

Working Copy

WP 12-FP0028

Revision 0

Fire/Safety Inspection and Testing

Technical Procedure

EFFECTIVE DATE: 03/08/11

Robert Paslay
APPROVED FOR USE

TABLE OF CONTENTS

CHANGE HISTORY SUMMARY 3

INTRODUCTION..... 4

REFERENCES..... 5

REFERENCED DOCUMENTS 5

PRECAUTIONS AND LIMITATIONS 5

PREREQUISITE ACTIONS..... 6

PERFORMANCE 7

1.0 MONTHLY FIRE SAFETY INSPECTION 7

2.0 QUARTERLY FIRE ALARM PANEL INSPECTION AND TESTING..... 7

3.0 SEMI-ANNUAL FIRE DETECTOR INSPECTION AND TESTING 8

 3.1 Rate Compensation/Fixed Temperature Heat Detector 8

 3.2 Rate-of-Rise Heat Detector..... 8

 3.3 Test Button Smoke or Carbon Monoxide Detector 8

 3.4 Spray Activated Smoke Detector 8

 3.5 TM-13 Activated Duct Smoke Detector..... 8

 3.6 Magnet Activated Duct Smoke Detector 8

 3.7 Infrared Detector..... 9

4.0 ANNUAL PULL STATION INSPECTION AND TESTING..... 9

5.0 ANNUAL AUDIO/VISUAL ALARM DEVICE INSPECTION AND TESTING..... 10

Attachment 1 – Sample Fire/Safety Inspection Report..... 11

CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
0	03/08/11	Initial revision. Formerly PM000028.

INTRODUCTION

This procedure provides instruction for the safe performance of the fire/safety inspections and testing of fire alarm, detection, and protection systems.

Performance of this procedure generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and Disposition Schedules. (Attachment 1 is Sample EA12FO0028-362.)

- EA12FP0028-362, Air Intake Shaft Hoist House
- EA12FP0028-364, Effluent Monitoring Instrument Shed A
- EA12FP0028-365, Effluent Monitoring Instrument Shed B
- EA12FP0028-384, Salt Handling Shaft Hoist House
- EA12FP0028-411C, Contact Handling Area
- EA12FP0028-411O, Overpack and Repair Room
- EA12FP0028-411R, Remote Handling Area
- EA12FP0028-413, Exhaust Filter Building
- EA12FP0028-451, Support Building
- EA12FP0028-451C, Central Monitoring Room and Computer Room
- EA12FP0028-452, Safety and Emergency Building
- EA12FP0028-453, Warehouse and Shops
- EA12FP0028-455, Auxiliary Storage Building
- EA12FP0028-456, Pumphouse
- EA12FP0028-458, Guard and Security and Armory Building 473
- EA12FP0028-459, Core Storage
- EA12FP0028-463, Compressor Building
- EA12FP0028-468, Telephone Building
- EA12FP0028-474, Hazardous Waste Storage Building
- EA12FP0028-475, Gatehouse
- EA12FP0028-481, Warehouse annex
- EA12FP0028-482, Exhaust Shaft Hoist Equipment Warehouse
- EA12FP0028-485, Sullair Compressor Building
- EA12FP0028-486, Engineering Building
- EA12FP0028-489, Training Building
- EA12FP0028-534A, 534-FP-00601
- EA12FP0028-534B, 534—FP-0315
- EA12FP0028-534C, 534-FP-0320
- EA12FP0028-534D, 534-FP-14002
- EA12FP0028-534E, 534-FP-0700
- EA12FP0028-910, Trailer 910
- EA12FP0028-918, Trailer 918B
- EA12FP0028-950, Trailer 950
- EA12FP0028-951, Trailer 951
- EA12FP0028-952, Trailer 952
- EA12FP0028-953, Trailer 953
- EA12FP0028-971, Trailer 971
- EA12FP0028-986, Trailer 986

REFERENCES

BASELINE REFERENCES

- 29 *Code of Federal Regulations* (CFR) 1910.164, "Fire Detection Systems"
- 29 CFR 1910.165, "Employee Alarm Systems"
- DOE-HDBK-1062, DOE Fire Protection Handbook
- NFPA 72, National Fire Alarm Code
- NFPA 101, Life Safety Code
- NFPA 801, Facilities Handling Radioactive Materials
- FM Data Sheet 5-48, Automatic Fire Detectors
- Manufacturer's Operation and Maintenance Manuals for Smoke and Heat Detector and Pull Stations
- WP 04-AD3016, Equipment Inactivation
- WP 10-2, Maintenance Operations Instruction Manual
- WP 10-WC3010, Maintenance PM/MWI Controlled Document Processing
- WP 10-WC3011, Maintenance Process
- WP 12-HP3600, Radiological Work Permits
- WP 12-IS.01, Industrial Safety Program – Structures and Management
- WP 12-FP3001, Fire Protection Impairment Procedure
- WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description

REFERENCED DOCUMENTS

NONE

PRECAUTIONS AND LIMITATIONS

- Personnel performing this procedure must be familiar with JHA PROD-413, Fire/Safety Inspection and Testing.

