



***Environmental Protection Division
Environmental Compliance Programs (ENV-CP)***
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

***National Nuclear Security Administration
Los Alamos Field Office, A316***
3747 West Jemez Road
Los Alamos, New Mexico, 87545
(505) 667-5794/Fax (505) 667-5948

Date: **FEB 19 2015**

Symbol: ENV-DO-15-0031

LA-UR: 15-20365

Locates Action No.: Not Applicable

Mr. John E. Kieling
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Dear Mr. Kieling:

Subject: Transmittal of Revised Procedure for TA-54 Area G Nitrate-Salt Waste Container Response Instructions

The purpose of this letter is to transmit a procedure that has been updated from the previous submission to the New Mexico Environment Department (NMED). The Los Alamos National Security, LLC (LANS) and the U.S. Department of Energy (DOE), the Permittees, sent the enclosed procedure (EP-AREAG-PLAN-1248, R.0) to the NMED originally on May 29, 2014, as Attachment 4 of the *Revised LANL Nitrate Salt-Bearing Waste Container Isolation Plan*. The procedure was also included as Attachment 6 of the *LANL Nitrate Salt-Bearing Waste Container Isolation Plan, Revision 2* on September 19, 2014. The isolation plan requires that all procedures and plans attached to the isolation plan be submitted to the NMED upon revision.

The revision enclosed as Enclosure 1 changes the name of the procedure to EWMO-AREAG-PLAN-1248, R.1: *TA-54 Area G Nitrate Salt Waste Container Response Instructions* and incorporates new drawings of the containers included within the isolation plan.

If you have comments or questions regarding this submittal, please contact Mark P. Haagenstad at (505) 665-2014 or Gene E. Turner at (505) 667-5794.

Sincerely,



Alison M. Dorries
Division Leader
Environmental Protection Division
Los Alamos National Security LLC

Sincerely,



Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Field Office
U.S. Department of Energy

AMD:GET:MPH:LVH/lm

Enclosures: (1) EWMO-AREAG-PLAN-1248, R.1: TA-54 Area G Nitrate Salt Waste Container Response Instructions

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)
Kathryn M. Roberts, NMED, Santa Fe, NM, (E-File)
Steve Pullen, NMED/HWB, Santa Fe, NM, (E-File)
Timothy Hall, NMED/HWB, Santa Fe, NM, (E-File)
Peter Maggiore, NA-LA, (E-File)
Lisa Cummings, NA-LA, (E-File)
Gene E. Turner, NA-LA, (E-File)
Kirsten M. Laskey, NA-LA, (E-File)
Michael A. Lansing, PADOPS, (E-File)
Amy E. De Palma, PADOPS, (E-File)
Randall M. Erickson, ADEP, (E-File)
Enrique Torres, ADEP, (E-File)
Cheryl D. Cabbil, ADNHHO, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna R. Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
James S. Clemmons, LTP, (E-File)
Rick A. Alexander, EWMO-DO, (E-File)
Andrew R. Baumer, EWMO-DO, (E-File)
Donald L. Allen, LTP, (E-File)
Scott A. Miller, LTP-SSS, (E-File)
David E. Frederici, LTP-SSS, (E-File)
Selena Z. Sauer, LC-ESH, (E-File)
Kenneth M. Hargis, LTP-PTS, (E-File)
Mark P. Haagenstad, ENV-CP, (E-File)
Luciana Vigil-Holterman, ENV-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locateteam@lanl.gov, (E-File)
env-correspondence@lanl.gov, (E-File)



COPY



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ENCLOSURE 1

**EWMO-AREAG-PLAN-1248, R.1: TA-54 Area G Nitrate Salt
Waste Container Response Instructions**

ENV-DO-15-0031

LA-UR-15-20365

Date: FEB 19 2015

TA-54 Area G Nitrate-Salt Waste Container Response Instructions

Effective Date: 01/30/15

The Responsible Manager has determined that the following organizations' review/concurrence is required for the initial document, and for major revisions a same type and level review is required. Review documentation is contained in the Document History File:

EWMO Engineering
LANL TRU Programs – Shipping and Safe Storage Disposition
LANL TRU Programs – Drum Disposition Project
LANL TRU Programs – Oversized Container Disposition Project
Subject Matter Expert
EWMO Environmental, Safety, and Health Manager
Emergency Response
Emergency Management
Environmental Compliance Programs

Responsible Manager, EWMO Facility Operations Director

Rick Alexander / 114624 / /s/ Rick Alexander / 01/14/15
Name (print) Z# Signature Date

Classification Review: N/A Unclassified UCNI Classified _____

Teri Tingey / 200975 / /s/ Teri Tingey / 01/12/15
Name (print) Z# Signature Date

Working Copy / Information Only (circle one)

Initials / Date: _____ / _____

This document fully satisfies the requirements of P300, Integrated Work Management, in order to systematically describe the work activity, the associated hazards, and the controls that **MUST** be employed to mitigate the risks.

