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Engineering Survey & Interference Report for Building 690-N, Ford Building

Prepared by: W.B. Griffin Date: 8/11/2020
W.B. Griffin
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Reviewed by: J.K. Blankenship Date: 8/11/20
J.K. Blankenship
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Approved: Grady L. Friday Date: 8/11/2020
Grady L. Friday
Project Manager
Environmental Compliance & Area Completion Projects

Approved: Steven P. Conner Date: 8/11/2020
Steven P. Conner
Cost Account Manager
Environmental Compliance & Area Completion Projects

Approved: T. O. Oliver Date: 8-17-2020
T. O. Oliver
EC&ACP Chief Engineer
Environmental Compliance & Area Completion Projects

WBG 8/11/2020

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Document Revision History

Date	Rev	Page	Description of Changes
8/11/20	0	All	Initial Issue

1.0 Introduction

The purpose of this survey / report is to provide guidance for the safe demolition of Building 690-N, Ford Building and meet the requirements of Occupational Safety and Health Administration (OSHA) standard 29 CFR 1926, Subpart T 850(a).

2.0 Background

2.1 Facility Description

This document addresses Building 690-N, Ford Building

- Building 690-N (Ford Building), Process Heat Exchanger Repair Facility is classified as an "Other Industrial" facility in the Savannah River Nuclear Solutions "Standards/Requirements Identification Document Facility List". It was used primarily as a machining repair/rework shop for contaminated SRS reactor process water (i.e. Deuterium Oxide) heat exchangers.
- Building 690-N, Process Heat Exchanger Repair Facility, built in the 1950s, is a one-story metal frame structure with metal siding on a concrete slab covering approximately 9,700 square feet. It is located in the extreme southeastern tip of the Central Shops (N-Area) near the center of SRS. The primary area consisted of a machine shop with offices, storage rooms, restrooms and service area, which can be accessed only from the outside of the building on the north side.
- The building has been undergoing deactivation over the past several months essentially removing all of the interior components and leaving a building shell.
- There are 8" thick concrete pads covering the previous HEPA filter pads on the south side of the building that must not be broken, cracked or otherwise disturbed/damaged during the demolition and removal of the 690-N building structure. These pads are noted in Figure 2: "Aerial View of 690-N and Surrounding Area".
- There are no power, water or sewer facilities remaining in or on the building.

2.2 Facility Condition

Based on visual inspection on June 3, 2020, the structure as defined in Reference 5.1 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 decommissioning end-state for this facility which has no defined or anticipated future missions, is dismantlement and removal (D&R) of the above grade structure(s) to the top of the building's concrete slab.

- There are no other structures in the area that can interfere with the building demolition and removal.
- 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 690-N.

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.

3.2 Interferences

There are no active process sewers, domestic water supplies, or sanitary sewers associated with this building. The fire hydrants shown in Figure 1 are not close enough to the building to pose any cause for concern during D&R activities. There are also no electric lines, poles & guy wires or communications lines close to or associated with this building.

Appendix A, Figures 1 and 2 provide a general lay-out of the area, interfacing facilities/utilities within close proximity and define the demolition boundary. All underground utilities are buried deep enough that the equipment may safely operate over them.

3.3 Hazardous Energy

There is no hazardous energy associated with Building 690-N.

3.4 Unplanned Collapse

There is no potential for an unplanned collapse associated with the D&R of Building 690-N.

4.0 Summary / Conclusions

The building structure has no future mission and the end state is D&R of all above grade structures (Reference 5.1). It is recommended that the structure be demolished using a track hoe mounted hydraulic shear which can also size reduce building materials and load them into skip pans. A grappler and front-end loaders may also be used in demolition if required and to load material into skip pans. The area will be cleaned up. The equipment operators should utilize a flag person and visible cones/markers to ensure the HEPA filter pads are not damaged during D&R operations.

