Q-APG-D-00016
REV. 1

ENVIRONMENTAL COMPLIANCE & AREA COMPLETION PROJECTS

Baseline Asbestos Inspection Report of Building 704-7D

Q-APG-D-00016
November 4, 2020

Savannah River
Nuclear Solutions, LLC
A Fluor Daniel Partnership

INTEROFFICE MEMORANDUM

Q-APG-D-00016
RSM Track Number 10755

November 4, 2020

TO: Andrew Macmillan, 730-4B

FROM: Heath McGregor, 730-4B

BASELINE ASBESTOS INSPECTION REPORT OF BUILDING 704-7D

On October 29, 2020, an inspection was performed to evaluate electrical wire insulation and other electrical components inaccessible during the October 2019 inspection.

On October 30, 2019 an initial inspection was performed to determine the presence of any suspect Asbestos Containing Material (ACM) in building 704-7D. Constructed in the 1990's, building 704-7D is a wood frame structure finished with vinyl siding and an asphalt shingled roof. The foundation of the building consists of concrete pillars (enclosed with plywood sheeting) and has a total footprint of approximately 4,200 square feet. Several wood decks with stairs provide access to the interior. The main interior space is divided into offices and communal areas. The attached wing is divided into multiple offices and restroom facilities (each having its own access). The building was unoccupied during this inspection.

Fifteen (15) homogenous types of material were evaluated during this inspection. The ACM identified in the original inspection has since been abated and is no longer part of the remaining structure.

Please see the attached Inspection Survey Table for descriptions and location(s) of the materials inspected. Results from SDD-APG-2009-00553 have been reproduced and added to the Inspection Survey Table.

SUMMARY

All accessible, visible, suspect ACM was evaluated at the time of this inspection. Visible Thermal Systems Insulation (TSI) included elastomeric foam, (domestic water lines), paper-backed fiberglass (walls and ceiling), Foil Scrim Kraft (FSK) fiberglass, and rigid fiberglass board (HVAC ducting). These materials do not contain asbestos. No suspect material was discovered during the follow-up inspection of remaining electrical wiring and electrical components. This evaluation was based on facility knowledge, material knowledge, bulk sample analyses, and document review. **The removal of all identified ACM was performed by asbestos trained personnel, with proper permitting, and waste disposal procedures.**

All samples were analyzed by Polarized Light Microscopy (PLM). The South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 61-86.1, requires additional Transmission Electron Microscopy (TEM) on organically bound samples to confirm the negative PLM results.

Samples collected in 2009 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)/PL. The laboratory ID number is 100642. TEM samples were analyzed by the Davis and Floyd/RJ Lee Group, Inc.

Savannah River Nuclear Solutions, LLC
A Fluor Daniel Partnership

INTEROFFICE MEMORANDUM

Samples collected in 2019 were analyzed by Bureau Veritas North America, Inc. 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. Please see the attached laboratory report for a review of accreditations and certifications.

The results from this inspection report will serve as the baseline reference of ACM in the building.

In accordance with 40CFR part 61.145 a **ten-day notification** must be filed with SCDHEC prior to demolition.

ASBESTOS INSPECTOR	INSTITUTION	CERT. NO	STATE	EXP. DATE
Heath McGregor	Greenville Tech College	203-EVT502-093	SC	**07/28/2021**

Included on the SRS Long-term in-house Group license ABS 8021

ASBESTOS INSPECTOR	INSTITUTION	CERT. NO.	STATE	EXP. DATE
Mikell Autrey	Greenville Tech College	203-ETV502-089	SC	**07/28/2021**

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
Lance Cramer, 730-4B
William Griffin, 730-4B