REVISION HISTORY

Document No./Revision No.	Issue Date	Action	Description
EP-AREAG-PLAN-1248, R.0	May 28, 2014	New Document	
EWMO-AREAG-PLAN-1248, R.1	January 30, 2015	Minor Revision	Revise document to incorporate new PermaCon drawings and make editorial corrections as necessary such as changing document number from "EP" to "EWMO". This revision does not introduce any new hazards.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
TITLE PAGE.....	1
REVISION HISTORY	2
TABLE OF CONTENTS.....	3
1. PURPOSE.....	4
2. HISTORY	4
3. SITE CONSIDERATIONS	5
4. BUILDING CONSIDERATIONS.....	5
5. VENTILATION STATUS.....	6
6. LTP PERSONNEL	6
7. RESPONSE ACTIONS	7
8. REFERENCES	7
<u>Appendices</u>	
Appendix 1, TA-54-231 PermaCon Fire Protection System	9
Appendix 2, TA-54-375 PermaCon Fire Protection System	11
Appendix 3, TA-54-375 SWB Storage Layout Plan	13
Appendix 4 TA-54 Area G Structure Location Map	14

1. PURPOSE

The purpose of this plan is to provide pre-planning and initial entry requirements for potential release scenarios from the nitrate salt-bearing waste containers. This plan is intended to minimize the consequences to personnel and the environment from a potential incident.

2. HISTORY

On February 14, 2014 there was a radiological release in the underground at the Waste Isolation Pilot Plant (WIPP). It was postulated that an energetic chemical reaction occurred. On May 15, 2014 WIPP released photographs which showed a Los Alamos National Laboratory (LANL) drum containing remediated nitrate salt-bearing waste had breached in Panel 7, Room 7. The cause of the breach and other potentially impacted drums is currently unknown, but is being actively investigated.

The current inventory of nitrate salt-bearing waste containers fall into 3 categories: 1) remediated, 2) un-remediated, and 3) cemented. Only the remediated containers have been “treated” and therefore are suspected of possible reactions. The remediated drums have all been placed in standard waste boxes (SWBs) and are located in a HEPA-ventilated, temperature-controlled PermaCon with a fire suppression system. The un-remediated drums have all been placed in 85-gal overpacks and will be transferred to a HEPA-ventilated, temperature-controlled PermaCon with a fire suppression system. The layouts of the TA-54-231 and TA-54-375 fire suppression systems within the PermaCons are illustrated on Appendix 1, TA-54-231 PermaCon Fire Protection System, and Appendix 2, TA-54-375 PermaCon Fire Protection System.

All of the remediated drums in SWBs are located in the PermaCon in TA-54-375. Appendix 3, TA-54-375 SWB Storage Layout Plan, is a diagram of the SWB layout in TA-54-375. The un-remediated drums are located in TA-54-230 and will be moved into the TA-54-231 PermaCon.

The cemented waste containers are not considered to present any risk and are therefore not addressed here.

3. **SITE CONSIDERATIONS**

The drums and SWBs are spaced to satisfy the Resource Conservation and Recovery Act (RCRA) requirements, which require a minimum of two feet between containers. Until the final configuration for the un-remediated drums is achieved a list of drum locations will be kept and provided to Emergency Management (EM). EM is the central point of distribution and will provide appropriate information to responders, including Emergency Response (ER) and Los Alamos Fire Department (LAFD). When the final configuration is achieved, a diagram with drum locations within the TA-54-231 PermaCon will be produced, provided to EM, and posted in the TA-54 Operations Center. A preliminary walkdown of TA-54-230, TA-54-231, TA-54-375 and TA-54-412 has been completed with EM and ER. A walkdown with LAFD will be completed. Photos of the final configuration will be provided to EM.

