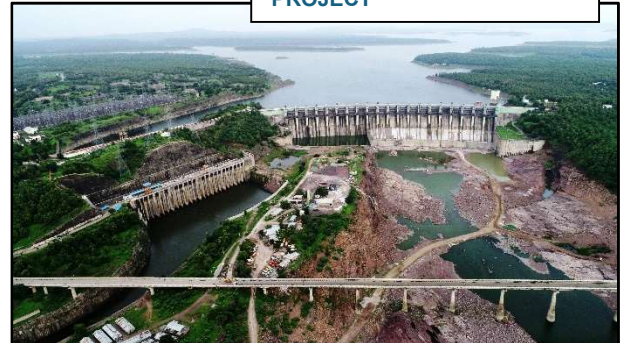




# CENTRAL WATER AND POWER RESEARCH STATION

## **ANALYSIS AND INTERPRETATION OF INSTRUMENTATION DATA OF POWR HOUSE FOR THE PERIOD JANUARY 2023 TO DECEMBER 2024, INDIRA SAGAR H.E. PROJECT, M.P.**

LOCATION MAP OF THE PROJECT



### **STUDY OVERVIEW**

The study includes, to carry out analysis and interpretation of instrumentation data of Power House, instrumentation data for the period from January 2023 to December 2024 which have been recorded and provided by Project Authority and verify the structural behavior of the power house structure.

### **APPROACH**

- Data received from all the installed instruments by project officials on weekly basis have been segregated, thoroughly examined and scrutinized for analysis and interpretation.
- The parameters have been plotted with time period, tail race channel water level and reservoir water level to study their effect on power house structural safety.
- Effects of Tail race channel water level and reservoir water level on parameters such as uplift pressure and pore pressure have been studied.
- The results and findings based on analysis and interpretation of supplied data for the period from January 2023 to December 2024 have been reported

### **IMPACT/SIGNIFICANCE/OUTCOME**

The analysis has been carried out as per IS: 7436-1997, "Guide for types of measurements for structures in river valley projects and criteria for choice and location of measuring instruments". Dam instrumentation data provide useful information on the behaviour of the structure both as a whole and at some particular points. CWPRS has rendered its services in many projects in the form of analysing the dam instrumentation data. Timely analysis and interpretation of dam instrumentation data helps to take an early action and thus play very important role in assuring safety of the dam.

### **KEY FINDINGS**

- Overall performance of power house is satisfactory except pressure built up which warrants corrective measures.
- It is suggested to clean choked up relief holes in the bottom most foundation gallery at suitable time intervals.
- Data analysis is required to be continued till the instruments are functioning to give early warning about any behavioural changes in the Power house structure.