

SECOND ANNUAL
JOINT UTILITY TRAINING AND SAFETY WORKSHOP

Sponsored By
South Dakota Electrical Council
&
Center for Power System Studies

In Cooperation With
South Dakota State University
&
School of Mines and Technology

February 1-2-3, 1977

SOUTH DAKOTA STATE UNIVERSITY
Brookings, South Dakota

&

February 15-16-17, 1977

SCHOOL OF MINES AND TECHNOLOGY
Rapid City, South Dakota

PROGRAM

REGISTRATION:	Tuesday	Tuesday
10:00 a.m.	Feb. 1, 1977	Feb. 15, 1977
to	Holiday Inn Motel	School of Mines
12:30 p.m.		Surbeck Center

ORIENTATION:	Tuesday	Tuesday
1:00 p.m.	Feb. 1, 1977	Feb. 15, 1977
to	Holiday Inn Motel	School of Mines
1:15 p.m.	Brookings Room	Subeck Center
	OR	
	SD State University	
	Pugsley - Room 203	

GENERAL SESSION:	Wednesday	Wednesday
12:15 p.m.	Feb. 2, 1977	Feb. 16, 1977
to	Holiday Inn Motel	School of Mines
1:15 p.m.	Poolside	Surbeck Center

LUNCHEON: Phil Nelson, Master of Ceremonies

Welcome and Introductions
Russ Wagner, Chairman, JUTS Committee

Safety Presentation
Phil Nelson, Safety Director, NWPS,
Fred Brown, Field Safety Supervisor, REC

SESSIONS PROGRAM INFORMATION:

Each session is designed as a sixteen hour mini-course. Registration will be for one session only per individual. You will remain in that session for the entire length of the course. Lineman Seminar I and II are identical, but class sessions are held at different times to reduce class size and use laboratory facilities. Diplomas will be presented at last class session if attendance has been continuous.

SESSION I - "A LEADERSHIP SEMINAR"

Bill Giesen,
Coordinator

Instructor - Kurt H. Peters, Director Management Training
Montana-Dakota Utilities
Title - "Supervisor of the 70's"
Description - A course designed for management, super-
visors, and foreman to explore human
relationships in working with others.
Location - Brookings - Holiday Inn - Ag Room
Rapid City - School of Mines - Room _____
Sessions - Tuesday 1:30 p.m. to 5:30 p.m.
Wednesday 8:00 a.m. to 12:00 p.m.
1:30 p.m. to 5:30 p.m.
Thursday 8:00 a.m. to 12:00 p.m.

SESSION II - "ELECTRIC METERING"

Russell Wagner,
Coordinator

Instructors - Albert Aschenbach, Meter Superintendent
Northern States Power, Minneapolis, and
Russell Pettis, Meter Engineer
Northern States Power, Minneapolis
Description - Designed for utility personnel working in
the area of metering. Exploring new
metering concepts.
Location - Brookings - SDSU - Pugsley - Room 202
Rapid City - School of Mines - Room _____
Sessions - Tuesday 1:30 p.m. to 5.30 p.m.
"Review of Basic Metering"
A. C. Circuits, Watthour Meter,
Theory, Demand Meters
Wednesday 8:00 a.m. to 12:00 p.m.
Reactiformer, Time of Day Metering,
Meter Connections, Instrument
Transformers
Wednesday 1:30 p.m. to 5:30 p.m.
"Totalizing Metering" - Theory,
Wiring, Testing,
"Q Meters" - Theory, Wiring,
Testing
Thursday 8:00 a.m. to 12 00 p.m.
"Magnetic Tapes"
"Customer Premise"
Question and Answer Period

SESSION III - "OIL CIRCUIT RECLOSERS - VOLTAGE REGULATORS"
Roger Nagel, Coordinator

Instructors - Oil Circuit Reclosers:

- Walt Wenino, Fergus Falls, MN - McGraw
- Matt Delaney, Kansas City, MO - McGraw
- Doug Fisher, Minneapolis, MN - McGraw
- Don Klamrowski, Milwaukee, WI - McGraw
- Pat McNamee, Aberdeen, SD - Border States
- Doug Nelson, Fargo, ND - Border States

Voltage Regulators:

- Charles Dale - Allis Chalmers Company
- George Burrell, Substation Maint. Supt, EREPC
- Allen Beyer, Substation Control Tech., EREPC

Description - Designed to obtain further knowledge on the operation and maintenance of voltage regulators and oil circuit reclosers. Equipment will be demonstrated and "torn down".