Appendix 4, TA-54 Area G Structure Location Map, is a map showing the 100-meter initial standoff distance from all affected facilities and a copy of it will be posted in the TA-54 Operations Center and the Emergency Operations Center (EOC).

The primary access into Area G will be the west entrance adjacent to the TA-54 Operations Center. Due to wind conditions, response organizations may have to enter Area G through the east gate. That road is not paved, but is maintained and it will be regularly inspected by appropriate personnel, including Emergency Operations (EO) and LAFD, to ensure accessibility. The road is inspected in accordance with EWMO-AREAG-WO-DOP-1246, Nitrate Salt-Bearing TRU Waste Container Monitoring, and repaired after each significant rain event.

4. **BUILDING CONSIDERATIONS**

Domes TA-54-231 and TA-54-375 have PermaCons installed within them. PermaCons are stainless steel enclosures designed for contamination control. Each has high-efficiency particulate air (HEPA) filtration and has been tested to ensure adequate airflow through the PermaCon. Each has several Continuous Air Monitors (CAMs) to monitor for airborne radioactive contamination. Two remotely monitored CAMs are installed in the TA-54-375 PermaCon which provides notification when there is a significant airborne release. Each structure has HVAC for heating and cooling within the PermaCons. All combustibles and flammable liquids have been removed from the domes, and the PermaCons. There are no hazardous materials, other than those in the waste containers, within the domes or PermaCons. The domes are not routinely occupied although daily and hourly inspections are performed. Access to the PermaCons is restricted by EWMO-AREAG-SO-1247, TA-54 Area G Domes TA-54-231 and TA-54-375 PermaCon Access Restrictions.

Dome TA-54-230 is a fabric dome with fire suppression. It is considered short-term storage and all un-remediated drums will be moved to the TA-54-231 PermaCon the week of May 26.

5. VENTILATION STATUS

Because the HEPA ventilation is a key component of the contamination control within the PermaCon, if it were to be non-functional, the contamination control provided by the PermaCon would be compromised. Therefore, its status should be monitored and mitigative actions implemented if non-functional. EWMO-AREAG-FO-DOP-1246 performs hourly inspections of the containers contains a requirement to verify the HEPA ventilation is operating. Therefore any failure of the system would be known within an hour. If the ventilation system is found to be non-functional, the inspector will notify the Shift Operations Manager (SOM) who will coordinate with appropriate resources to repair the system as soon as possible. If the ventilation is non-functional for an extended period of time, the frequency of temperature measurements of the containers will be increased at the direction of the SOM.

6. LTP PERSONNEL

The TA-54 Operations Center is manned 5 x 12 (Monday - Friday). Core work hours are 0600 to 1800. All normal support personnel are available during those hours. The Abnormal Operating Procedures and Emergency Response Procedure (see references) rely on the TA-54 Operations Center personnel to make notifications, contact Subject Matter Experts (SMEs), and coordinate with response organizations. EWMO-AREAG-FO-DOP-1246 provides direction to personnel performing hourly inspections on the backshift and weekends since they will not have access to TA-54 Operations Center personnel.

To support a backshift or weekend response, the TA-54 Operations Center will maintain an on-call list with the following personnel:

- Facility Operations Director (FOD)
- Operations Manager (OM)
- SOM
- Shift Operations Supervisor (SOS)
- Radiological Control Technician (RCT) Foreman
- RCT (2)
- Industrial Hygiene (IH)
- Operations Center Operator (OCO)
- Nuclear Operator

In accordance with company procedure, on-call LTP personnel are required to be on site within two hours of notification. Radiation Protection (e.g., Radiological Control Technicians) respond within one hour.

7. RESPONSE ACTIONS

The following actions will initiate a response action requiring notification to LAFD via 911 and the Emergency Operations Support Center (EOSC) 667-6211:

1. Loss of container integrity such as evidence of leakage and/or lid or lid container gasket compromised
2. Bulging such as expansion of side walls or top
3. Chemical reaction such as smoke or release of internal contents to atmosphere
4. Evidence of fire or smoke
5. Blistering paint on a container
6. A container temperature measurement that is greater than 15 °F higher than the control temperature in accordance with EWMO-AREAG-FO-DOP-1246
7. A CAM alarm

Response personnel will initially mobilize to 100 meters from the affected facility as shown on the figure in Appendix 4. If specialized tools are identified (none have been to date), they will be staged in a central location more than 100 meters from any of the potential facilities. The forklift with blast protection will be staged between TA-54-231 and TA-54-375 as shown in Appendix 4. The Hazardous Material (HazMat) team will develop an incident specific response plan and safety plan per EO procedures (see references), which will be approved by the Incident Commander (IC) prior to any mitigation. LAFD, LTP SMEs, HazMat, and the Field Monitor Team (FMT) from Emergency Response will be involved in the planning for any mitigation and will be included in the pre-job briefing. In addition, the FMT has pre-planned the placement of additional monitoring equipment if it is needed. EO has personnel on call to support the IC including chemists, modelers, health physicists, samplers, etc.

