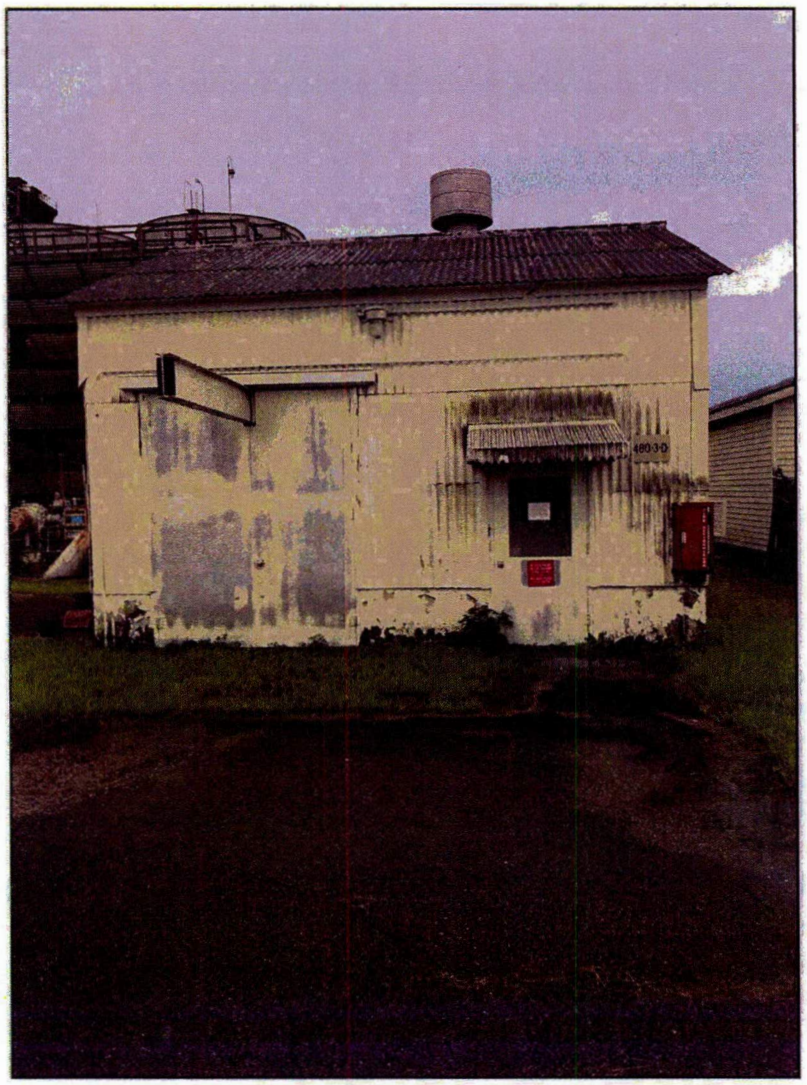
ENVIRONMENTAL COMPLIANCE & AREA COMPLETION PROJECTS

Baseline Asbestos Inspection Report of Building 480-3D



Q-APG-D-00010
November 11, 2019

Savannah River Nuclear Solutions, LLC
A Fluor Daniel Partnership

INTEROFFICE MEMORANDUM

Q-APG-D-00010
RSM Track Number 10755

November 11, 2019

TO: Andrew MacMillan, 730-4B

FROM: Ken Padgett, 730-4B

BASELINE ASBESTOS INSPECTION REPORT OF BUILDING 480-3D

On October 29, 2019, an inspection was performed to determine the presence of any asbestos containing material (ACM) in building 480-3D. Building 480-3D is a steel framed structure on a concrete foundation. It was constructed in the 1950's as a Maintenance Field Shop and measures approximately 576 SF. The exterior walls and roof are corrugated cementitious panels. The interior finishes include; painted gypsum board walls, cementitious wall panels, pre-fabricated metal walls, resilient floor tile, and a suspended acoustical tile ceiling system.

Twelve (12) homogenous types of material were evaluated during this inspection. Please see the attached Inspection Survey Table for descriptions, estimated quantities, and location(s) of the materials inspected. Results from SDD-APG-2009-00546 have been reproduced and added to the Inspection Survey Table. The results from this inspection report will serve as the baseline reference of ACM in the building.