Page 2 of 2

INSPECTION SURVEY TABLE OF BULDING 704-7D

Homogeneous Number	Suspect/Non-Suspect Material	Description and Sample Numbers of Material	Test Results
H01OB	Miscellaneous	**Description:** Black colored shingles **Sample Numbers:** 7047D090302-03A, 7047D090302-03B, 7047D090302-03C, 7047D090302-03D, 7047D090302-03E **Sample Number:** 7047D090302-03E analyzed via TEM.	Negative **See Note 1.**
Location: Observed on roof and awnings.			
H02OB	Miscellaneous	**Description:** Black colored felt paper **Sample Numbers:** 7047D090302-04A, 7047D090302-04B, 7047D090302-04C, 7047D090302-04D, 7047D090302-04E **Sample Number:** 7047D090302-04D analyzed via TEM.	Negative
Location: Observed on roof and awnings.			
H03OB	Miscellaneous	**Description:** Various colored sealant (rubberized) **Sample numbers:** N/A, not suspected to contain asbestos	N/A **See Note 2.**
Location: Observed around windows and doors.			
H04OB	Miscellaneous	**Description:** Grey colored sealant **Sample Numbers:** 7047D090302-02A, 7047D090302-02B, 7047D090302-02C **Sample Number:** 7047D090302-02B analyzed via TEM.	Negative
Location: Observed on HVAC ductwork/vinyl siding interface (south end).			
H05OB	TSI	**Description:** Fiberglass insulation board w/black/grey colored mastic **Sample Numbers:** 7047D090302-01A, 7047D090302-01B, 7047D090302-01C **Sample Number:** 7047D090302-01C analyzed via TEM.	Negative
Location: Applied to HVAC ducting w/protective metal finishing (south end).			
H06	Miscellaneous	**Description:** 2' x 4' White w/tan speckle pattern ceiling tile **Sample Numbers:** 7047D090302-09, 7047D090302-10, 7047D090302-11	Negative
Location: Observed in bathroom area (men's and women's) rooms 17 and 18.			
H07	Miscellaneous	**Description:** 2' x 4' White pinhole pattern ceiling tile **Sample Numbers:** 7047D090302-15, 7047D090302-16, 7047D090302-17	Negative
Location: Observed throughout the interior of the building.			
H08	Miscellaneous	**Description:** 2' x 4' White small fissure pattern ceiling tile **Sample Numbers:** 7047D090302-18, 7047D090302-19, 7047D090302-20	Negative
Location: Observed throughout the interior of the building.			

1. Negative = no asbestos fibers were detected during laboratory sample analysis.
2. N/A = not applicable.

INSPECTION SURVEY TABLE OF BULDING 704-7D

Homogeneous Number	Suspect/Non-Suspect Material	Description and Sample Numbers of Material	Test Results
H09OB	Miscellaneous	**Description:** Brown colored w/tan specks polyvinyl sheeting **Sample Numbers:** 7047D090302-06, 7047D090302-07, 7047D090302-08 **Sample Number:** 7047D191104-01A analyzed via TEM.	Negative
Location: Observed flooring in women's facility (room 18).			
H10OB	Miscellaneous	**Description:** Grey colored w/specks polyvinyl sheeting **Sample Numbers:** 7047D090302-12, 7047D090302-13, 7047D090302-14 **Sample Number:** 7047D191104-02A was analyzed via TEM	Negative
Location: Observed flooring in rooms 12, 13 (under carpet), 14, 15, 16, 19, 20, 21, 22, and 23 (under carpet).			
H11OB	Miscellaneous	**Description:** 12" x 12" Tan colored w/brown streaks floor tile w/mastic **Sample Numbers:** 7047D090302-21A, 7047D090302-21B, 7047D090302-21C, 7047D090302-22A, 7047D090302-22B, 7047D090302-22C **Sample Numbers:** 7047D090302-21A, 7047D090302-22A analyzed via TEM.	Negative
Location: Observed flooring in rooms 4, 5, 5A (closet) 6, 10, and 11.			
H12OB	Miscellaneous	**Description:** 12" x 12" White colored w/red flakes floor tile w/mastic **Sample Numbers:** 7047D191030-01A, 7047D191030-01B, 7047D191030-01C **Sample Number:** 7047D191030-01C analyzed via TEM.	Negative
Location: Observed flooring in men's facility (room 17).			
H13OB	Miscellaneous	**Description:** Brown colored mastic **Sample Numbers:** 7047D090302-23A, 7047D090302-23B, 7047D090302-23C **Sample Number:** 7047D090302-23A was analyzed via TEM	Negative
Location: Applied to carpet throughout the interior of the building.			
H14OB	Miscellaneous	**Description:** Vinyl cove base w/brown colored mastic **Sample Numbers:** 7047D090302-26A, 7047D090302-26B, 7047D090302-26C **Sample Number:** 7047D090302-26A analyzed via TEM.	Negative
Location: Observed on the base of cabinets in kitchen (room 4).			
H15OB	Miscellaneous	**Description:** Grey colored sealant **Sample Numbers:** 7047D090302-25A, 7047D090302-25B, 7047D090302-25C **Sample Number:** 7047D090302-25C analyzed via TEM.	Negative
Location: Observed in conduit penetration in room 6.			

