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| [illegible]hern States Power Company<br>Minneapolis, Minn.<br>R.O. Duncanson, Jr., | DATE OF DOCUMENT: 9-29-70 | DATE RECEIVED 10-5-70 | NO.: 3179 |
| | LTR. X | MEMO: | R[illegible]T: OTHER: |
| TO: Dr. Morris - | ORIG.: 1 | CC: | OTHER: |
| | ACTION NECESSARY ☐<br>NO ACTION NECESSARY ☐ | CONCURRENCE ☐<br>COMMENT ☐ | DATE ANSWERED:<br>BY: |
| CLASSIF: U | POST OFFICE<br>REG. NO: | FILE CODE: 50-263 — Applic. | |

DESCRIPTION: (Must Be Unclassified)

Ltr pursaunt to Appendix A, Tech. Specs. for POL DPR-22 trans following report:

ENCLOSURES:

Abnormal Occurrence Report #4 w/ Basic Elementary Diagram--Blanket Heater E34A-2.

(2 cys encls rec'd)

REMARKS:

| REFERRED TO | DATE | RECEIVED BY | DATE |
|---|---|---|---|
| Muller<br>w/9 cys for Action | 10-5 | | |
| DIST:<br>Reg File | | | |
| AEC PDR | | | |
| OGC Rm 506A | | | |
| Compliance(2)<br>H. Price & Staff | | | |
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| Skovholt<br>DTIE-Laughlin | | ACKNOWLEDGED | |
| NSIC-Buchanan<br>DeYoung | | | |
| Boyd | | 3179 | wns |

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MAIL CONTROL FORM FORM AEC-326S (8-60)

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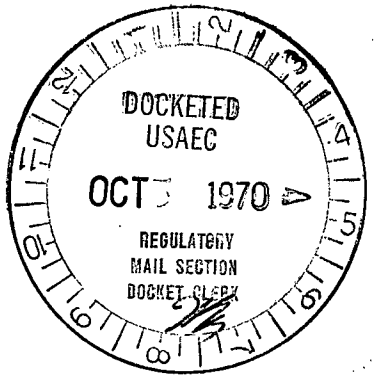
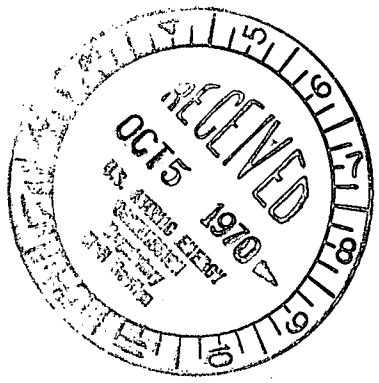
NSP

NORTHERN STATES POWER COMPANY

Minneapolis, Minnesota 55401




September 29, 1970

Dr. Peter A. Morris, Director
Division of Reactor Licensing
United States Atomic Energy Commission
Washington, D.C. 20545

Dear Dr. Morris:

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22
Reporting of Abnormal Occurrences

A condition has occurred at the Monticello Nuclear Generating Plant which requires reporting to your office in accordance with provisions of Appendix A, Technical Specifications, of the Provisional Operating License DPR-22. The condition was classified as an Abnormal Occurrence as defined in Section 1.A.4. of the Technical Specifications and requires reporting in accordance with Section 6.6.B.3 of the Specifications. The Region III Compliance Office has been notified in accordance with the requirements of Section 6.6.A of the Technical Specifications.

The occurrence involved a failure in the Standby Gas Treatment System which resulted in the burning of a portion of the charcoal filter in the A circuit of the system. The cause of the problem has been determined and the necessary repairs have been completed. The details of the occurrence are described in detail in the attached Abnormal Occurrence Report No. 4.

Yours very truly,

R.O. Duncanson, Jr., P.E.
Gen. Supt. of Power Plants-Mechanical
Chairman - Monticello Safety Audit Committee

ROD/caf

3179

September 25, 1970

MONTICELLO NUCLEAR GENERATING PLANT

Abnormal Occurrence Report No. 4

1. Summary Description of Occurrence

At approximately 1440 hours, September 21, 1970, an abnormal occurrence, consisting of a localized fire in a portion of the Standby Gas Treatment System train A charcoal filter bank, rendered the unit inoperable. An investigation of the occurrence was begun immediately and was concluded on September 22, 1970.

