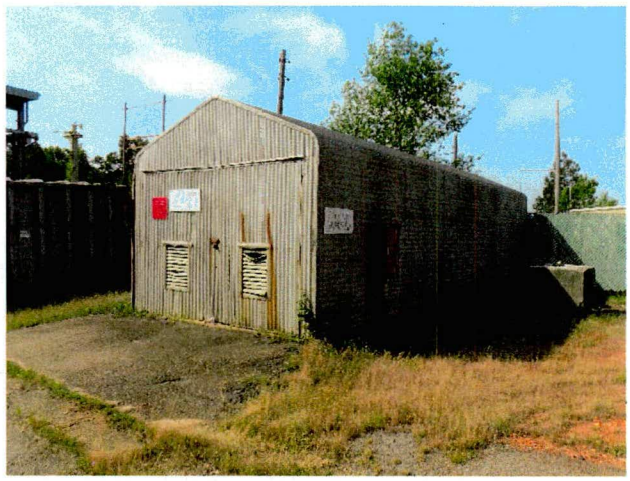
Engineering Survey & Interference Report for Building 484-5D, D-Area Powerhouse Storage Building



Prepared by: W.B. Griffin Date: 11/3/2020
W.B. Griffin
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Reviewed by: J. K. Blankenship Date: 11/3/20
J. K. Blankenship
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Approved: R S Shirley Date: 11/4/2020
R. S. Shirley
Manager, EC&ACP Projects
Environmental Compliance & Area Completion Projects

Approved: M. I. Terronez Date: 11/04/2020
M. I. Terronez
EC&ACP Engineering Manager
Environmental Compliance & Area Completion Projects

Approved: T. O. Oliver Date: 11-5-2020
T. O. Oliver
EC&ACP Engineering Chief Engineer
Environmental Compliance & Area Completion Projects

WBG 11/2/2020

DISCLAIMER

Printed in the United States of America

Prepared for
U.S. Department of Energy
and
Savannah River Nuclear Solutions LLC
Aiken, South Carolina

Document Revision History

Date	Rev	Page	Description of Changes
11/2/20	0	All	Initial Issue

1.0 Introduction

The purpose of this survey / report is to provide guidance for the safe demolition of Building 484-5D, an aluminum tube-frame structure located south southwest of the 484-D Powerhouse and west of 484-12D in 400-Area, as well as meeting the requirements of OSHA Standard 1926.850(a).

2.0 Background

2.1 Facility Description

This document addresses Building 484-5D, D-Area Powerhouse Storage Building.

The building was erected circa 1980 and is an aluminum tube-frame structure with a corrugated aluminum skin attached to a concrete slab. The structure is approximately 12'wide x 30' long (approximately 360 sq. ft.), with a non-partitioned interior. The structure has double, swinging doors at its front for access.

There are no utilities associated with this building, including water, sewer, communication, or electrical.

2.2 Facility Condition

Based on visual inspection on June 3, 2020, the structure as defined in References 5.1 and 5.2 is in good condition, and there is no potential for an unplanned collapse of the structure either due to forces of nature and/or vibrations created by movement of heavy equipment in proximity to the building.

The proposed end-state for this facility which has no defined or anticipated future missions, is decommissioning of the above grade structure to the concrete slab.

On November 4, 2019, an asbestos inspection was conducted on Building 484-5D (Q-APG-D-00007, Reference 5.3), with the results being there were two areas that tested positive for asbestos containing materials (ACM).

- Approximately 84 linear feet of non-friable gray sealant was found around perimeter of doors and windows.
- The report also reported approximately 28 linear feet of non-friable gray caulking on the roof eaves.

There are no potential hazards from other structures in the area.

There are no overhead or underground powerlines proximate the building.

Any underground lines in the general vicinity of the building are deep enough that there is no potential for damage due to heavy equipment.

There are no fall hazards associated with Building 484-5D.

3.0 Discussion

3.1 General

All demolition work shall meet the requirements of 29CFR1926 Subpart T and SRS Manual 8Q, Procedure 104. All personnel performing demolition work shall be knowledgeable of these documents.