8. REFERENCES

EP-DIV-BEP-20048, EWMO Division Building Emergency Plan (BEP)

EP-DIV-RM-AOP-20201, Discovery of an Airborne, Liquid and/or Solid Material Release or Spill

EP-DIV-RM-AOP-20204, Waste Container Questionable Integrity

EP-DIV-RM-ERP-20200, EWMO Area Emergency Response

EWMO-AREAG-FO-DOP-1246, Nitrate Salt-Bearing TRU Waste Container Monitoring

9. REFERENCES (continued)

EWMO-AREAG-SO-1247, TA-54 Area G Domes TA-54-231 and TA-54-375 PermaCon
Access Restrictions

EO-ER-600-005, EO-ER Emergency Response Plan

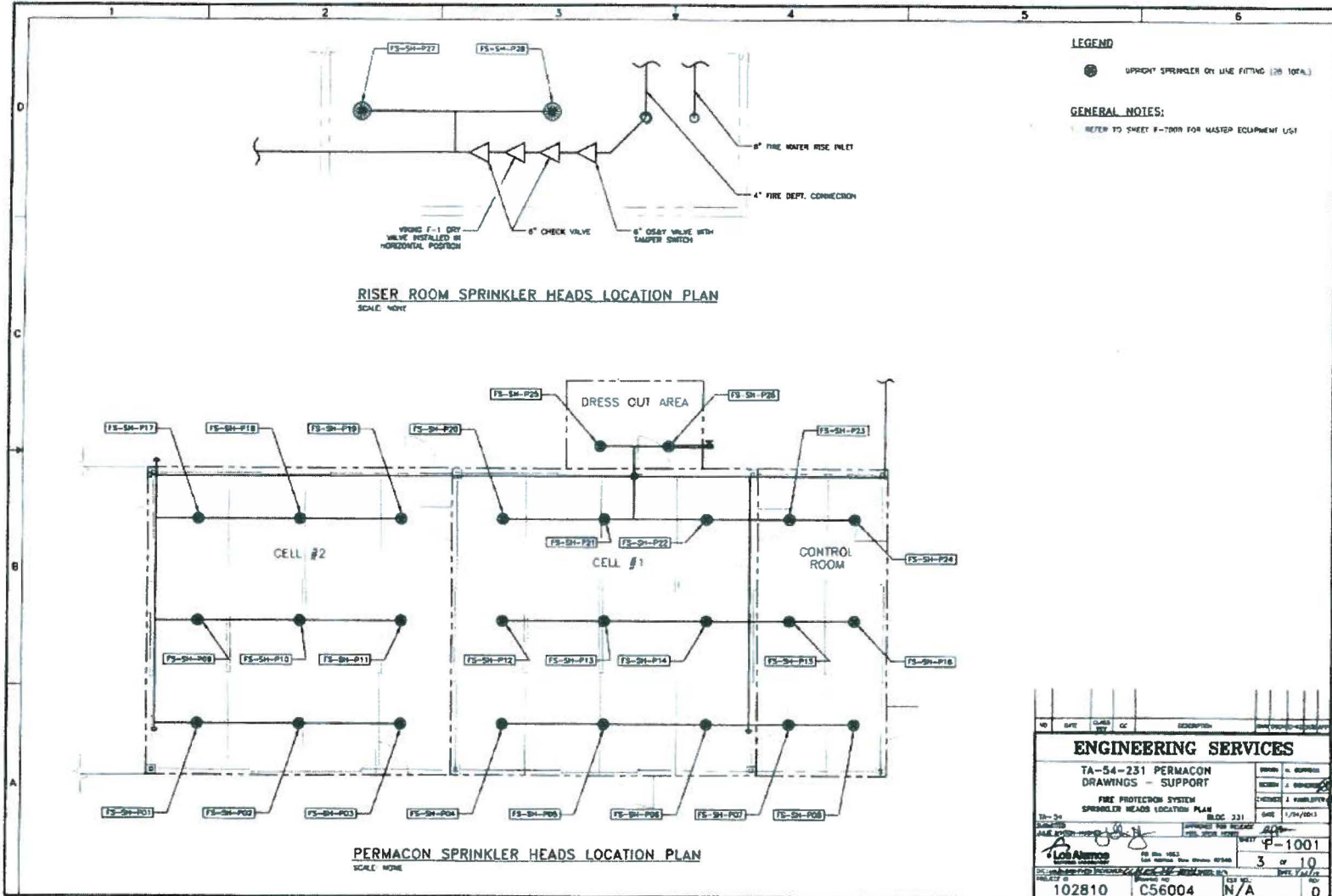
EO-ER-630-003, Hazmat Safety Officer Guidelines