2. Detailed Description of the Occurrence

a. Summary of Conditions

At the time of the occurrence there were 406 fuel elements in the core and conditions were in accordance with Technical Specification 3.7.C such that Secondary Containment Integrity was not required.

b. Account and Analysis of the Occurrence

At approximately 1440 hours, September 21, 1970, Standby Gas Treatment System train A was started for the purpose of taking air temperature data at the inlet of the air heater and at the inlet of the charcoal filter bank. When the unit was started, sparks were noticed going past an inspection port downstream of the charcoal filter bank. The unit was immediately shutdown from the control room and power to SGTS train A was interrupted from a local power panel. Immediate investigation revealed that three of the charcoal filter units had ignited (there are twelve charcoal filter units per filter bank). A $CO_2$ fire extinguisher was obtained and $CO_2$ was injected upstream and downstream of the filter bank. Approximately one hour later the three filter units were removed from the filter bank and cooled with water.

Investigation revealed that the fire was caused by overheating one of the four strip heaters (Chromalox Type SE-48) of which the charcoal blanket heater is comprised. The four strip heaters are wired in a series/parallel arrangement (see the basic elementary diagram attached). An electrical short across one of the strip heaters resulted in a higher voltage drop across the second strip heater which was wired in series with the shorted heater causing it to overheat. The short was caused by deterioration of the plastic tape applied to the strip heater leads.

c. Results of the Occurrence

Section 4.7.B.1.b.(2) of the Technical Specification requires the removal efficiency of the charcoal filters to be equal to or greater than 99 percent. As a result of the fire, three of the charcoal filter units needed replacement and train A was considered inoperable.

3. Corrective Actions

On September 21, 1970, all of the SGTS train B strip heater leads were inspected and where the possibility of a short existed, the leads were taped with asbestos tape. B train heater resistances were measured before and after the leads were inspected and no shorts were found to exist.

