH, SCIENTIST (Alternate)	Y	Y	Y
7.	CENTRAL SOIL & MATERIAL RESEARCH STATION, NEW DELHI	SHRI N P HONKANDAVAR, SCIENTIST E  SHRI HARI DEV, SCIENTIST E (Alternate)	Y	Y	Y
8.	CENTRAL WATER & POWER RESEARCH STATION, PUNE	DR. G. DHANUNJAYA, SCIENTIST  SHRI V. CHANDRA SHEKAR, SCIENTIST C (Alternate)  SHRI B. SURESH KUMAR SCIENTIST C (Alternate)	Y	Y	Y
9.	CENTRAL WATER COMMISSION, NEW DELHI	SHRI SAMIR KUMAR SHUKLA DIRECTOR (FE&SA)  SHRI S K SHARMA, DIRECTOR CMDD (E&NE) (Alternate)	Y	Y	Y
10.	FERRO CONCRETE CONSTRUCTION PVT LTD, INDORE	DR. MAHAVIR BIDASARIA	Y	Y	X
11.	GEOLOGICAL SURVEY OF INDIA	SHRI P. K. GAJBHIYE, DIRECTOR	Y	Y	X



		SHRI IMTIKUMZUK, DIRECTOR (Alternate)			
12.	GUJARAT ENGINEERING RESEARCH INSTITUTE, NARMADA, WATER RESOURCES, WATER SUPPLY AND KALPSAR DEPARTMENT	SHRI K A KESWANI, CHIEF ENGINEER & DIRECTOR  SHRI N. R. MAKWANA, JOINT DIRECTOR (IRRIGATION) (Alternate)	Y	Y	Y
13.	HIMACHAL PRADESH POWER CORPORATION LIMITED, SHIMLA	SHRI R. K. KAUNDAL, DIRECTOR GENERAL MANAGER (DESIGNS)  SHRI SANJAY KUMAR RANA, (Alternate)	X	Y	Y
14.	INDIAN INSTITUTE OF REMOTE SENSING, DEHRADUN	DR. R.S. CHATTERJEE, SC 'G' & HEAD GEOSCIENCES DEPARTMENT & GROUP DIRECTOR, GEOSCIENCES & DISASTER MANAGEMENT GROUP	Y	Y	Y
15.	IIT(ISM)	SHRI LOHIT KUMAR NAINEGAL, ASSISTANT PROFESSOR  DR. AVINASH KUMAR SINGH, ASSISTANT PROFESSOR	NR	NR	NR
16.	IIT INDORE	Shri Manish Kumar Goyal, Professor	NR	NR	NR
17.	J&K STATE POWER DEVELOPMENT CORPORATION LIMITED	SHRI RAVI PANDITA, CHIEF ENGINEER	X	X	X
18.	M/S PARSONS OVERSEAS LTD.	SHRI SANJAY RANA, MANAGING DIRECTOR  SHRI ASHUTOSH KAUSHIK, CEO (Alternate)	X	Y	Y

19.	NARMADA CONTROL AUTHORITY, INDORE	SHRI M K CHAUHAN, SECRETARY	X	X	X
20.	NATIONAL INSTITUTE OF ROCK MECHANICS, KARNATAKA	DR. AJAY KUMAR NAITHANI, SCIENTIST - IV & HOD, ENGG. GEOLOGY DEPT.  DR. SANDEEP NELLIAT(Alternate)	Y	Y	Y
21.	NATIONAL HYDROELECTRIC POWER CORPORATION LTD, FARIDABAD, FARIDABAD	SHRI VACHASPATI PANDEY, GM (GEOLOGY)  SHRI PRASHANT RAI, DGM (GEOLOGY) (Alternate)  MRS. SHWETA, DEPUTY MANAGER (GEOPHYSICS) (Alternate)	Y	Y	Y
22.	NTPC LIMITED, NOIDA	SHRI NAVEEN KUMAR JAIN SHRI BHUVNESH KUMAR (Alternate)	Y	Y	X
23.	NORTH EASTERN ELECTRIC POWER CORPORATION LIMITED.	SHRI GIRISH KALITA, MANAGER (GEOLOGY)	X	X	X
24.	SATLUJ JAL VIDYUT NIGAM LIMITED	SH AJAY KUMAR, MANAGER  SH BRIJESH BADONI, MANAGER (Alternate)	Y	Y	X
25.	THDC INDIA LIMITED, RISHIKESH	SHRI AJAY KUMAR, DGM	Y	X	Y
26.	UTTARAKHAND JAL VIDYUT NIGAM LTD., DEHRADUN	SHRI SURESH CHANDRA BALUNI, DIRECTOR (PROJECTS)  DR. HARISH BAHUGUNA (Alternate)	X	X	X

27.	IN PERSONAL CAPACITY	GOPAL DHAWAN	Y	Y	X
28.	IN PERSONAL CAPACITY	SH. IMRAAN SYEED	Y	X	Y
29.	IN PERSONAL CAPACITY	SHRI R.K. GOEL	Y	X	Y

**Standards due for review**

<b>Sl. No.</b>	<b>IS No.</b>	<b>Title</b>
1.	IS 4453 : 2009	Subsurface exploration by pits trenches drifts and shafts - Code of practice Second Revision
2.	IS 4464 : 2020	Code of Practice for Presentation of Drilling Information and Core Description in Geotechnical Investigation Second Revision
3.	IS 5313 : 2020	Guide for Core Drilling Observations Second Revision
4.	IS 5529 (Part 2) : 2006	In - Situ permeability test Part 2 tests in bedrock Second Revision
5.	IS 6926 : 1996	Diamond core drilling - Site investigation for river valley projects - Code of practice First revision
6.	IS 6955 : 2008	Subsurface exploration for earth and rockfill dams - Code of practice First Revision
7.	IS 7422 Part 5 : 1992	Symbols and abbreviations for use in geological maps Sections and sub - Surface exploratory logs Part 5 line symbols for formation contacts and structural features
8.	IS 11385 : 2008	Subsurface exploration for canals and cross drainage works - Code of practice First Revision
9.	IS 13578 : 2008	Subsurface exploration for barrages and weirs - Code of practice First Revision
10.	IS 14330 : 1996	Ground water investigation for hydraulic structures - Guidelines
11.	IS 15662 : 2006	Geological exploration for gravity dams and overflow structures - Code of practice
12.	IS 15681 : 2006	Geological exploration by geophysical method Seismic Refraction - Code of practice
13.	IS 15686 : 2006	Recommendations for preparation of geological and geotechnical maps for river
14.	IS 4410 (Part 7) : 1982 Reviewed In : 2020	Glossary of terms relating to river valley projects: Part 7 engineering geology (First Revision)

**Pre – 2000 Standards**

<b>Sl. No.</b>	<b>IS No.</b>	<b>TITLE</b>
1.	IS 4078: 1980	Code of Practice for Indexing and storage of drill cores ( <i>First Revision</i> )
2.	IS 4410 (Part 7): 1982	Glossary of terms relating to river valley projects Part 7 engineering geology ( <i>First Revision</i> )
3.	IS 6926: 1996	Diamond core drilling — Site investigation for river valley projects —Code of Practice ( <i>First Revision</i> )
4.	IS 6935: 1973	Method for determination of water level in a bore hole
5.	IS 7422 (Part 1): 1974	Symbols and abbreviations for use in Geological maps section and subsurface exploratory logs Part 1 Abbreviations
6.	IS 7422 (Part 2): 1974	Symbols and abbreviations for use in geological maps section and subsurface exploratory logs Part 2 Igneous rocks