SUMMARY

All accessible, visible, suspect ACM was evaluated at the completion of this inspection. Visible Thermal Systems Insulation (TSI) includes Polyisocyanurate insulation in aluminum jacketing, paperbacked fiberglass insulation, and fiberglass batts. This evaluation was based on facility knowledge, material knowledge, and document review.

Samples collected in the SDD-APG-2009-00546 report were analyzed at the SRNS LLC. Industrial Hygiene Laboratory, which is accredited by the American Industrial Hygiene Association (AIHA) Laboratory Quality Assurance Program (LQAP) in the Field of Testing (FoT)/Polarized Light Microscopy (PLM). The laboratory ID number is 100642.

Samples in this inspection report were analyzed by Maxxam Analytic A Bureau Veritas Group Company. The laboratory is located at 3380 Chastain Meadows Parkway, Suite 300 Kennesaw, GA 30144. Please see the attached laboratory report for a review of accreditations and certifications.

Although building 480-3D has been deactivated and placed in shutdown condition, the inspector could not verify that the building was de-energized. Therefore, suspect materials may exist inside electrical disconnect boxes.

If this report is used for contract bid or regulatory permit purposes, it is the obligation of the user to verify the actual quantities of the materials presented in the Inspection Survey Table. In accordance with 40CFR part 61.145, a **ten-day notification** must be filed with SC DHEC prior to demolition.

The removal of all identified ACM and Presumed Asbestos Containing Material (PACM) must be performed by asbestos trained personnel, with proper permitting, and waste disposal procedures.

Savannah River
Nuclear Solutions, LLC
A Fluor Daniel Partnership

INTEROFFICE MEMORANDUM

Q-APG-D-00010
RSM Track Number 10755

ASBESTOS INSPECTOR	INSTITUTION	CERT. NO.	STATE	EXP.DATE
William K. Padgett	AAA Environmental	06-1397	SC	04/17/20

(Included on the SRS long-term in-house group license ABS 8021)

C: C.R.F., 773-52A
Site D&D Correspondence File
J.K. Barrineau, 730-4B
Mark Wright, 705-3C Room 126

Page 2 of 2

INSPECTION SURVEY TABLE OF BUILDING 480-3D

Homogeneous Number	SUSPECT MATERIAL	DESCRIPTION OF MATERIAL and SAMPLE NUMBERS	AMOUNT	TEST RESULTS	FRIABLE-NONFRIABLE
H01	Miscellaneous	**Description:** Corrugated cementitious panels **Sample Numbers:** N/A, known to contain asbestos	Approximately 1,900 SF	ACM	Non-friable Good Condition
Location: Observed on all sides and roof of the building.					
H02	Miscellaneous	**Description:** Smooth cementitious panels **Sample Numbers:** N/A, known to contain asbestos	Approximately 400 SF	ACM	Non-friable Good Condition
Location: Observed behind interior partition walls					
H03OB	Miscellaneous	**Description:** Resilient floor tile/mastic – 12" x 12", Brown with white streaks **Sample Numbers:** 4803D090225-01A, 4803D090225-01B, 4803D090225-01C 4803D090225-02A, 4803D090225-02B, 4803D090225-02C	Approximately 260 SF	Positive	Non-friable Good Condition
Location: Interior floor covering (Note: floor tile and mastic are asbestos containing materials)					
H04	Surfacing	**Description:** Joint compound **Sample Numbers:** 4803D090225-01, 4803D090225-02, 4803D090225-03	Approximately 600 SF	Negative	Friable Good Condition
Location: Interior walls					
H05	Miscellaneous	**Description:** Gypsum board **Sample Numbers:** 4803D191029-01, 4803D191029-02, 4803D191029-03	Approximately 600 SF	Negative	Friable Good Condition
Location: Interior walls					
H06	Miscellaneous	**Description:** Acoustical ceiling tile, 24"x 48" – small, deep fissure **Sample Numbers:** 4803D191029-04, 4803D191029-05, 4803D191029-06	Approximately 250 SF	Negative	Friable Good Condition
Location: Interior ceiling					
H07	Miscellaneous	**Description:** Acoustical ceiling tile, 24"x 48" – pinhole pattern **Sample Numbers:** 4803D090225-04, 4803D090225-05, 4803D090225-06	Approximately 250 SF	Negative	Friable Good Condition
Location: Interior ceiling					