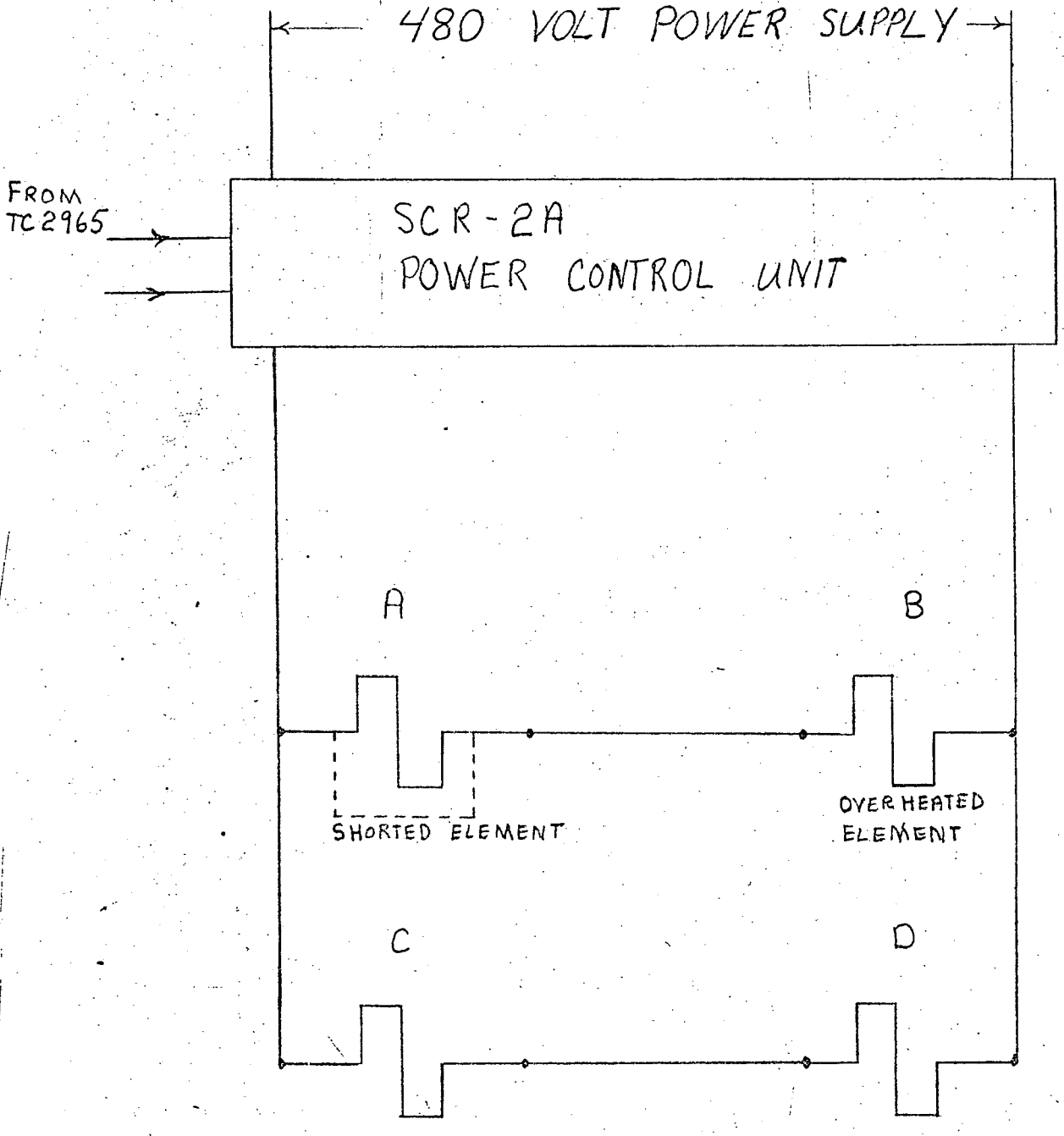
On September 24, 1970, six of the twelve train A charcoal filter units were replaced. The filter bank is comprised of two stacks of six filter units each. The six new filter units replaced the three units which burned and the three remaining units in the stack adjacent to the strip heater which had overheated (see attached filter and heater diagram). The lead wires to the overheated strip heater were replaced and the strip heater leads were inspected and taped with asbestos tape where possibility of a short existed. Four temperature switches, each sensing the surface temperature of one of the four train A strip heaters, were installed and will interrupt a control signal to the power control unit if any of the strip heater temperatures exceed 400°F. Similar temperature switches will be installed on train B when received.

On September 25, 1970, Nuclear Containment System (NCS) Incorporated personnel performed a Freon test on the train A charcoal filter bank and found the efficiency to be greater than 99.9 percent. NCS also performed DOP tests on the SGTS train A HEPA filters at this time and found their efficiencies to be greater than 99.9 percent.

Prepared By:

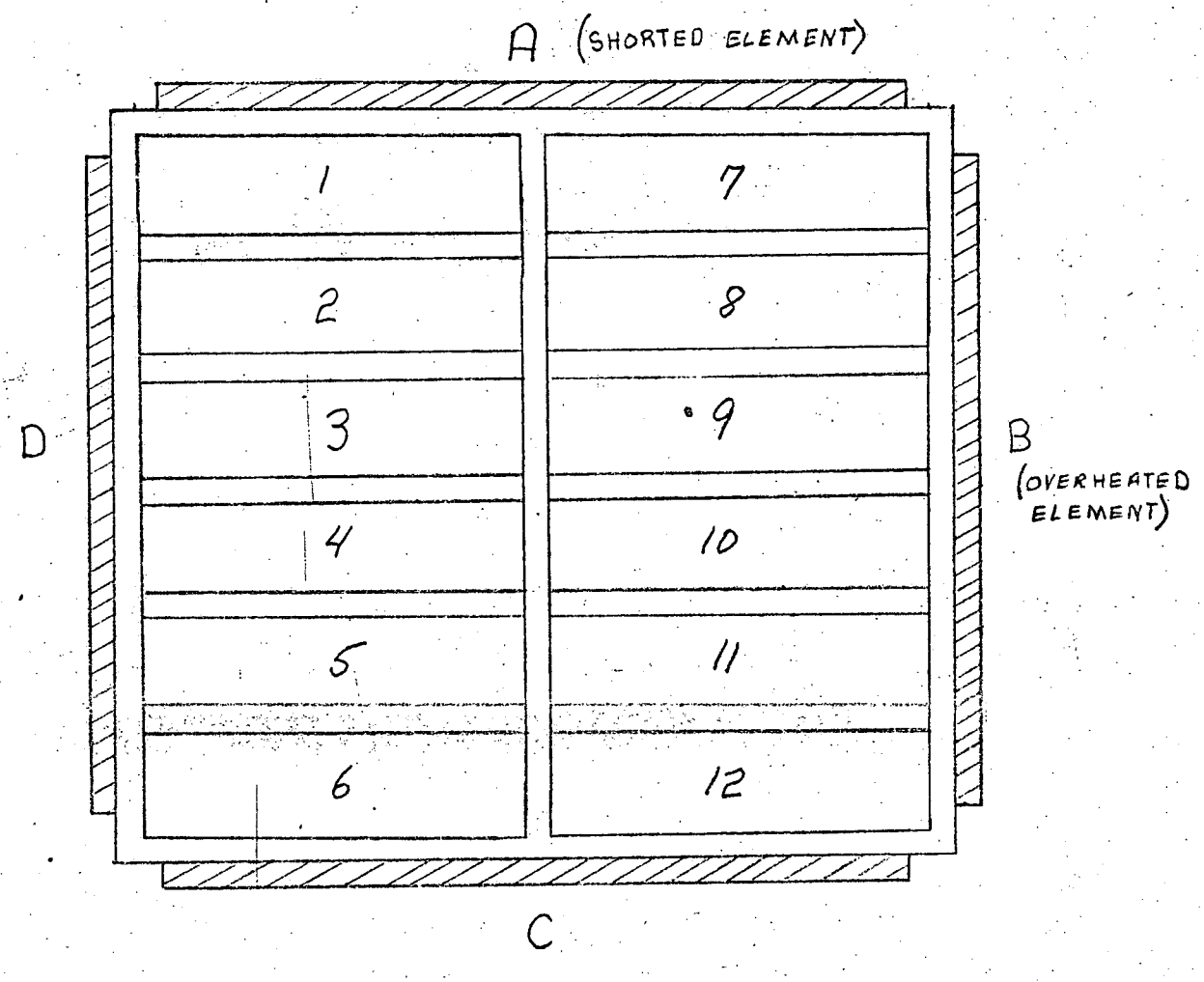
Douglas D. Antony

D.D. Antony, Engineer
Occurrence Investigator




A, B, C AND D REPRESENT THE FOUR STRIP HEATER SECTIONS OF WHICH CHARCOAL BLANKET HEATER E-34A-2 IS COMPRISED.

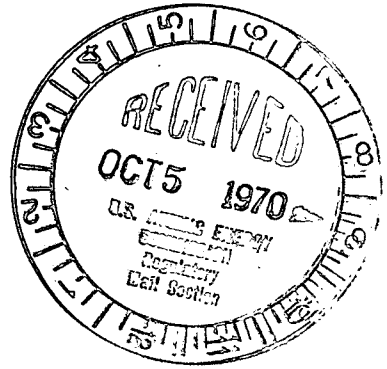
BASIC ELEMENTARY DIAGRAM




A, B, C and D represent the four STRIP HEATER SECTIONS OF WHICH CHARCOAL BLANKET HEATER E-34A-2 IS COMPRISED.

Numbers 1 through 12 represent the twelve CHARCOAL FILTER UNITS COMPRISING SGTS train A CHARCOAL FILTER BANK. FILTER UNITS 7, 8 AND 9 burned. UNITS 7 through 12 WERE REPLACED.

FILTER AND HEATER ARRANGEMENT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