EO-ER-630-001, Hazmat Group Supervisor Guidelines

LANL Hazardous Waste Permit, Attachment D, Contingency Plan

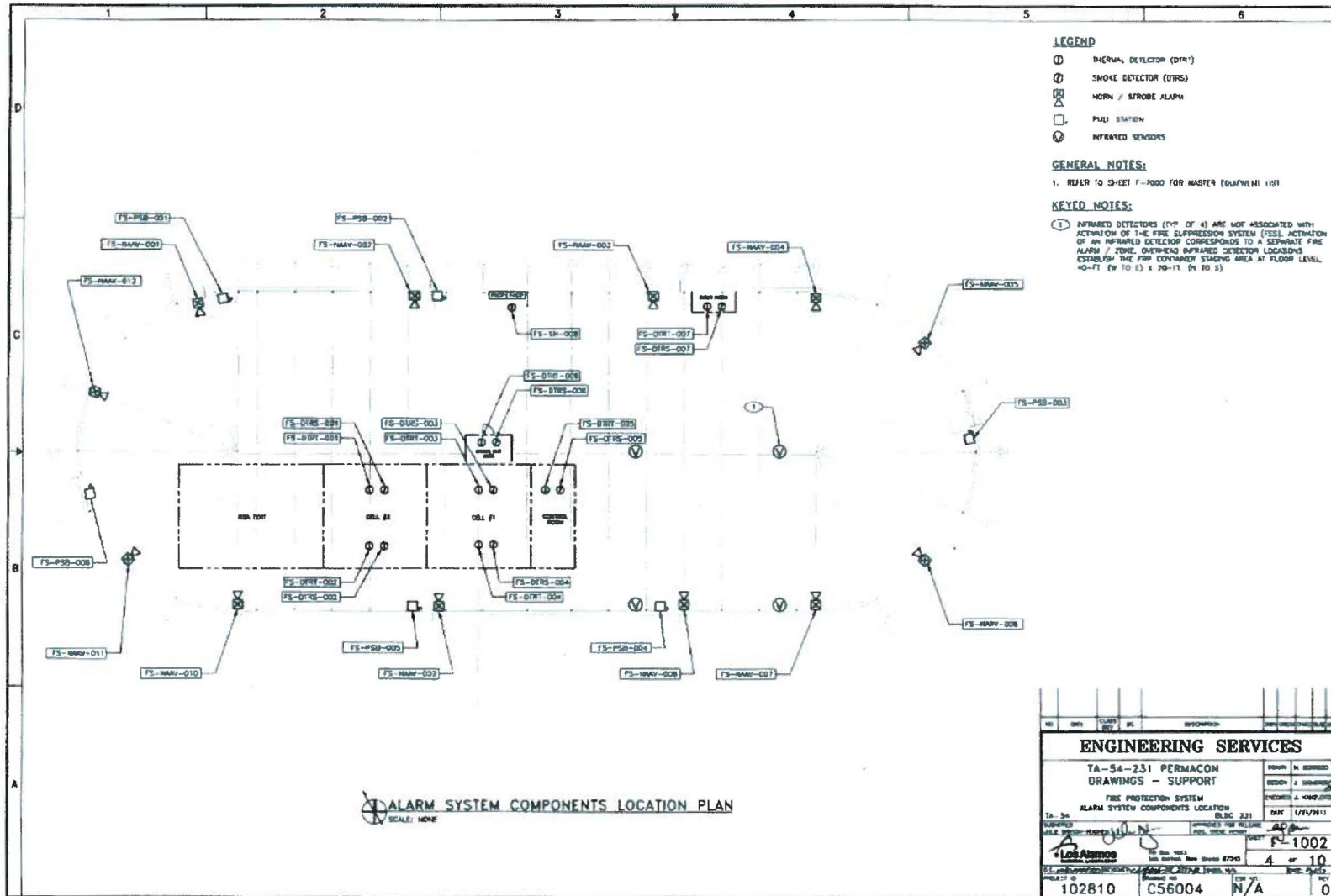
APPENDIX 1
 Page 1 of 2

TA-54-231 PERMACON FIRE PROTECTION SYSTEM