- Personnel performing these inspections and tests must be qualified as Emergency Services (ES) personnel.

PREREQUISITE ACTIONS

1.0 Obtain the proper drawing before performing these inspections and tests.

33-J-005-W	Air Intake Shaft Hoist House Building 362 Fire Panel 362-FP-05001
38-J-027-W	Salt Handling Hoist House Building 384 & 384A Fire Panel 384-FP-05001
41-J-021-W	Exhaust Filter Building 413 Fire Panel 413-FP-010-03 Fire Detection & Alarm System Arrangement
41-J-024-W	Waste Handling Building 411 Fire Panel 411-FP-01301
41-J-025-W	TRUPACT Maintenance Facility 412 Fire Panel 412-FP-00101
41-J-004-W	Support Building 451 Fire Panel 451-FP-089-41
45-J-022-W	Warehouse (Maint.) Building 455 Fire Panel 455-FP-101
45-J-026-W	Guard and Security Building 458 Fire Panel 458-FP-31401
45-J-029-W1/W2	Support Building 451 Fire Panel 451-FP-011-32
45-J-035-W	Gate House Building 475 Fire Panel 475-FP-30801
45-J-036-W	Pumphouse Building 456 Fire alarm Panel 456-FP-012-01
45-J-038-W	Warehouse Building 453 Fire Panel 453-FP-012-01
45-J-039-W	Core Storage Building 459 & Sandia Annex TRLR 459A Fire Panel 459-FP-039-01 Fire Detection & Alarm System Arrangement
45-J-040-W	Compressor Building 463 Fire Panel 463-FP-040-01
45-J-046-W	Building 364 Fire Panel 364-FP-00301 Building 365 Fire Panel 365-FP-00301
45-J-071-W	Engineering Building 486 Fire Panel 486-FP-0301
45-J-073-W	Building 468 – Telephone Building
45-J-089-W	Training Building 486 Fire panel 489-FP-089
45-J-096-W	Oil & Grease Bldg. – 474C Fire Panel 474-FP-096-01 Hazardous Materials Bldg. – 474E Fire Panel 474E-FP-096-02
45-J-097-W	Compressor Bldg. 485 Fire Panel 485-FP-097-01 Fire Detection & Alarm System Arrangement
45-J-481-W5	Warehouse Annex Fac 481 Fire Panel 481-FP-E3-001
53-J-039-W	Underground Utilities Fire Panel 534-FP-0320
53-J-042-W	Underground Utilities Fire Panel 534-FP-00601
53-J-041-W	Underground Utilities Fire Panel 534-FP-14002
Sketch 1971-S	Underground Utilities Fire Panel 534-FP-007
73-S-001-W1/W2	WIPP Site Fire Detection and Alarm System Arrangement
91-J-047-W	Trailer 918B Fire Panel 918B-FP-0301 Fire Protection and Alarm System Arrangement
91-J-049-W	Trailer 950 Fire Panel 950-FP-0301 Fire Protection and Alarm System Arrangement
91-J-051-W-	Trailer 951-Fire Panel 951-FP-0301 Fire Protection and Alarm System Arrangement

91-J-052-W	Trailer 952 Fire Panel 950-FP-052 Fire Protection and Alarm System Arrangement
73-J-047-W1	Trailer 953 Fire Protection and Alarm System Arrangement

NOTE

The order of completion of this work may be modified, or sections may be performed in parallel.

NOTE

Results of fire/safety inspections shall be recorded on the applicable data sheet similar to sample Attachment 1.

NOTE

An Action Request must be generated if defects are discovered during performance of the inspection and testing and the Fire Protection Engineer should be notified.

PERFORMANCE**1.0 MONTHLY FIRE SAFETY INSPECTION**

- 1.1 Perform visual inspection to ensure no combustible load build-up has occurred.
- 1.2 Check accessibility of pull stations.
- 1.3 Visually inspect condition of the following equipment, as required:
 - Fire alarm panel
 - Fire alarm transmitter (RFAR/FTR)
 - Fire alarm receiver (RFAR/FTR)
 - Audible/visual alarm devices
 - Detectors
 - Pull stations
- 1.4 Verify EXIT signs are clearly visible.

2.0 QUARTERLY FIRE ALARM PANEL INSPECTION AND TESTING

- 2.1 Inspect fire alarm panel (FAP) for defects.
- 2.2 Verify all lamps illuminate by operating the lamp test device on FAP equipped with a lamp test device.

3.0 SEMI-ANNUAL FIRE DETECTOR INSPECTION AND TESTING

3.1 Rate Compensation/Fixed Temperature Heat Detector

3.1.1 Inspect detector for defects.

3.1.2 Activate heat detector by applying heat from a heat gun at a distance of 1 to 2 feet from detector for up to 3 to 4 minutes or until detector sets off alarm.