November 18, 2019

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

Bureau Veritas Work Order No. A1911081

Reference Activity Code: 0BJL15PNDC

Dear Kenny Barrineau:

Bureau Veritas North America, Inc. received 2 samples on November 11, 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: *18-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC

Project: Activity Code: 0BJL15PNDC

Work Order No A1911081

QUANTITATIVE ANALYSIS OF BULK SAMPLES FOR ASBESTOS USING TRANSMISSION ELECTRON MICROSCOPY (TEM) EPA-600/R-93/116 Section 2.5.5.1

Upon receipt in the laboratory, samples are ground until homogeneous. Each sample is weighed in a tared silica crucible. The sample is placed in a muffle furnace at a temperature of 480 degrees C for 5 hours. The sample is allowed to cool to room temperature and immediately weighed to record ashed sample weight. Approximately 1 ml of nondiluted HCL acid is slowly added to remove calcite and dolomite from the ashed sample. After evolution of CO2 gas has ceased, the sample is immediately diluted with ultra-pure water. The sample is then dispersed in 50 ml of ultra-pure water and filtered onto a pre-weighed 47 mm, 0.45 um pore size, MCE filter. The filter is dried on a slide warmer and weighed once again.

A 1 cm2 portion of the filter is cut and placed in a clean silica crucible. Approximately 250 ul of both 20 ppm methyl cellulose solution and isopropyl alcohol are added and ultra-sonicated for 1 minute to remove the deposited sample into suspension. Approximately 3 ul of the suspension is pipetted onto a carbon-coated copper TEM grid and allowed to dry. Grids are examined in the TEM at 15,000X magnification. Asbestos is identified using morphology, selected area electron diffraction, and energy-dispersive x-ray spectroscopy. From TEM examination, a visual area estimation is made of asbestos in the final residue. Percent asbestos in the final residue is then extrapolated using gravimetric records to percent asbestos in the total sample.

References

Chatfield Method for Quantitative Analysis of Bulk Samples for Asbestos Using Transmission Electron Microscopy (unpublished).

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

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

ANALYTICAL RESULTS

Client: **SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC**

Client Reference No.: **Activity Code: 0BJL15PNDC**

Work Order No.: **A1911081** **Date:** *18-Nov-19*

Analytical Method: NYELAP METHOD 198.4 by TEM
Sample Type: Bulk
Reporting Limit (% by Weight): 0.1

Date Received: 11/11/2019 2:10:27 PM
Report Date: 11/18/2019 10:23:08 AM
Grid Box Identification: 11-12-19D-1

Lab Sample No.	Client Sample Identification	Date Sampled	Analysis Date	Analyst	Sample Description (Morphology)	Asbestos Identification	(%)*	Total Asbestos (%)**
A1911081-001A	7047D191104-01A	11/04/19 @12:00 am	11/16/19 @2:29 pm	TM	Brown Sheet Flooring w/ Mastic	None Detected	--	< 0.1
A1911081-002A	7047D191104-02A	11/04/19 @12:00 am	11/16/19 @2:29 pm	TM	Gray Sheet Flooring w/ Mastic	None Detected	--	< 0.1

TEM Microscope Documentation

Instrument	*Magnification	Accelerating Voltage	Calibration Date
TEM 2/D686	14965x	100 KeV	10/6/2019

*Magnification = Calibrated screen magnification at 15,000X. For ISO Method 10312 the calibrated screen magnification is at 20,000X

<: Result is less than the indicated limit of detection. --: Present but below the detection limit
*: The visual area estimation of asbestos content in the final residue.
**: The calculated total percent asbestos in the sample as received.

