

50-390
391

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
500C Chestnut Street Tower II

10 JUN 79 P 2: 30

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - NRC REGION II LETTER
RII:DKW 50-390/79-20, 50-391/79-16 - INSPECTION REPORT - RESPONSE
TO DEVIATION AND TWO INFRACTIONS

The subject letter dated May 30, 1979, cited TVA with one deviation and two infractions in accordance with 10 CFR 2.201. Enclosed is our response to that deviation and two infractions.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 854-2581.

Very truly yours,



J. E. Gilleland
Assistant Manager of Power

Enclosure

cc: Mr. John G. Davis, Acting Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Q 8010020243

OFFICIAL COPY

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
RESPONSE TO DEVIATION AND TWO INFRACTIONS

A. Infraction 390/79-20-01 and 391/79-16-01

As required by Criterion V of Appendix B to 10 CFR 50 and implemented by Watts Bar Nuclear Plant (WBNP) FSAR Section 17.1A.5, the appropriate instructions will be used for activities affecting quality. WBNP Quality Control Procedure 3.5 requires that electrical cables be installed in raceways as detailed on their pull slips and as designated in this procedure.

Contrary to the above, two safety-related cables were not routed as required by their pull slips. The two cables and their routing were:

<u>Cable Number</u>	<u>Required Cable Tray Route</u>	<u>Actual Cable Tray Route</u>
1-5PP-74-575-A	5A2192	5A2189
2-5PP-63-600-A	5A2224	5A2208

Corrective Action Taken

It should be noted that this infraction is identical in nature to a problem previously identified as Infraction 390/79-07-01. The two cables noted above as being incorrectly pulled were pulled before corrective action to 390/79-07-01 had been implemented.

Procedure WBNP-QCP-3.5 R8 was approved for issue on April 19, 1979. Craft, engineering, and inspection employees were issued controlled copies of the procedure on April 24, 1979. Procedure 1.16, a mechanical equipment identification procedure, was also revised in accordance with WBNP-QCP-3.5, Revision 8 and issued at the same time. A training session was conducted on April 25, 1979, for all electrical craft foremen responsible for the installation and termination of electrical cable. The foremen were instructed to study the procedures, instruct their crew members as to their provisions, and make them available to each crew member for study and/or reference.

To provide an indication of the quality of cable installation, approximately 64 cables were randomly selected by TVA personnel and reinspected during the period from March 15, 1979, to April 16, 1979. No evidence of incorrect cable routing was found during this reinspection. In addition, the licensee has begun a program to reinspect all cables installed on the 6900 V shutdown system boards and the 480 V shutdown system boards. This reinspection is to provide assurance as to the quality of cable installation and is expected to be completed by November 1, 1979.

Nonconformances are to be written for all nonconforming cables found during reinspection.

Action Taken to Avoid Further Noncompliance

A primary reason that cable was being incorrectly routed is that electrical craft employees responsible for pulling cable were not aware of the reasons

for installing the cable as specified by the pull slip. The issuance of WBNP-QCP-3.5 R8 and the followup training and instruction should resolve this concern.

Because of the field routing of electrical conduit, the conduit to tray interface location may be different from the location used in the design routing of cable. It is therefore possible that the pull slip could specify one or more node numbers which are not needed or that one or more node numbers could have been omitted from the pull slip which were actually needed to properly route the cable depending upon where the conduit was located. To correct this problem, Revision 9 to WBNP-QCP-3.5 is now in process to provide instructions for documenting the node points of actual cable pull routes if they are different from those specified on the pull slip and for assuring these node point changes are acceptable.

To provide more thorough surveillance of cable installation, additional inspection employees will be added to the cable installation program. Also, Field Instructions WBFI-E7 entitled, "Cable Auditing By Use of Signal Tracer," was written and issued May 17, 1979. These instructions describe the methods to be used by inspection employees to verify that safety-related cables are routed as specified by the pull slip. Safety-related cables will be inspected 100 percent and nonsafety-related cables (nondivisional) will be inspected on a surveillance basis. This policy began during the week of June 4, 1979. Revision 9 to procedure WBNP-QCP-3.5 will incorporate this change.