Other hazards not specifically identified in the engineering survey are mitigated or prevented by Site programs as described in SRS Manual 1-01, MP 1.22 Integrated Safety Management System.

The approximately 84 linear feet of gray sealant and 28 linear feet of gray caulking described in Section 2.2 will be removed prior to building decommissioning. Any other hazardous materials associated with this building have already been removed. All wastes generated during decommissioning shall be managed in accordance with SRS procedures.

Barricades will be established in accordance with Manual 8Q, Procedure 9 prior to demolition.

3.2 Interferences

There are no domestic water, fire water, or sanitary sewers associated with this building. There are no electric lines, poles, guy wires or communications lines close to or associated with this building. Prior to decommissioning, 484-5D shall be confirmed isolated and disconnected from any associated utilities and rendered cold and dark (C&D) in accordance with EC&ACP guidelines and as noted in References 5.5 and 5.6.

Appendix A, Figures 1-4, provide a general lay-out of the area, interfacing facilities/utilities within proximity and define the demolition boundary. Any underground utilities in the area are buried deep enough that heavy equipment may safely operate over them, and overhead powerlines north of the building are not energized (References 5.4, 5.5 and 5.6).

3.3 Hazardous Energy

There is no hazardous energy associated with Building 484-5D.

3.4 Unplanned Collapse

There is no potential for an unplanned collapse associated with the demolition and removal of Building 484-5D.

4.0 Summary / Conclusions

The building structure has no future mission and the end state is decommissioning of the above grade structure to the concrete slab (References 5.1 and 5.2). This structure may be demolished using a track hoe mounted hydraulic shear which can also size reduce the building materials and load them into skip pans. Due to the relatively small size of this building a front-end loader may also be used in demolition and to load material into skip pans. The area will be cleaned up. The equipment operators should utilize a flag person so as not to contact facilities within proximity of the demolition area.

This engineering survey was performed to determine the condition of the structure prior to demolition. The results of the survey are that the structure is sound and conventional demolition may proceed.

5.0 References

5.1 G-FDE-D-00047, Re. 0, dated April 27, 2020, "Facility Decommissioning Evaluation Building 484-5D, D-Area Powerhouse Storage Building"

5.2 V-PMP-D-00019, Rev. 0, dated 11/2/2020, "Decommissioning End Points Document Building 484-5D, D-Area Powerhouse Storage Building"

5.3 Q-APG-D-00007, Rev. 0, dated November 4, 2019, "Baseline Asbestos Inspection Report of Building 484-5D"

5.4 V-PCOR-D-00042, Rev. 0, dated 7/1/2014, "Deactivation Project Final Report Building 484-D Powerhouse and Ancillary Buildings"

5.5 E-SDD-D-00001, Rev. 1, dated August 19, 2020, "Verification of Hazardous Energy Isolations for Building 484-D Powerhouse and Ancillary Buildings"

5.6 E-SDD-D-00002, Rev. 0, dated August 17, 2020, "Closeout of Verification Document for Building 484-D Powerhouse and Ancillary Buildings"