Analyst(s) Name/Date: Thomas J. Michel 11/18/2019

SRS Chain of Custody / Laboratory Analysis Request

A1911081

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): HEATH MCGREGOR

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
	7047D191104-01A		11/04/2019	TEM	< 1 Gram	N/A	N/A	H01OB - Resilient sheet flooring - Brown
	7047D191104-02A		11/04/2019	TEM	< 1 Gram	N/A	N/A	H02OB - Resilient sheet flooring - Grey

Relinquished by

Name	Signature	Date and Time
Ken Padgett		11/4/19 1320
Kane Bice		11-4-19 1331
735-B Rm 401	735-B Rm 401	11/7/19 0540
Kane Bice		11/7/19 1100

Received by

Name	Signature:	Date and Time
Kane Bice		11-4-19 1330
735-B Rm 401	735-B Rm 401	11-4-19 1331
Kane Bice		11/7/19 0540
C/S Shipping	C/S Shipping	11/7/19 1130

K. Smith 11/8/19

Page 1 of 1

November 13, 2019

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

Bureau Veritas Work Order No. A1911019

Reference Activity Code: 0BJL15PNDC

Dear Kenny Barrineau:

Bureau Veritas North America, Inc. received 3 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: *13-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC

Project: Activity Code: 0BJL15PNDC

Work Order No A1911019

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 A1911019

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

QUANTITATIVE ANALYSIS OF NON-FRIABLE ORGANICALLY BOUND BULK SAMPLES FOR ASBESTOS USING TRANSMISSION ELECTRON MICROSCOPY (TEM) (NY ELAP 198.4)

Approximately 100-500 mg of sample is weighed in a tared crucible. The sample is placed in a muffle furnace at a temperature of 480°C for at least 5 hours, or until the weight has stabilized. The sample is allowed to cool to room temperature and immediately weighed to calculate percent of organic loss.

The sample is placed in a tared crucible and ground to disaggregate the residue. Approximately 1 ml of non-dilute HCL acid is slowly added to remove calcite and dolomite from the remaining sample residue. After 15 minutes, the sample is immediately diluted with ultra-pure water. The sample is then dispersed in 50 ml of ultra-pure water and filtered onto a pre-weighed 47 mm, 0.4um pore size polycarbonate filter. The filter is dried on a slide warmer and weighed again. If the residue mass is <1% of the subsample's original mass, the analysis is terminated and the result is reported as non-ACM.

A one cm2 portion of the filter is cut and placed in a clean silica crucible. Approximately 5ml of ethanol are added and ultra-sonicated for 1 minute. Approximately 3 µl of the suspension is drop-mounted onto a carbon-coated TEM grid and allowed to dry.

Grids are examined at 3000X for suitability of the prep where >50% intact filter coverage and <25% particle loading is determined. Large bundles of asbestos may be noted during this phase of the analysis. At 10,000X to 20,000X, positive confirmation and further visual estimation of asbestos is determined. If there are no other particles on the filter, then the asbestos observed is 100% visual

estimation. Otherwise, the estimate includes all sizes relative to other particles or fibers. Morphology, selected area electron diffraction, and energy-dispersive x-ray spectroscopy are used to confirm asbestos fibers. From TEM examination as outlined above, the final visual area estimation is made of asbestos on the TEM grids and the percent asbestos in the residue is then extrapolated using gravimetric records to identify the percent asbestos in the total sample (NYS DOH Lab Code 11645).

SPECIAL NOTES

1)Material types analyzed by 198.1 method: a) Friable materials other than SM-V (Surfacing Material) with <10% vermiculite; b) Surfacing Material (SM) without vermiculite; and c) ceiling tile without cellulose.

2)Material types analyzed by 198.6/198.4 method: NOB material (other than SM-V) with <10% vermiculite; b) any material other than SM-V with >10% vermiculite; and c) Ceiling Tiles with cellulose.