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-SOW-N-00188, Rev. 2, dated 8/11/20, "Deactivation and Demolition of Building 690-N (Ford Building)"

5.2 SRNS-RP-2019-00318, Rev. 2, "Waste Management Plan for the 690-N, Process Heat Exchanger Repair Facility (Ford Building) (U)"

5.3 S5-6-454: "Process Heat Exchanger Repair Facility, Concrete Sections and Details"

5.4 W232862: "Savannah River Plant Central Shops Area Building 690-G, H.X. Repair Facility, Plans & Sections, Concrete"

Appendix A – General Layout and Interfacing Facilities

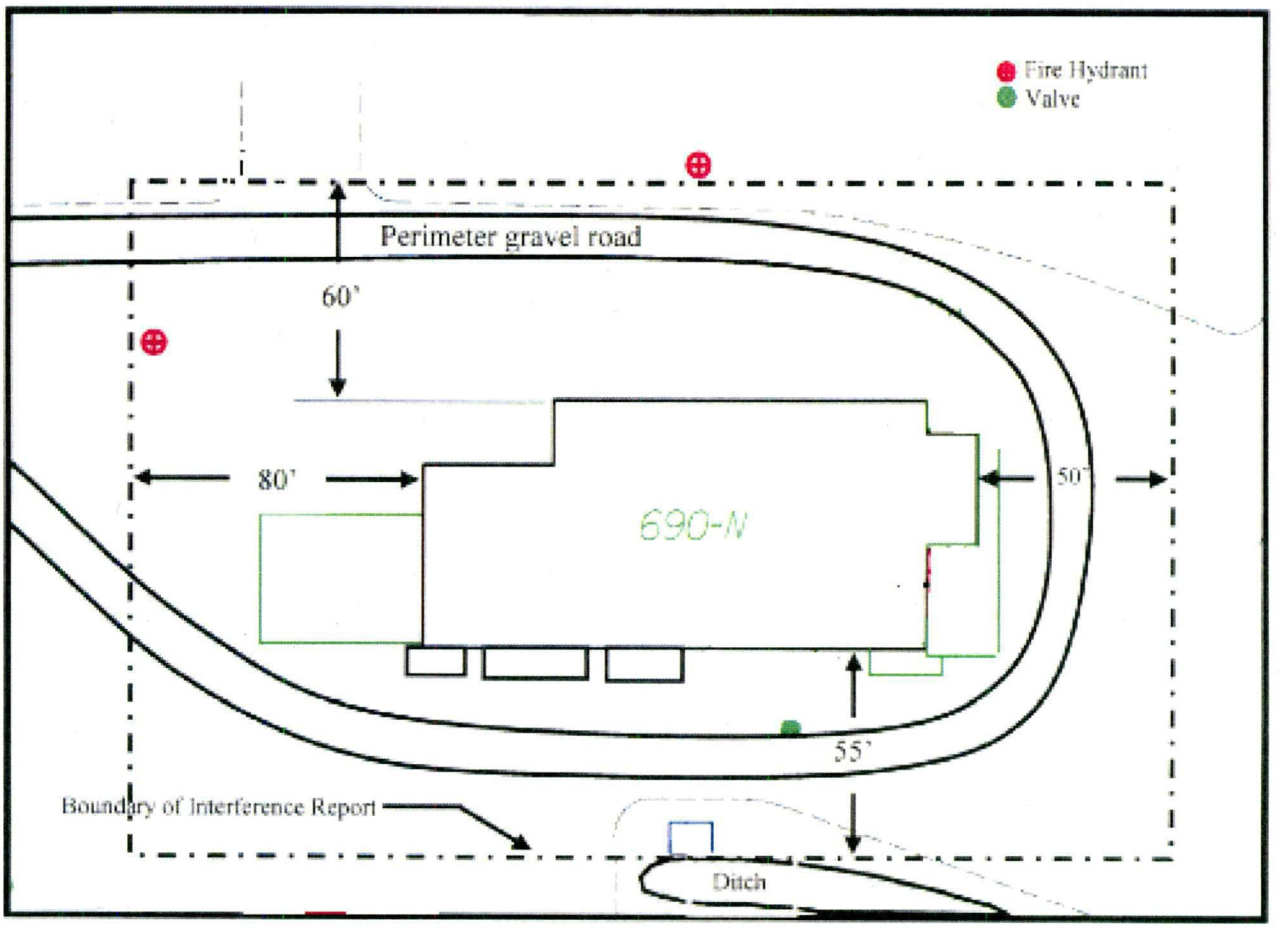

Figure 1: Plot Plan of 690-N and Surrounding Area

Appendix A – General Layout and Interfacing Facilities

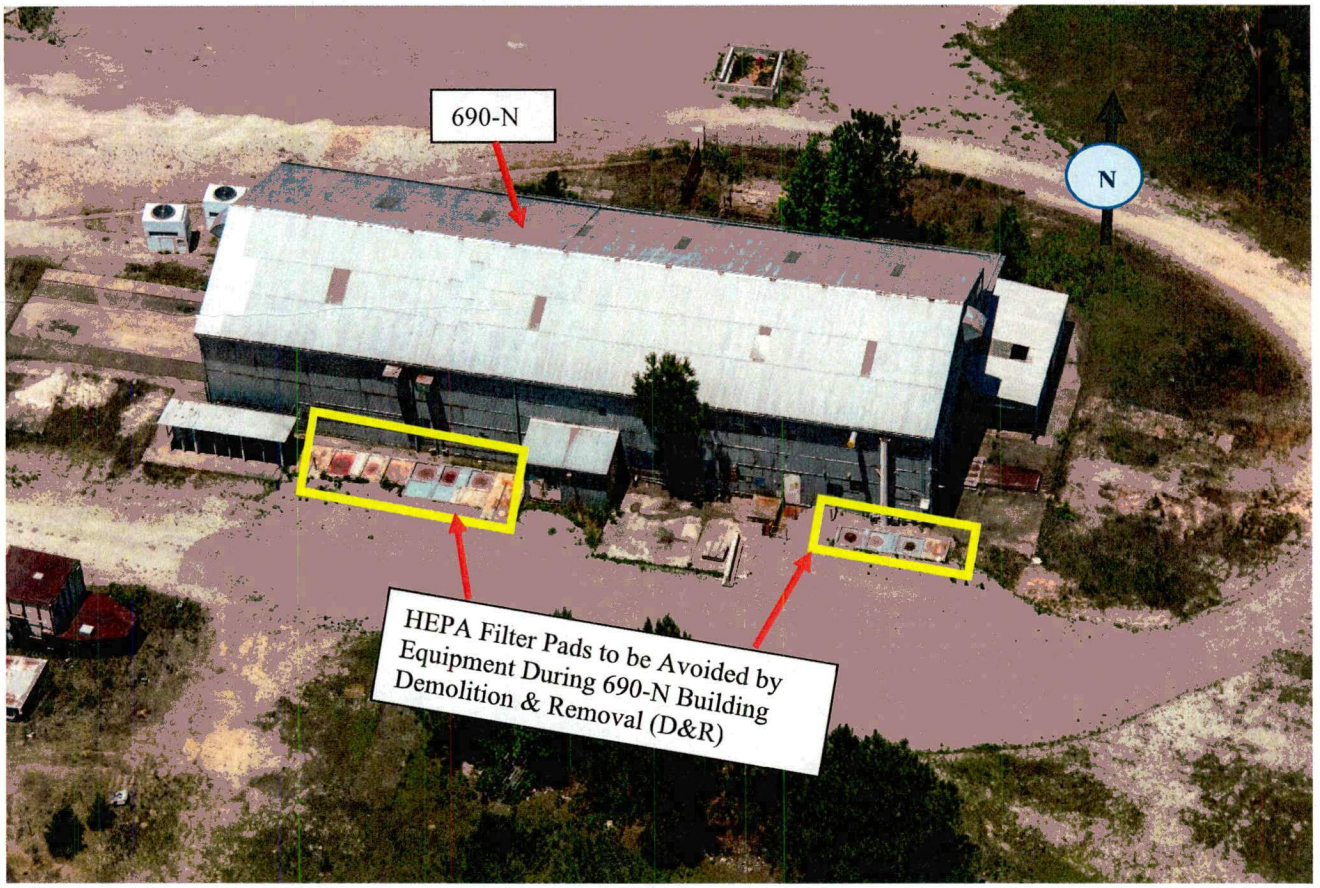

Figure 2: Aerial View of 690-N and Surrounding Area