It has been recognized that instances could occur where it might be desirable to remove a permanently installed cable in which documentation was complete. Field Instructions WBFI-E8 entitled, "Removal of Permanent Cables," was written and issued on May 17, 1979, to provide a method of removing and/or replacing permanent electrical cable installed in any conduit and/or cable tray. Revision 9 to procedure WBNP-QCP-3.5 will incorporate this change.

Reinspections up to this time, have not revealed any instance where mis-routing of cable has resulted in a cable being installed in a cable tray of the wrong voltage level or a situation where the train separations criteria was violated. The routing problems found have been restricted to difficulties caused by field routing of conduit or where a cable had been incorrectly routed in a parallel tray of the same voltage level. For example, Figures 1 and 2 attached, show the routes according to the pull slip and the path the cable was actually routed for the two cables listed in Infraction 390/79-20-01 and 391/79-16-01. Therefore, the cable installation program at WBNP is felt to be adequate for producing a high quality product and no nonconformances exist in cable presently installed which would compromise the safe operation of the plant. Assurance that future cable installations will be in accordance with design is provided with implementation of the described corrective action.

Date of Compliance

TVA will be in compliance upon issuance of Revision 9 of WBNP-QCP-3.5 including followup instructions to employees. This will be completed August 1, 1979.

B. Infraction 390/79-20-02 and 391/79-16-02

As required by Criterion V of Appendix B to 10 CFR 50 and implemented by Watts Bar Nuclear Plant (WBNP) FSAR Section 17.1A.5, documented instructions will be prescribed for activities affecting quality. WBNP-QCP-3.4, Revision 7, is the instruction utilized by WBNP for the installation, inspection and documentation, including status of cable tray systems.

Contrary to the above, WBNP-QCP-3.4, Revision 7, does not provide instructions for the modification of or the removal and reinstallation of cable trays after initial installation. The below listed cable tray sections were observed to be removed or disconnected for modification or removal for interference after initial installation had been completed and documented.

- (a) Cable tray section 3B2266 had been removed by unbolting and relocated in an adjacent cable tray section.
- (b) One end of cable tray section 5A2224 had been unbolted and dropped down.

Corrective Action Taken

WBNP-QCP-3.4 R8, as approved and released for distribution on May 24, 1979, has added a new Section 6.6 entitled, "Removal of Permanent Documented Cable Tray Segments or Supports." This section will provide the necessary instruction for removal and reinstallation of cable trays whose installation was previously documented as being complete.

Documentation was voided on the date of the NRC inspection for tray node numbers 3B2266 and 5A2224. These node numbers will be reinspected and documentation again completed when the tray is reinstalled. To our knowledge these are the only trays which have been altered after documentation was complete.

Action Taken to Avoid Further Noncompliance

In a June 6, 1979, meeting, electrical and instrumentation craft supervisory employees were informed of Revision 8 to WBNP-QCP-3.4 and its provisions and were instructed not to allow the removal or modification of cable tray segments or conduits without approval by the responsible engineer of the Electrical Engineering Unit. Craft foremen engaged in this type work have received similar instructions and training during the week of June 19, 1979.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved by June 25, 1979.

C. Deviation 390/79-20-03 and 390/79-16-03

The TVA letter to Region II dated April 6, 1979, committed to the issuance of Revision 8 to Quality Control Procedure (QCP) 3.5 and to the training of site personnel in its use by April 16, 1979.

Contrary to the above, as of April 20, 1979, QCP-3.5 Revision 8 had not been issued and, therefore, site personnel had not been trained in its use.

Corrective Action Taken

Because of unforeseen difficulties, Revision 8 to WBNP-QCP-3.5 was not approved for issue until April 19, 1979. Site employees were issued the procedure on April 24, 1979, and a training session on the revisions was held for electrical craft foremen on April 25, 1979. The foremen were instructed to study the procedures and make them available to their work crews.

