Schedule Number: N1-142-89-023

All items in this schedule are inactive. Items are either obsolete or have been superseded by newer NARA approved records schedules.

Description:

Item 1.A was accessioned by NARA, National Archives Identifier 52801023.

Item 1.B was superseded by N1-142-10-001, item 19e.

REQUEST FOR RECORDS DISPOSITION AUTHORITY
(See Instructions on reverse)

LEAVE BLANK
JOB NO. N1-142-89-23
DATE RECEIVED 9/27/89

TO: GENERAL SERVICES ADMINISTRATION
NATIONAL ARCHIVES AND RECORDS SERVICE, WASHINGTON, DC 20408

1. FROM (Agency or establishment)
Tennessee Valley Authority

2. MAJOR SUBDIVISION
Power

3. MINOR SUBDIVISION
Business Operations

4. NAME OF PERSON WITH WHOM TO CONFER
whm
Ronald E. Brewer

5. TELEPHONE EXT.
615/751-2520

NOTIFICATION TO AGENCY

In accordance with the provisions of 44 U.S.C. 3303a the disposal request, including amendments, is approved except for items that may be marked "disposition not approved" or "withdrawn" in column 10. If no records are proposed for disposal, the signature of the Archivist is not required.

DATE 2/2/90
ARCHIVIST OF THE UNITED STATES
[signature]

6. CERTIFICATE OF AGENCY REPRESENTATIVE

I hereby certify that I am authorized to act for this agency in matters pertaining to the disposal of the agency's records; that the records proposed for disposal in this Request of ______ page(s) are not now needed for the business of this agency or will not be needed after the retention periods specified; and that written concurrence from the General Accounting Office, if required under the provisions of Title 8 of the GAO Manual for Guidance of Federal Agencies, is attached.

A. GAO concurrence: ☐ is attached; or ☒ is unnecessary.

B. DATE	C. SIGNATURE OF AGENCY REPRESENTATIVE	D. TITLE
9/21/89	[signature: Ronald E. Brewer]	TVA Archivist

7. ITEM NO.	8. DESCRIPTION OF ITEM (With Inclusive Dates or Retention Periods)	9. GRS OR SUPERSEDED JOB CITATION	10. ACTION TAKEN (NARS USE ONLY)
	See the attached description for the Solar Pond Slides and Photographs. This will be a series in the Power Business Operations Comprehensive Records Schedule.		

All changes to this proposed schedule have been approved by:

[signature] 1/25/90 — NARA appraiser, date

[signature: Ronald E. Brewer] 1-18-90 — Agency representative, date

SOLAR POND RECORDS

In 1979 TVA began a feasibility study of solar ponds in the TVA region. This study concluded that solar ponds could be cost competitive for institutional and industrial heating applications and for some industrial process heat applications. As a result of the study, TVA decided to undertake a project to demonstrate the technical and economic feasibility of the nonconvecting solar pond concept in the TVA region. The site selected for TVA's project is on the Chickamauga reservation near Chattanooga. TVA's Board of Directors authorized construction of the 1-acre pond on June 4, 1981. The design was completed, and construction began in August of that year. Construction was completed and the pond became fully operational in the summer of 1982. Funding was appropriated by Congress as part of the National Energy Demonstration program. Total cost for design and construction was $450,000.

A salt-gradient solar pond combines the collection and the storage of solar energy into one single operation. Solar radiation is absorbed and stored in the water in the lower levels of the pond. Convection is prevented by establishing a salt gradient in the pond such that the salt concentration varies from zero at the surface to 20 percent at the bottom of the pond. The pond collects and stores solar energy all year round, and the available thermal energy in the pond can be extracted via a heat exchanger. The concept of collecting and storing solar energy by means of salt-gradient solar ponds was derived from studies of various natural water bodies that had a salt concentration gradient.

The written documentation for this project is indexed into RIMS. There are approximately 1300 colored 2x2-inch slides and twelve 16x20-inch colored photographs in a binder that were produced from some of the slides. The slides and photographs date from 1981-1985, and the approximate accumulation is 1 cubic foot. These slides and photographs present a history of TVA's solar pond. They were developed in-house by TVA and were used for presentations to Federal agencies, educational institutions, and conferences--national, technical, industrial, and local.

Also included in this series is a magnetic tape containing a representative sampling of raw data measurements taken at the pond in 24-hour summaries for a one-year period (1985-1986). The measurements include weather and air conditions, temperatures above and below the pond, and solar radiation. Approximately 2 cubic feet of computer printout reports from the solar pond monitoring system are also included in this series. These printout reports were generated from the monitoring system, but they are not necessarily from the one-year period that has been preserved on magnetic tape.

In 1989 TVA began decommissioning the solar pond project. It was determined that there is too much rainfall in the Tennessee valley for a solar pond to work efficiently. The decommissioning will be complete in FY 91.

DISPOSITION

A. Color Slides, ~~Magnetic Tape, and Computer Printout Reports~~

PERMANENT. Transfer to the National Archives upon approval of schedule.

B. 16x20-inch Colored Photographs, Magnetic Tape, and Computer Printout Reports

Destroy when no longer needed for reference, not to exceed 5 years after decomissioning of the pond is complete.

0977B

11/15/89