Location - Brookings - Holiday Inn
 Group "A" Room 102
 Group "B" Brookings Room
Rapid City - School of Mines - Room _____

Sessions:

Tuesday
 1:30 p.m.
 to
 5:30 p.m.

Group "A"
 Use & Maint. of
 Oil Circuit Recloser
 and Other Protective
 Devices

Group "B"
 Intro. to Voltage Reg.
 Need for Regulation
 Regulator Construction
 Tap Changer Operation
 Controls, Installation
 and Bypassing
 Trouble Shooting and
 Procedures

Wednesday
 8:00 a.m.
 to
 12:00 p.m.

Operation and Coordination of Oil
 Circuit Reclosers

Film-Research and Development
 Review of Inst. Book
 Equip. Trouble Shooting
 Problem Analysis & Rev.

1:30 p.m.

Intro. to Voltage
 Regulators
 Need for Regulation
 Regulator Const.
 Tap Changer Operation
 Control, Installation
 and Bypassing
 Trouble Shooting and
 Procedures

Use and Maint. of the
 Oil Circuit Recloser
 and Other Protective
 Devices

Thursday Film-Research and Operation and Coord-
8:00 a.m. Development ination of Oil
Review of Inst. Book Circuit Reclosers
Equip. Trouble Shooting
Problem Analysis & Review

SESSION IV - "OPERATORS' SEMINAR - HYDRAULIC LINE & AERIAL
EQUIPMENT"

Mike Mebius, Coordinator

Instructors - Al Nelson, Chas. Olson & Sons
Don Hjerpe, Chas. Olson & Sons

Description - A course for the operation and maintenance
of hydraulic equipment

Location - Brookings - Holiday Inn, Campus Room
Rapid City - School of Mines, Room _____

Sessions: - Tuesday 1:30 p.m. to 5:30 p.m.
"Power Take-Offs - Basic
Hydraulics and Fluids"
Wednesday 8:00 a.m. to 12:00 p.m.
"Service and Repair of
Epoxyglas and Fiberglas"
Wednesday 1:30 p.m. to 5:30 p.m.
"Field Inspection and Service"
Thursday 8:00 a.m. to 12:00 p.m.
"Aerial Devices and Derricks"

SESSION V - "PRACTICAL THEORY ON OPERATION OF DISTRIBUTION
AND TRANSMISSION SYSTEMS"

Don Hendrickson,
Coordinator

Instructors - College of Elec. Eng., SDSU

Dr. J. O. Storry, Dean

Prof. Wayne Knabach

School of Mines and Technology

Dr. Lyle D. Feisel, Prof. & Dept. Head

Cyrus W. Cox, Prof., Elec. Eng.

Richard D. McNeil, Asst. Prof, Elec. Eng.

Ronald J. Schmitz, Asst. Prof, Elec. Eng.

Description - Required prerequisite of very basic
electrical theory. After review, course
will continue on through intermediate
electrical theory.

Location - Brookings, SDSU, Pugsley, Room 210
Rapid City, School of Mines, Room _____

Sessions - Tuesday 1.30 p.m. to 5:30 p.m.
Wednesday 8:00 a.m. to 12:00 p.m.
1.30 p.m. to 5:30 p.m.
Thursday 8:00 a.m. to 12:00 p.m.

SESSION VI - "LINEMAN SEMINAR I"

Leroy Greenwold,
Coordinator

Instructors -

- (1) Prof. Wayne Knabach, SDSU, Brookings
- (2) Evertt Dill, Planning Eng., EREPC, Madison
- (3) George Burrell, Sub. Maint., EREPC, Madison
- (4) Roland Thompson, Supv. of Comm., NWPS, Huron
- (5) Dean Jones, GE, Pittsfield, Mass.
- (6) Sheldon Billey, Lee-Noonan Company, Mpls.
- (7) Pete Lee, Lee-Noonan Company, Mpls.
- (8) Bill Hill, Chapman Chemical Co., Memphis, TE
- (9) Bill Holdsworth, GE, Denver
- (10) _____, School of Mines, Rapid City
- (11) Charles Stoddard, McFarland Co., Sandpoint, Idaho

Description - Practical school on the operating problems of electrical distribution and transmission systems. Course designed for all line operating, maintenance, and design personnel.