Appendix A – General Layout and Interfacing Facilities

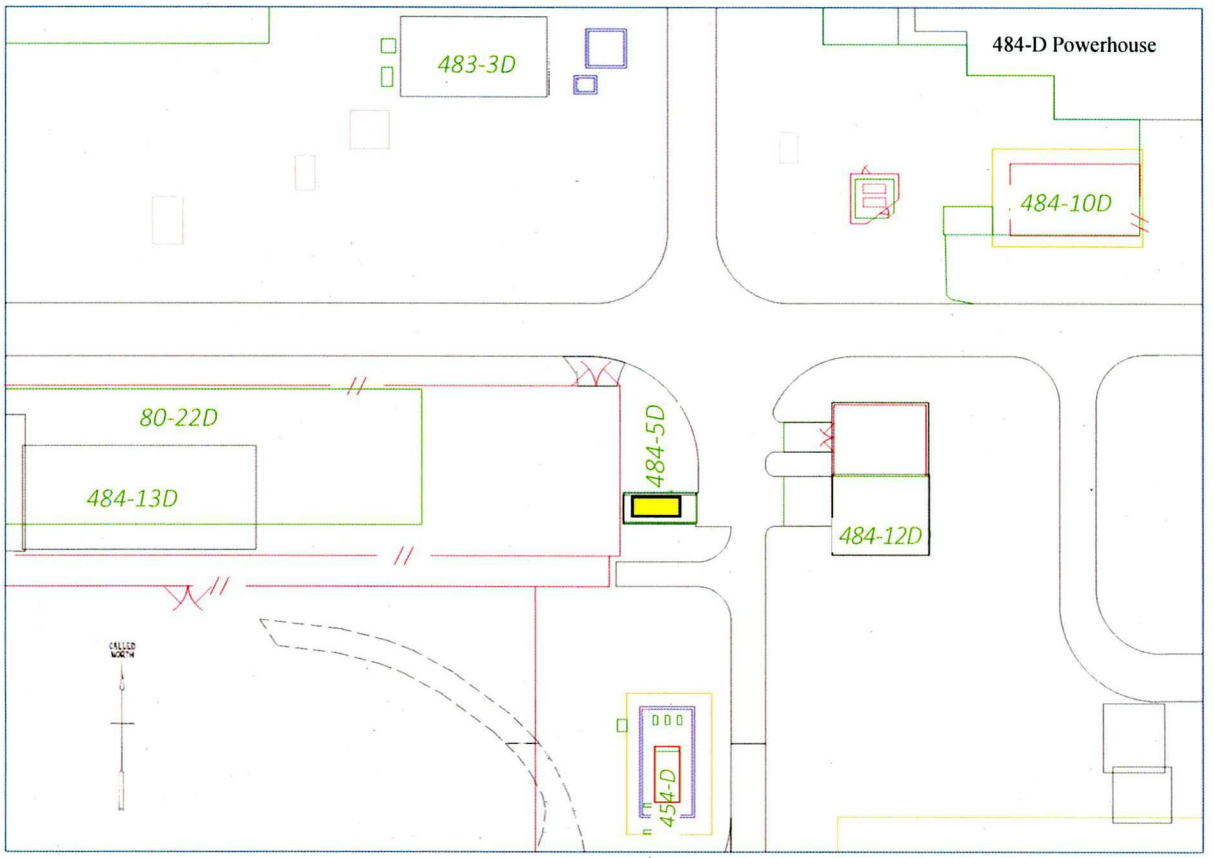


Figure 1: 484-5D, Storage Building Location

Appendix A – General Layout and Interfacing Facilities

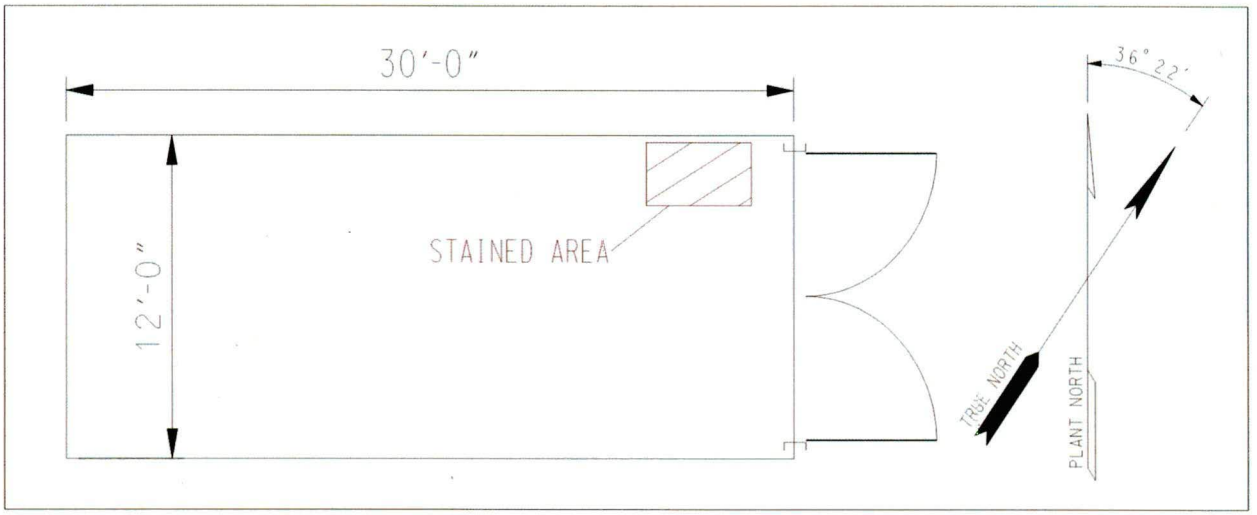


