

WP 04-FP2202

Revision 3

Diesel Fire Pump Emergency Start

Technical Procedure

EFFECTIVE DATE: 06/24/09

Randy Britain
APPROVED FOR USE

TABLE OF CONTENTS

INTRODUCTION 3

REFERENCES 3

PRECAUTIONS AND LIMITATIONS 3

PERFORMANCE 3

1.0 DIESEL ENGINE EMERGENCY START 3

2.0 DIESEL ENGINE SHUTDOWN 4

INTRODUCTION

This procedure provides the steps necessary for operating the Fire Water System Diesel Pump under abnormal conditions (experiencing the inability to start Diesel Pump from Controller Panel 456-CP-008-03) at the Waste Isolation Pilot Plant (WIPP).

REFERENCES

BASELINE DOCUMENTS

- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- NFPA 20, *Centrifugal Fire Pumps*
- Firetrol FTA1100 Diesel Driven Fire Pump Controller
- 45-S-012-W, Water Pumphouse 456 Fire Water Pumping System/Sprinkler System Piping & Instrument Diagram

REFERENCED DOCUMENT

- WP 04-FP1201 Fire Water Supply System Operations

PRECAUTIONS AND LIMITATIONS

- This procedure does not allow for restoration to operable status. Appropriate repairs and LCO Surveillances must be completed prior to a declaration of operability.
- Failure of the diesel fire pump to start in Auto causes it to be inoperable. If the electric fire pump is also inoperable, verify that the Waste Handling Building is in **Standby Mode** or Facility Shift Manager (FSM) has entered the required actions for **LCO 3.1.1**.

PERFORMANCE

1.0 DIESEL ENGINE EMERGENCY START

- 1.1 Verify FW-456-V-047, Cooling System Manual Valve, is OPEN.
- 1.2 OPEN FW-456-V-046, Cooling System Manual Bypass Valve.
- 1.3 Verify diesel engine cooling water is flowing.

- 1.4 Rotate Governor Operating Lever at Fuel Rack, counterclockwise (CCW) to the EMERGENCY RUN position.
- 1.5 Crank the engine as follows:
 - 1.5.1 Pull and hold either of the following MANUAL CONTACTORS for a maximum of 10 seconds **OR** until Diesel starts:
 - MANUAL CONTACTOR #1 (SC #1)
 - MANUAL CONTACTOR #2 (SC #2)
- 1.6 **IF** engine does NOT start,
THEN alternate between the MANUAL CONTACTORS to start engine.
- 1.7 **IF** Diesel Fire Water Pump does NOT start after five attempts,
THEN inform Central Monitoring Room Operator (CMRO) and FSM of failure to start.

CAUTION

To avoid damage to the pump, packing gland supply valves are designed so that when adjusted properly, a slight amount of leakage is present for proper cooling and lubrication.

- 1.8 Verify packing gland has slight amount of leakage.
- 1.9 Verify the following gauges indicate readings within Diesel Engine operating parameters:
 - Oil Pressure Gauge: 28 to 60 psig
 - Water Temperature Gauge: 165° to 185° F
- 2.0 DIESEL ENGINE SHUTDOWN
 - 2.1 Rotate Governor Operating Lever clockwise (CW) to AUTO-OFF.
 - 2.2 CLOSE FW-456-V-046, Cooling System Manual Bypass Valve.
 - 2.3 **IF** both AC and battery power were lost,
THEN align Controller in accordance with WP 04-FP1201.