

**APPENDIX B**  
**HYDROELECTRIC ENERGY LOGBOOK STANDARDS**

## **I. PURPOSE**

The intent of this document is to define requirements for operation logs for attended and unattended hydroelectric generating facilities. These standards are intended to ensure that operating information associated with normal operation, maintenance, and abnormal activities are properly recorded and available for review and analysis by regulatory agencies.

## **II. GENERAL**

Owners of hydroelectric generating facilities shall maintain logbooks or other data collection systems that contain the chronological, real-time operational history of the facilities. Logbooks shall include accurate and concise entries regarding the operations and maintenance of the facility and overall status of the generating units and auxiliary equipment. Logbooks shall be maintained at attended facilities, control centers for unattended facilities, and unattended facilities, as described more fully below.

Logbooks shall include, as appropriate, entries of important and/or unusual events relating to safety, accidents, environmental matters, and any other information pertinent to operations. Where information is unit specific, information for each unit must be recorded and so identified. Logbooks shall also contain entries noting operations and maintenance communications between the facility operator and outside entities, including but not limited to the Independent System Operator (ISO), scheduling coordinators or headquarters facilities, regulators, environmental agencies, CalOSHA or similar agencies. The logbooks shall be maintained notwithstanding and in addition to any other similar requirements that mandate that events be recorded.

Owners of hydroelectric generating facilities must collect and record, either through automated data collection systems, written logbooks, or both, all information specified in this standard. Such information must be readily available to operators, California Public Utilities Commission staff, and other authorized personnel at all times, and must be kept for a minimum period of five years from the date of collection. The owner of the hydroelectric facility is responsible for maintaining the integrity of the information collected and recorded. Any corrections to logbook entries shall be made in a manner that preserves the legibility or integrity of the original entry and identifies the date and time of the correction. Each utility (and facility) will maintain a list of any approved abbreviations used by operators in that utility (and that particular facility), along with a definition of each abbreviation.

## **III. REQUIRED INFORMATION**

### **A. Attended Facilities and Control Centers for Unattended Facilities**

Logbooks at attended facilities and control centers for unattended facilities shall be the chronological, real-time record of the operation and maintenance activities that occur either at the attended facility or the unattended facilities within the jurisdiction of the control center, respectively.

Information collected and recorded by automatic devices may be maintained separately and need not be entered in the logbook itself, provided that the information is available for review and shall be maintained in accordance with the standards set forth herein for the daily operations logbooks.

Each logbook shall consist of accurate, concise entries and shall contain at least the information specified below. To the extent any of the information below is not available to the control center operator, it shall be captured either by automated systems or recorded in the Unattended Facilities Log.

- 1) Orders and other communications received and transmitted by the operator, as appropriate, including but not limited to those from or to the Independent System Operator (ISO); scheduling coordinators, headquarters facilities and/or dispatchers; transmission operating centers; regulators; environmental agencies; CalOSHA; or similar agencies;
- 2) Actions taken by the operator to change load, derate the unit, or take the unit off line;
- 3) Operational data, including power production (load) levels, water flows, the availability and operation of AGC, and any generation limits applicable to AGC operation other than the normal limits specified in the Participating Generator Agreement with the California Independent System Operator;
- 4) Operation of system protection relays;
- 5) Water regulation (*e.g.*, downstream water requirements, FERC license requirements);
- 6) Unit separation and parallel times;
- 7) Clearances/Work authorizations;
- 8) Reporting on and off clearances;
- 9) Start and completion of switching operations;
- 10) The application, removal, moving, or change in location and/or number of grounding devices;
- 11) Site emergency activities; including but not limited to accidents, spills and earthquakes;
- 12) Trouble reports; including but not limited to those involving equipment failures and those from outside persons or entities;
- 13) Daily operations, including unit outages and deratings, Automatic Voltage Regulator/Power System Stabilizer operations, voltage operations, governor operations, and black-start operations, if applicable; and
- 14) Special system setups for hydraulic, mechanical, electrical or pneumatic systems.

Each entry shall include the time, location and description of event, including, as relevant, the equipment involved, loads and other readings, voltage orders, directed load changes, deviations from generation schedules, weather, annunciator alarms or other indications, relay target information including device number, limitations, notifications, and corrective actions. Entries noting communications between the operator and outside parties shall include the names of the people involved in the communication.

**B. Unattended Facilities**

Logbooks at unattended facilities shall be the chronological record of operation and maintenance activities that occur when personnel visit an unattended facility. Entries in logbooks at unattended facilities shall be made consecutively and shall include the following information, as applicable:

- 1) Time and date of entry and exit;
- 2) Name(s) of personnel entering/exiting the station;
- 3) Location of event;
- 4) Text description of event/reason for entering station;
- 5) All information pertinent to event, including but not limited to equipment involved, loads and other readings, voltage orders, directed load changes, deviations, weather, annunciator alarms or other indications, relay target information including device number, curtailments, limitations, notifications, corrective actions;
- 6) The application, removal, moving, or change in location and/or number of grounding devices;
- 7) Clearances/Work authorizations.

**(END OF APPENDIX B)**