Figure 2: Building 484-5D, Storage Building Layout

Figure 3: Building 484-5D, Storage Building Photo

Appendix A – General Layout and Interfacing Facilities

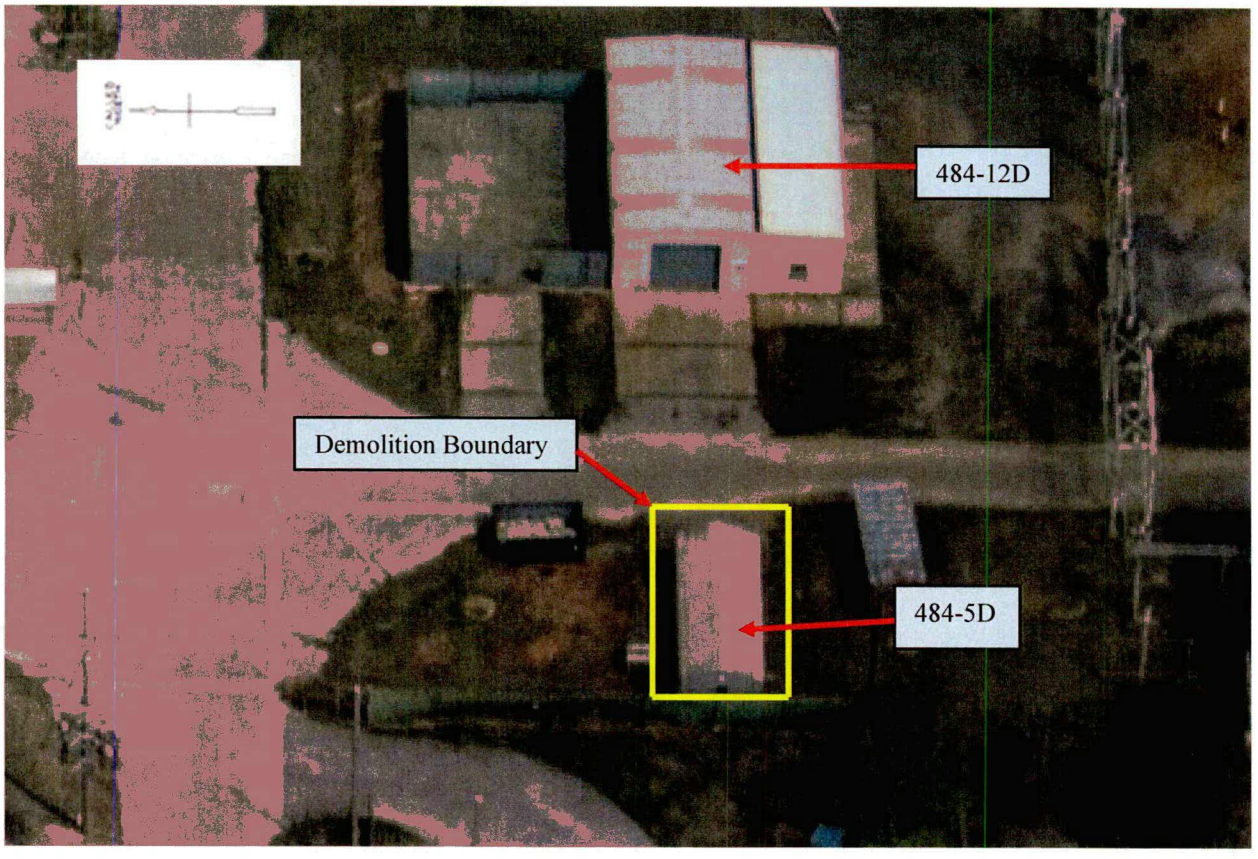


Figure 4: Aerial View of 484-5D and Surrounding Buildings/Facilities