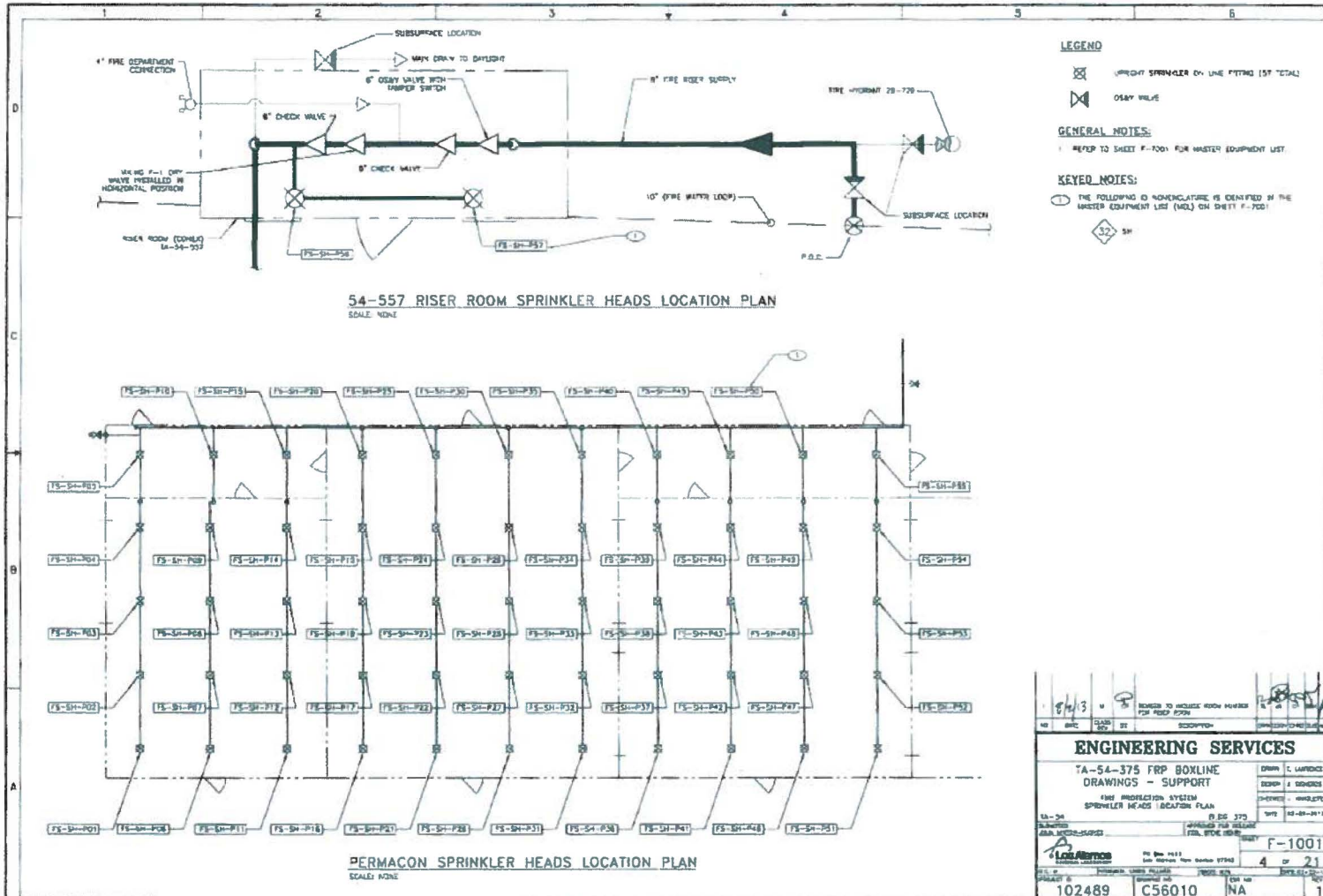
APPENDIX 1

Page 2 of 2



APPENDIX 2
 Page 1 of 2

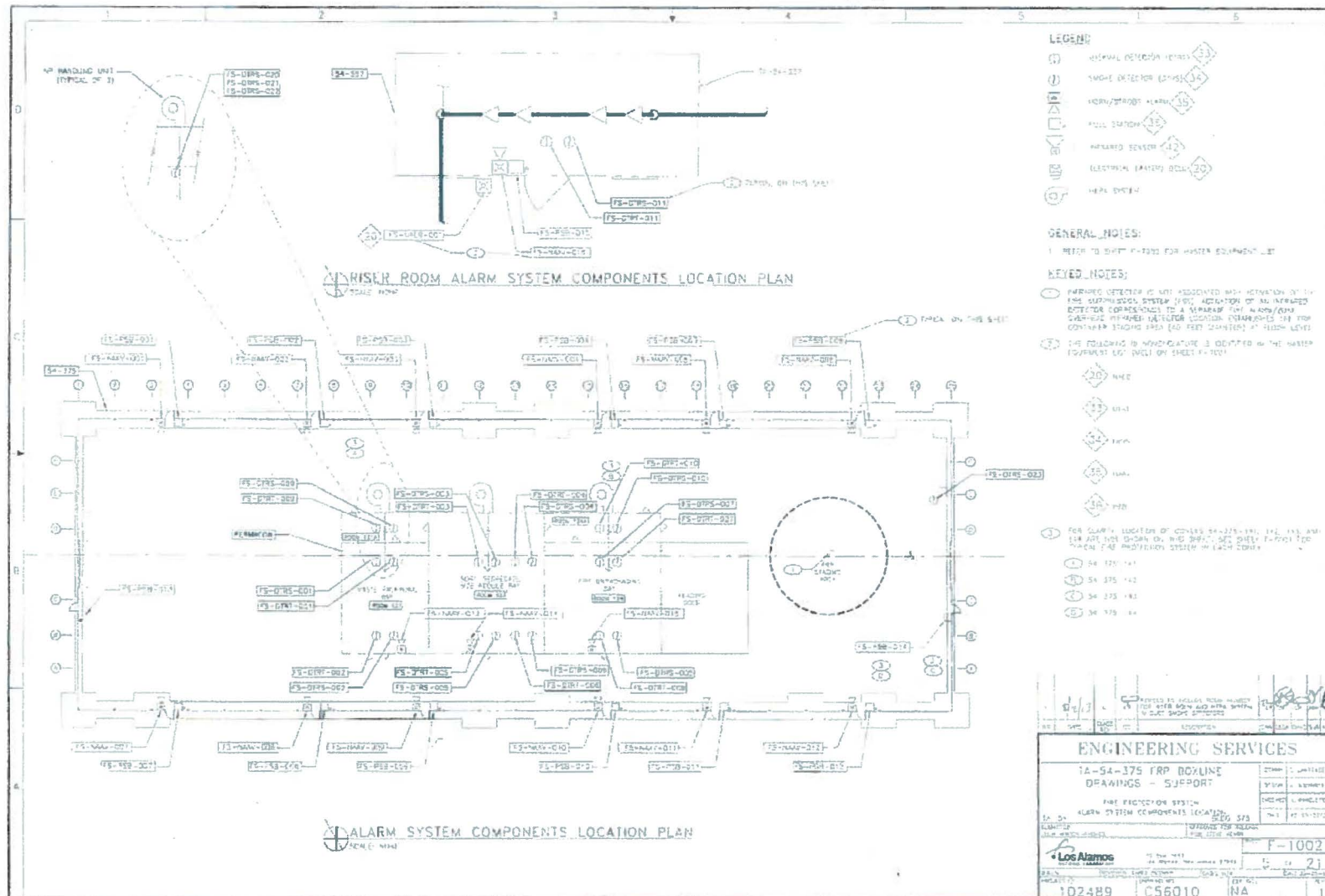
TA-54-375 PERMACON FIRE PROTECTION SYSTEM



NO	DATE	BY	DESCRIPTION	APPROVED FOR RELEASE
1	01/30/15
ENGINEERING SERVICES				
TA-54-375 FRP BOXLINE DRAWINGS - SUPPORT			DESIGN: C. LAWRENCE	PROJECT: 2. 050805
FIRE PROTECTION SYSTEM SPRINKLER HEADS LOCATION PLAN			DATE: 01/30/15	SCALE: 1/8" = 1'-0"
PROJECT NO: 102489			SHEET NO: 4 OF 21	DATE: 01/30/15
C56010			NA	1