3)Material types analyzed by 198.8 method: Surfacing Material containing vermiculite (SM-V).

REFERENCES

Chatfield Method for Quantitative Analysis of Bulk Samples for Asbestos Using Transmission Electron Microscopy (unpublished).

New York ELAP Method 198.4, May 2016.

NOTE: Some of the samples may have contained inseparable layers which were combined during preparation.

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

ANALYTICAL RESULTS

Date: *13-Nov-19*

CLIENT: SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
Sample Type: Bulk
Work Order No.: A1911019
Date Received: 11/1/2019
Client Reference: Activity Code: 0BJL15PNDC
Report Date: 13-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	***7047D191030-01A***	HA	10/30/2019	11/06/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Homogeneous White/Red Rubber Floor Tile	None Detected		Non-Detected		Binder/Filler

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
002A	***7047D191030-01B***	HA	10/30/2019	11/06/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Homogeneous White/Red Rubber Floor Tile	None Detected		Cellulose fiber	< 1%	Binder/Filler Mastic

Lab ID	Client Sample ID	Analyst	Date Sampled	Date Analyzed
003A	***7047D191030-01C***	HA	10/30/2019	11/06/2019

Layer	POB	Sample Morphology	Asbestos	%	Other Fibers	%	Particulate
(1)	100	Homogeneous White/Red Rubber Floor Tile	None Detected		Cellulose fiber	< 1%	Binder/Filler

Laboratory Limits

Heather Alley (HA)

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 which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed.

Analyst(s) Name/Date: H Alley 11/13/2019

ANALYTICAL RESULTS

Client: **SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC**

Client Reference No.: **Activity Code: 0BJL15PNDC**

Work Order No.: **A1911019** **Date:** *13-Nov-19*

Analytical Method: NYELAP METHOD 198.4 by TEM
Sample Type: Bulk
Reporting Limit (% by Weight): 0.1

Date Received: 11/1/2019 8:45:23 AM
Report Date: 11/13/2019 3:26:40 PM
Grid Box Identification: 11-06-19C-1

Lab Sample No.	Client Sample Identification	Date Sampled	Analysis Date	Analyst	Sample Description (Morphology)	Asbestos Identification	(%)*	Total Asbestos (%)**
A1911019-003A	7047D191030-01C	10/30/19 @12:00 am	11/13/19 @10:29 am	TM	White/Red Tile	None Detected	--	< 0.1

TEM Microscope Documentation

Instrument	*Magnification	Accelerating Voltage	Calibration Date
TEM 2/D686	14965x	100 KeV	10/6/2019

*Magnification = Calibrated screen magnification at 15,000X. For ISO Method 10312 the calibrated screen magnification is at 20,000X

<: Result is less than the indicated limit of detection. --: Present but below the detection limit
*: The visual area estimation of asbestos content in the final residue.
**: The calculated total percent asbestos in the sample as received.

Analyst(s) Name/Date: Thomas J. Michel 11/13/2019

SRS Chain of Custody / Laboratory Analysis Request

A19 11019

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

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) Heath McCendon

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
	7047D191030-01A		10/30/2019	PLM	< 1 Gram	N/A	N/A	H01OB - RFT, 12"x12" white with red flake
	7047D191030-01B		10/30/2019	PLM	< 1 Gram	N/A	N/A	H01OB - RFT, 12"x12" white with red flake
	7047D191030-01C		10/30/2019	PLM/TEM	< 1 Gram	N/A	N/A	H01OB - RFT, 12"x12" white with red flake

Relinquished by		
Name	Signature	Date and Time
Ken Padgett		10/30/19 1450
Kane Bice		10/30/19 1511
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 1510
735-B Rm 401	735-B Rm 401	10/30/19 1511
Kane Bice		10/31/19 0600
c/s shipping	c/s shipping	10/31/19 1130

K. Smith 11/1/19

Page 1 of 1

7 of 7

DAVIS & FLOYD

LABORATORY ANALYSIS REPORT

April 2, 2009

James Koch II
Savannah River Nuclear Solutions, LLC
735-B Room 133
Aiken, SC 29804-6809

Re: Job 09070 Asbestos Analysis – TEM

On March 25, 2009, the Davis & Floyd, Inc. laboratory received ten solid waste sample from the Savannah River Nuclear Solutions LLC. The sample listed on the Chain-of-Custody (COC) form arrived at Davis & Floyd Laboratory intact. A fourteen-day turnaround was requested on the COC.