INSPECTION SURVEY TABLE OF BUILDING 480-3D

Homogeneous Number	SUSPECT MATERIAL	DESCRIPTION OF MATERIAL and SAMPLE NUMBERS	AMOUNT	TEST RESULTS	FRIABLE-NONFRIABLE
H08	Miscellaneous	**Description:** Window glazing **Sample Numbers:** 4803D191029-07, 4803D191029-08, 4803D191029-09	Approximately 48 SF	Negative	Friable Damaged Condition
Location: Observed on interior side of windows (3 total)					
H09OB	Miscellaneous	**Description:** Baseboard mastic (residue) - brown **Sample Numbers:** 4803D090225-03A, 4803D090225-03B, 4803D090225-03C **Sample Number:** 4803D090225-03C was analyzed via TEM	Approximately 50 SF	Negative	Non-friable Good Condition
Location: Observed on baseboards					
H10	Miscellaneous	**Description:** Black mastic on Polyisocyanurate (rigid foam insulation) **Sample Number:** N/A, Presumed Asbestos Containing Material **REF:** Dyplast ISO-HT™ (SDS #47005-1) or equivalent	Approximately 1 SF	**PACM**	Non-friable Good Condition
Location: Observed on south side of building (Note: Insulation is not suspect, but the mastic should be treated as PACM)					
H11	TSI	**Description:** Paper-backed fiberglass insulation (batts) **Sample Numbers:** N/A, not suspected to contain asbestos. **REF:** Owens Corning® SDS#8545-1, or equivalent.	N/A	N/A	N/A
Location: Observed in wall cavities and above acoustical ceiling tile					
H12OB	Miscellaneous	**Description:** Caulking/sealants/mastics/coatings **Sample Numbers:** N/A, Presumed Asbestos Containing Materials Note: These materials cannot be separated from asbestos containing cementitious panels without disturbing or damaging the panel(s).	Approximately 30 SF	**PACM**	Non-friable Good Condition
Location: Exterior: Adhered directly to asbestos containing cementitious panels					

November 08, 2019

Kenny Barrineau
SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
Building 730-4B, 2135
Aiken, SC 29808

Bureau Veritas Work Order No A1911018

Reference Activity Code:0BJL15PNDC

Dear Kenny Barrineau:

Bureau Veritas North America, Inc. received 9 samples on November 01, 2019 for the analyses presented in the following report.

The results apply only to the samples analyzed in this project. Please note that any unused portion of the samples will be discarded after a sixty-day holding period, unless you have requested otherwise.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number provided below.

We appreciate the opportunity to assist you. If you have any questions concerning the report, please contact the analyst whose name appears on the report or myself at (770) 499-7701.

Sincerely,
Kuntal Parikh

Kuntal Parikh
Senior Microscopist
Electronic signature authorized through password protection

cc: Ken Padgett
Mike
Siobhan Kitchen

Bureau Veritas North America, Inc.
Industrial Hygiene Laboratory
3380 Chastain Meadows Parkway, Suite 300
Kennesaw, GA 30144
Main: (770) 499-7701
Fax: (770) 499-7511
www.bvlabs.com

CASE NARRATIVE

Date: *08-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC

Project: Activity Code:0BJL15PNDC

Work Order No A1911018

ANALYTICAL METHOD FOR ASBESTOS IN BULK SAMPLES USING POLARIZED LIGHT MICROSCOPY (PLM)

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected unless otherwise noted.