3.2 Rate-of-Rise Heat Detector

3.2.1 Inspect detector for defects.

3.2.2 Activate heat detector by applying cold pack to detector on front disc of detector for 1 to 2 minutes and remove. Immediately apply hot pack for 2 to 3 minutes to disc to activate detector.

NOTE

Some test button detectors are not assigned to a FAP and are local alarming only.

3.3 Test Button Smoke or Carbon Monoxide Detector

3.3.1 Inspect detector for defects.

3.3.2 Activate smoke or carbon monoxide (CO) detector by depressing test button until alarm activates.

3.4 Spray Activated Smoke Detector

3.4.1 Inspect detector for defects.

3.4.2 Activate smoke detector by spraying with artificial smoke at vent from a distance of 2 to 4 feet for 1 to 2 seconds.

3.5 TM-13 Activated Duct Smoke Detector

3.5.1 Inspect detector for defects.

3.5.2 Activate smoke detector by inserting prongs from TM-13 into smoke detector. Depress alarm button on TM-13 for 10 seconds until alarm is activated.

3.6 Magnet Activated Duct Smoke Detector

3.6.1 Inspect detector for defects.

- 3.6.2 Activate smoke detector by placing magnet to rib, molded on outside of smoke detector housing, until alarm is activated. The red LED on detector, and on duct housing control panel should activate within 30 seconds.

NOTE

The magnet is required to reset detectors in Building 489. The reset button on detector resets detector in Building 486.

- 3.6.3 Reset smoke detector.

3.7 Infrared Detector

- 3.7.1 Inspect detector for defects.

- 3.7.2 Activate flame detector by placing obscuration card in infrared wave path.

4.0 ANNUAL PULL STATION INSPECTION AND TESTING

- 4.1 Notify Central Monitoring Room Operator (CMRO) when testing begins.
- 4.2 Verify pull station number to be inspected and tested.
- 4.3 Open FAP for specific pull station to be tested.
- 4.4 Verify power to panel and that no other alarms or signals are showing.
- 4.5 Inspect pull station for defects.
- 4.6 Activate pull station.
- 4.7 Verify all bells and alarms sound.
- 4.8 Verify FAP and RFAR/FTR, if applicable, is activated.
- 4.9 Verify alarm was transmitted to CMR.
- 4.10 Reset FAP and RFAR/FTR, if applicable.
- 4.11 Verify all alarms are reset.
- 4.12 Verify FAP and RFAR/FTR are back in normal mode.
- 4.13 Notify CMRO of completion of testing.

5.0 ANNUAL AUDIO/VISUAL ALARM DEVICE INSPECTION AND TESTING

5.1 Inspect horns, bells, and strobes for defects.

5.2 Verify audio/visual alarm devices function properly.

Attachment 1 – Sample Fire/Safety Inspection Report

FIRE/SAFETY INSPECTION REPORT

BUILDING 362

Dwg. No. 33-J-005-W

MONTHLY

EQUIPMENT	LOCATION	ACTION	CONDITION	FUNCTION TEST
Combustible Load Build-up	Building	Visual Inspection	SAT [] UNSAT* []	
Exit Signs	All Exits	Visual Inspection	SAT [] UNSAT* []	QUARTERLY N/A []
Fire Alarm Panel, 362-FP-05001	North Wall	Panel Power On	YES [] NO* []	SAT [] UNSAT* []
		Visual Inspection	SAT [] UNSAT* []	
RFAR Transmitter, 363-FTR-030-001	East Wall (Outside)	Panel Power On	YES [] NO* []	SAT [] UNSAT* []
		Visual Inspection	SAT [] UNSAT* []	
				SEMI-ANNUAL N/A []
Detector, 5001-AS-101	AIS Hoist House	Visual Inspection	SAT [] UNSAT* []	SAT [] UNSAT* []
Detector, 5001-AS-102			SAT [] UNSAT* []	SAT [] UNSAT* []
Detector, 5001-AS-104			SAT [] UNSAT* []	SAT [] UNSAT* []
Detector, 5001-TD-103			SAT [] UNSAT* []	SAT [] UNSAT* []
				ANNUAL N/A []
Pull Station, 5001-Hs-101	East Exit	Accessible	SAT [] UNSAT* []	SAT [] UNSAT* []
		Visual Inspection		
Pull station, 5001-Hs-102	West Exit	Accessible	SAT [] UNSAT* []	SAT [] UNSAT* []
		Visual Inspection		
Audio/Visual alarm Device, 5001-FA/L-101	North Wall	Visual Inspection	SAT [] UNSAT* []	SAT [] UNSAT* []
Audio/Visual Alarm Device, 5001-FA-102	North Wall, Outside	Visual Inspection	SAT [] UNSAT* []	SAT [] UNSAT* []
		Visual Inspection		

* Explain in Comments Section