The samples were subcontracted to the RJ Lee Group, Inc. in Monroeville, PA for analysis of Asbestos by TEM. The sample(s) were received by the RJ Lee Group and logged in for analysis on March 27, 2009 as follows:

SRNS ID	RJ Lee Sample Number
09070-7047D090302-03E	0165220.HT
09070-7047D090302-04D	0165221.HT
09070-7047D090302-02B	0165222.HT
09070-7047D090302-01C	0165223.HT
09070-7047D090302-21A	0165224.HT
09070-7047D090302-22A	0165225.HT
09070-7047D090302-23A	0165226.HT
09070-7047D090302-24C	0165227.HT
09070-7047D090302-25C	0165228.HT
09070-7047D090302-26A	0165229.HT

Enclosed are the Chain-of –Custody Records and the RJ Lee Group laboratory analysis report. Please contact me if you have any questions.

Sincerely,
Davis & Floyd, Inc.

John H. McCord Jr.
Laboratory Manager

Enclosure:

CHAIN-OF-CUSTODY

Labora

09070	Customer Name:	Carter, Charles	RL
Contract Number AC39041N	Customer Department:	SDD	Ship to: Company: Davis & Floyd
	Customer Address:	707-49B	Address: 816 East Durst Ave. Greenwood, SC 29649
	Customer Phone/Beeper:	507-4764 20730	Attention: Carl Burrell, 864-229-4413

Washington Savannah River Company
Aiken, SC 29808

Environmental Services Section
Waste Sample Management Group

COC creation date. 3/20/09

Matrix: S=Soil,SO=Solid,SL=Sludge,O=Organic,A=Aqueous, SM=Smear

Sample Analysis Requested

	Sample ID:	Sample ID:	Sample ID:
	09070-7047D090302-03E	09070-7047D090302-04D	09070-7047D090302-02B
	Collect Date 3/2/09	Collect Date 3/2/09	Collect Date 3/2/09
	Collect Time 0800	Collect Time 0800	Collect Time 0800
	No. Containers 1	No. Containers 1	No. Containers 1
	Matrix SOLID	Matrix SOLID	Matrix SOLID
TEM for Asbestos (362)	✓	✓	✓

14 Day TAT

RAD SCREEN REQUIRED? NO STR Authorization RWL for J. Koch

1 Relinquished by:	Date/Time	Received by:	2 Relinquished by:	Date/Time	Received by:
(Print) RM Cooke	Date 3/23/09	(Print) CE Lewis	(Print) CE Lewis	Date 3/23/09	(Print) Minnie Hightower
(Sign) RM Cooke	Time 1355	(Sign) CE Lewis	(Sign) CE Lewis	Time 1420	(Sign) Minnie Hight
3 Relinquished by:	Date/Time	Received by:	**4** Relinquished by:	Date/Time	Received by:
(Print) Minnie Hightower	3/24/09	(Print) CLS	(Print)	3.25.09	(Print) Tisa S. McCall
(Sign) Minnie Hight	Time 0000	(Sign) Shipping	(Sign)	Time 11:15	(Sign) Tisa S. McCall

Cooler 0530

P2

CHAIN-OF-CUSTODY

Labora

09070	Customer Name:	Carter, Charles	RL
Contract Number AC39041N	Customer Department:	SDD	Company: Davis & Floyd
	Customer Address:	707-49B	Ship to: Address: 816 East Durst Ave. Greenwood, SC 29649
	Customer Phone/Beeper:	507-4764 20730	Attention: Carl Burrell, 864-229-4413