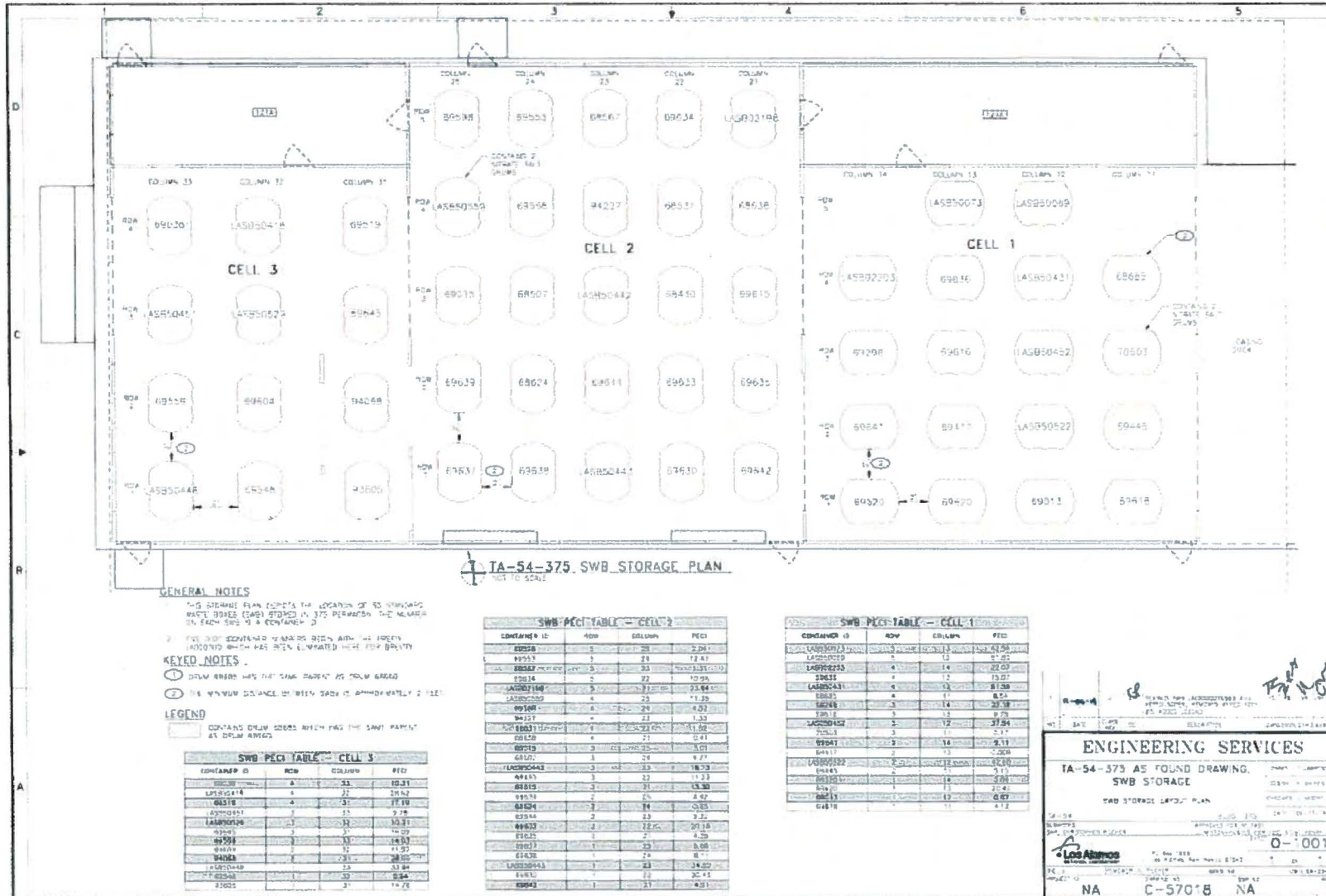
APPENDIX 2

Page 2 of 2



APPENDIX 3
 Page 1 of 1

TA-54-375 SWB STORAGE LAYOUT PLAN



APPENDIX 4
Page 1 of 1

TA-54 AREAG STRUCTURE LOCATION MAP