Location - Brookings, SDSU, Pugsley, Room 203
** A. C. Laboratory, Harding Hall, Room _____
Rapid City, School of Mines
** A. C. Laboratory, Room _____

Sessions - Tuesday 1:30 p.m. to 3.30 p.m.
**Transformer Theory & Connections (1) Bkgs.
(10) R. City
3:30 p.m. to 5:30 p.m.
**Capacitors (2)
Wednesday 8:00 a.m. to 10 00 a.m.
**Line Balancing (3)
10:00 a.m. to 12:00 p.m.
**Pole Testing (8) Brookings
(11) Rapid City
1.30 p.m. to 3.30 p.m.
Line Connectors (6)

3.30 p.m. to 5:30 p.m.
Line Terminations (7)
Thursday 8:00 a.m. to 10:00 a.m.
Radio and TV Interference (4)
10:00 a.m. to 12:00 a.m.
Lightning Arrestors (5) Brookings
(9) Rapid City

SESSION VII - "LINEMAN SEMINAR II"

Pete Swanson,
Coordinator

Instructors - (See SESSION VI Instructors)

Description - Practical school on the operating problems of electrical distribution and transmission systems. Course designed for all line operating, maintenance, and design personnel.

Location - Brookings, SDSU, Pugsley, Room 203
** A. C. Laboratory, Harding Hall, Room _____
Rapid City, School of Mines
** A. C. Laboratory, Room _____

Sessions - Tuesday 1:30 p.m. to 3.30 p.m.
Line Connectors (6)
3:30 p.m. to 5 30 p.m.
Line Terminations (7)
Wednesday 8:00 a.m. to 10:00 a.m.
Radio and TV Interference (4)
10:00 a.m. to 12:00 p.m.
Lightning Arrestors (5) Brookings
(9) Rapid City
1:30 p.m. to 3.30 p.m.
**Trans. Theory & Connections (1) Bkgs
(10) R. C.
3:30 p.m. to 5.30 p.m.
**Capacitors (2)
Thursday 8 00 a.m. to 10:00 a.m.
Line Balancing (3)
10:00 a.m. to 12 00 p.m.
**Pole Testing (8) Brookings
(11) Rapid City

JOINT UTILITY TRAINING COMMITTEE

Chairman - Russ Wagner, Northern States Power, Sioux Falls
Vice Chairman - Roger Nagel, JT&S Instructor, REC, Pierre
Secretary - Don Scheibe, Northwestern Public Service, Huron
Treasurer - Don Hendrickson, Montana-Dakota Util., Moberly

JUTS MEMBERS

Electrical Contractors:

Dennis Engelstad, Engelstad Electric, Watertown
Thomas J. Freeman, Electric Service, Rapid City
Gene Lothrop, Lothrop Electric, Huron

Dakotas Chapter.

Elton Johnson, Elton Electric, Sioux Falls
James Kellar, Checker Electric, Rapid City

South Dakota Rural Electricians:

Leroy Schecher, Grand Electric Coop, Bison
Roger Nagel, JT&S Instructor, REC, Pierre
Myron Mebius, Tri County Electric, Plankinton
Jacob Niezwaag, Turner-Hutchinson Electric, Marion
Ted Anderson, Intercounty Electric Assoc., Mitchell

Investor Owned Electric Utilities

Russ Wagner, Northern States Power, Sioux Falls
Phil Nelson, Northwestern Public Service, Huron
(Chairman of Publicity Committee)
Bill Giesen, Otter Tail Power Company, Milbank
Don Hendrickson, Montana-Dakota Utilities, Moberly
Everett Pompy, Black Hills Power & Light, Rapid City
(Chairman of Site Committee)

Municipal Association:

Dave Padgett, Pierre
Merle Dirksen, Supt. of Light Plant, Miller
Dan Cotton, Beresford
Greg Sherman, Electric Utilities, Brookings
(Chairman of Site Committee)
Pete Swanson, Electric Utilities, Watertown

AD HOC Members.

Don Scheibe, Northwestern Public Service, Huron
Leroy Greenwald, REC, Plankinton
Fred Brown, REC, Pierre (Chairman Registration Committee)
Art Donnell, NWPS, Huron
Bob Graham, NWPS, Huron
John Smith, KMS Electric, Aberdeen
Dennis Sunderman, NSP, Sioux Falls