Use of EPA/600/R-93/116 satisfies applicable requirements of the USEPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Sample", EPA-600/M4-82-020, December 1982, published as Appendix E to Subpart E of 40CFR763. Bulk samples analyzed by New York State methods follow stratified point counting methods (198.1) or Method 198.6 for PLM non-friable organically bound materials (NYSDOH Lab Code –11645). Percentages are visual estimations of asbestos >3:1 aspect ratio. The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed. NESHAP requires point counting of a bulk sample when the result is <10% by a method other than point counting. EPA, however states that if 3 mounts of the sample are analyzed and the asbestos percentage is <10% by visual estimation, the client may elect to assume the amount to be greater than 1% or require verification by point counting. If the result by point counting is different than the result obtained by visual estimation, the point count result will be used. Sample friability or non-friability noted on the report is a requirement for the State of California and refers only to the condition of the sample under macroscopic examination. It does not imply friability or non-friability for the sample as collected or observed in the field as determined by the person collecting the sample. The Kennesaw, Georgia lab is accredited by NVLAP –Lab Code 101125-0.

(a)Polarized- light microscopy is not consistently reliable in detecting asbestos in floor coverings, similar non-friable organically bound materials, soil and vermiculite. Quantitative electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. When analysis of such materials by PLM yields results negative for the presence of asbestos, Bureau Veritas recommends utilizing quantitative transmission electron microscopy (TEM). For more information, contact the laboratory.

References

CLIENT:	SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
Project:	Activity Code:0BJL15PNDC
Work Order No	A1911018

McCrone, Walter C. 1980. The Asbestos Particle Atlas. Ann Arbor, MI: Ann Arbor Science Publishers, Inc.

United States Environmental Protection Agency. Environmental Monitoring Systems Laboratory. 1982. Interim Method for the Determination of Asbestos in Bulk Insulation Samples. EPA-600/M4-82-020. Washington: GPO, December.

United States Environmental Protection Agency. Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993 (PLM)

Fed. Reg. Vol. 55, No.224, 11/20/90, p.48415 (NESHAP)
EPA Memorandum 5/8/1991 –NESHAP Clarifications

NYSDOH Methods 198.1/198.6.

Note: The attached chain-of-custody form shows the sample data that was provided by the client.

ANALYTICAL RESULTS

Date: *08-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
Sample Type: Bulk
Work Order No.: A1911018
Date Received: 11/1/2019
Client Reference: Activity Code:0BJL15PNDC
Report Date: 08-Nov-19
Method Reference: EPA-600/M4-82-020/EPA/600/R-93/116/NYELAP 198.1

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
001A	4803D191029-01	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	10	Non-homogeneous Gray/White Joint Compound/Paint	None Detected		Non-Detected		Binder/Filler
(2)	10	Non-homogeneous Beige/White Joint Compound/Paint	None Detected		Non-Detected		Binder/Filler
(3)	80	Non-homogeneous White/Brown Gypsum Board	None Detected		Cellulose fiber	20%	Binder/Filler Tape

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
002A	4803D191029-02	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous Gray/Brown/White Gypsum Board	None Detected		Cellulose fiber	20%	Binder/Filler Tape Paint

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
003A	4803D191029-03	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous White/Brown Gypsum Board	None Detected		Cellulose fiber	20%	Binder/Filler Tape

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
004A	4803D191029-04	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous White/Tan/Brown Acoustical Ceiling Tile	None Detected		Cellulose fiber Fibrous glass	30% 5%	Binder/Filler Tape Glue

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
005A	4803D191029-05	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous White/Tan/Brown Acoustical Ceiling Tile	None Detected		Cellulose fiber Fibrous glass	30% 10%	Binder/Filler Tape Glue

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date: _____ 11/8/2019

ANALYTICAL RESULTS

Date: *08-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
Sample Type: Bulk
Work Order No.: A1911018
Date Received: 11/1/2019
Client Reference: Activity Code:0BJL15PNDC
Report Date: 08-Nov-19
Method Reference: EPA-600/M4-82-020/EPA/600/R-93/116/NYELAP 198.1

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
006A	***4803D191029-06***	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous White/Tan/Brown Acoustical Ceiling Tile	None Detected		Cellulose fiber Fibrous glass	30% 10%	Binder/Filler Tape Glue

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
007A	***4803D191029-07***	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous White/Gray Window Glazing	None Detected		Mineral Fiber	1%	Binder/Filler Dust