Action Taken to Prevent Further Noncompliance

Not applicable.

Date of Compliance

TVA is now in full compliance.

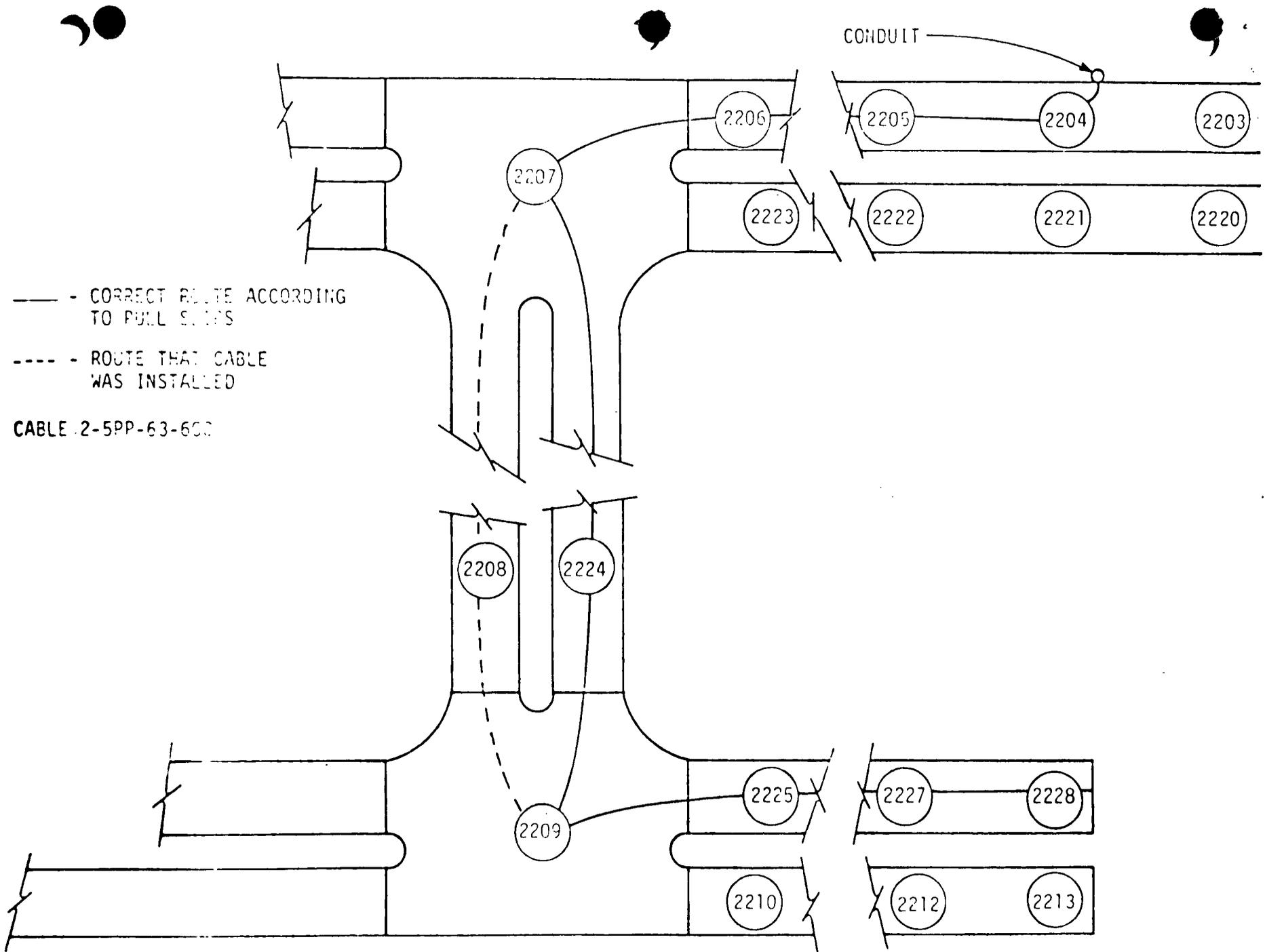


FIGURE 1

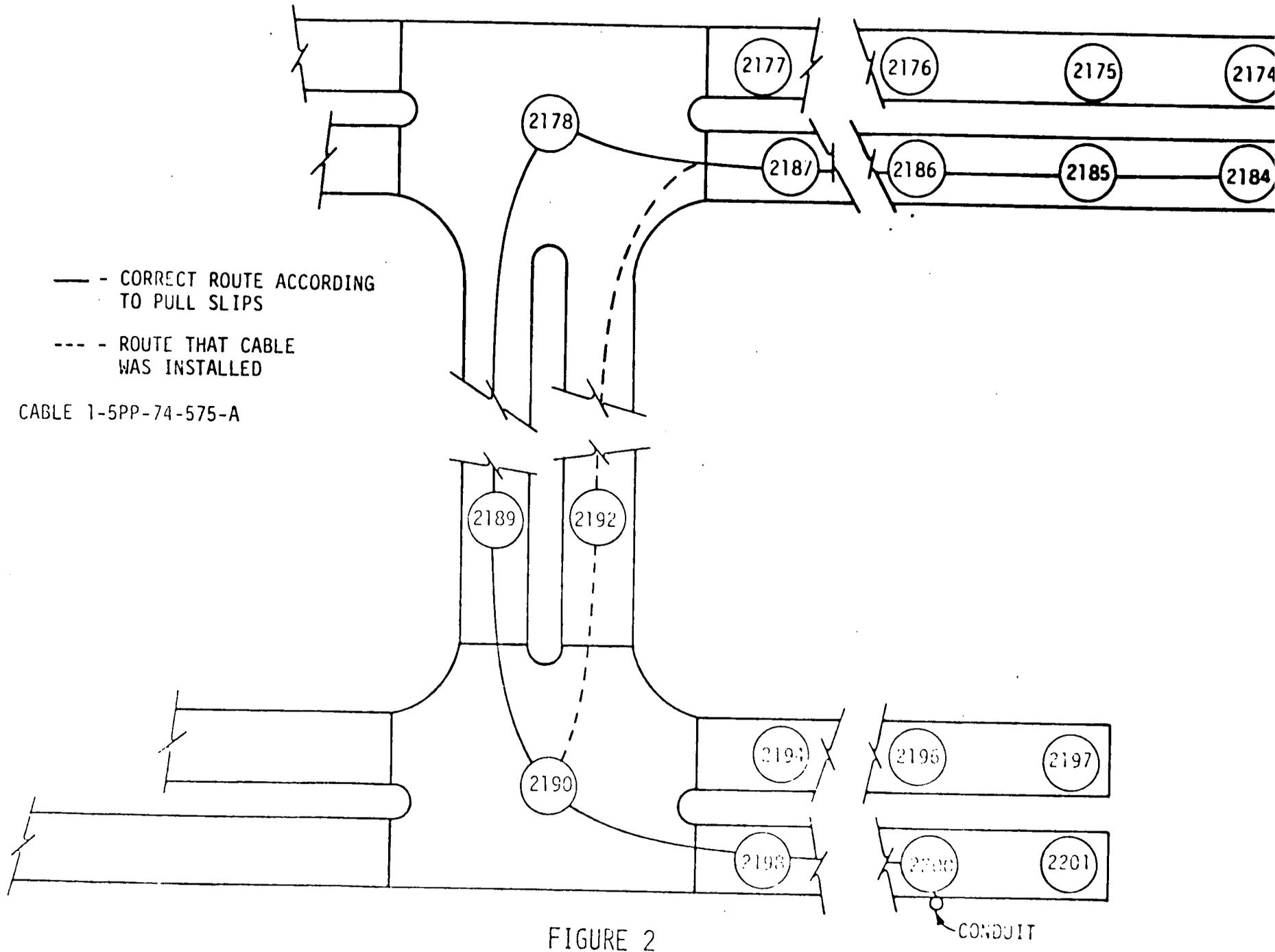


FIGURE 2