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
008A	***4803D191029-08***	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous Multi-Colored Window Glazing	None Detected		Non-Detected		Binder/Filler Paint

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
009A	***4803D191029-09***	HS	10/29/2019	11/07/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Non-homogeneous Multi-Colored Window Glazing	None Detected		Mineral Fiber	1%	Binder/Filler Paint Dust

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date: Helen Summit 11/8/2019

Laboratory Limits

Helen Sonsino (HS)

Range	R Limit	Quartile Limit
0.1-1	100	+/- 1.482
10-100	100	+/- 26.676
1-10	100	+/- 5.928
Trace	100	+/- 1.482

Laboratory

Range	R Limit	Quartile Limit
0.1-1	100	+/- 1.482
10-100	100	+/- 22.23
1-10	100	+/- 7.41
Trace	100	+/- 1.482

The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date: Helen Sonsino 11/8/2019

SRS Chain of Custody / Laboratory Analysis Request

A1911018

Requested TAT: ☐ Rush ☐ Routine ☒ Other 5 Day from rec.

Activity Code 0BJL15PNDC

Samples received in good condition? ☐ Y ☐ N

Laboratory

Lab Name	Bureau Veritas (Atlanta)
Address 1	3380 Chastain Medows Pkwy, Suite 300
Address	Kennesaw, GA 30144
POC	Alan Segrave / 800-252-9919

Sample Comments

Use positive stop for all homogenous groups. TEM is required only as indicated for organically bound samples or analyst may choose another sample from that ABC group that was positive via PLM. P.O. # will sent to Kelly Smith via Email for services related to this task.

Peer Reviewed / Self Check by

Name (Print) M. Adney

Return Results / Electronic Report To

Name (CTF)	Kenny Barrineau
Email / Phone	kenny.barrineau@srs.gov/ (803) 952-5650
Name (STR)	Kenny Barrineau
Email / Phone	kenny.barrineau@srs.gov (803) 952-5650
Name (Req by)	Ken Padgett
Email / Phone	william03.padgett@srs.gov (803) 646-1831
Organization	SRNS / EC&ACP
Address	Savannah River Site Aiken, SC 29802

This Line Laboratory use ONLY	Laboratory ID#:	Results attached (date):	Results Pages (Total)

No	Field ID	Matrix	Sample Date / Time	Requested Analysis	Sample Media / Size	Time (min)	Vol / Area	Sample Comments
	4803D191029-01		10/29/2019	PLM	< 1 Gram	N/A	N/A	H01 - Gypsum board
	4803D191029-02		10/29/2019	PLM	< 1 Gram	N/A	N/A	H01 - Gypsum board
	4803D191029-03		10/29/2019	PLM	< 1 Gram	N/A	N/A	H01 - Gypsum board
	4803D191029-04		10/29/2019	PLM	< 1 Gram	N/A	N/A	H02 - ACT, 24"x48" - small, deep fissure
	4803D191029-05		10/29/2019	PLM	< 1 Gram	N/A	N/A	H02 - ACT, 24"x48" - small, deep fissure
	4803D191029-06		10/29/2019	PLM	< 1 Gram	N/A	N/A	H02 - ACT, 24"x48" - small, deep fissure
	4803D191029-07		10/29/2019	PLM	< 1 Gram	N/A	N/A	H03 - window glazing
	4803D191029-08		10/29/2019	PLM	< 1 Gram	N/A	N/A	H03 - window glazing
	4803D191029-09		10/29/2019	PLM	< 1 Gram	N/A	N/A	H03 - window glazing

Relinquished by		
Name	Signature	Date and Time
Ken Padgett		10/30/19 1455
Kane Bice		10/30/19 1506
735-B Rm 401	735-B Rm 401	10/31/19 0600
Kane Bice		10/31/19 1100

Received by		
Name	Signature:	Date and Time
Kane Bice		10/30/19 1505
735-B Rm 401	735-B Rm 401	10/30/19 1506
Kane Bice		10/31/19 0600
C/S Shipping	C/S Shipping	10/31/19 1130

K. Smith 11/1/19

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