Washington Savannah River Company
Aiken, SC 29808

Environmental Services Section
Waste Sample Management Group

COC creation date. 3/20/09

Matrix: S=Soil,SO=Solid,SL=Sludge,O=Organic,A=Aqueous, SM=Smear

Sample Analysis Requested

Sample Analysis Requested	Sample ID: 09070-7047D090302-01C	Sample ID: 09070-7047D090302-21A	Sample ID: 09070-7047D090302-22A
	Collect Date 3/2/09	Collect Date 3/2/09	Collect Date 3/2/09
	Collect Time 0800	Collect Time 0800	Collect Time 0800
	No. Containers 1	No. Containers 1	No. Containers 1
	Matrix SOLID	Matrix SOLID	Matrix SOLID
TEM for Asbestos (362)	✓	✓	✓

14 Day TAT

RAD SCREEN REQUIRED? NO

STR Authorization RWL for J. Koch

1 Relinquished by:	Date/Time	Received by:	2 Relinquished by:	Date/Time	Received by:
(Print) RM Cooke	Date 3/23/09	(Print) CE Lewis	(Print) CE Lewis	Date 3/23/09	(Print) Minnie Mightower
(Sign) RM Cooke	Time 1355	(Sign) CE Lewis	(Sign) CE Lewis	Time 1420	(Sign) Minnie Mightower
3 Relinquished by:	**Date/Time**	**Received by:**	**4 Relinquished by:**	**Date/Time**	**Received by:**
(Print) Minnie Mightower	3/24/09	(Print) C/S	(Print)	3.25.09	(Print) Tisa S. McCall
(Sign) Minnie Mightower	Time 1000	(Sign) Shipping	(Sign)	Time 11:15	(Sign) Tisa S. McCall

Cooler # 0530

P3

CHAIN-OF-CUSTODY

Labora

09070	Customer Name:	Carter, Charles	RL
Contract Number AC39041N	Customer Department:	SDD	Company: Davis & Floyd
	Customer Address:	707-49B	Ship to: Address: 816 East Durst Ave. Greenwood, SC 29649
	Customer Phone/Beeper:	507-4764 20730	Attention: Carl Burrell, 864-229-4413

Washington Savannah River Company
Aiken, SC 29808

Environmental Services Section
Waste Sample Management Group

COC creation date. 3/20/09

Matrix: S=Soil,SO=Solid,SL=Sludge,O=Organic,A=Aqueous, SM=Smear

Sample Analysis Requested

Sample ID:	Sample ID:	Sample ID:
09070-7047D090302-23A	09070-7047D090302-24C	09070-7047D090302-25C
Collect Date 3/2/09	Collect Date 3/2/09	Collect Date 3/2/09
Collect Time 0800	Collect Time 0800	Collect Time 0800
No. Containers 1	No. Containers 1	No. Containers 1
Matrix SOLID	Matrix SOLID	Matrix SOLID
TEM for Asbestos (362) ✓	✓	✓

14 Day TAT

RAD SCREEN REQUIRED? NO STR Authorization RWL for J. Koch

1 Relinquished by:	Date/Time	Received by:	2 Relinquished by:	Date/Time	Received by:
(Print) RM Cooke	Date 3/23/09	(Print) CE Lewis	(Print) CE Lewis	Date 3/23/09	(Print) Minnie Hightow
(Sign) RM Cooke	Time 1355	(Sign) CE Lewis	(Sign) CE Lewis	Time 1420	(Sign) Minnie Hight
3 Relinquished by:	**Date/Time**	**Received by:**	**4 Relinquished by:**	**Date/Time**	**Received by:**
(Print) Minnie Hightow	3/24/09	(Print) CIS	(Print)	3.25.09	(Print) Tisa S. McCall
(Sign) Minnie Hight	Time 1000	(Sign) Shipping	(Sign)	Time 11:15	(Sign) Tisa S. McCall

Cooler 0530

P4

CHAIN-OF-CUSTODY

Labora

09070	Customer Name:	Carter, Charles	RL
Contract Number AC39041N	Customer Department:	SDD	Ship to: Company: Davis & Floyd
	Customer Address:	707-49B	Address: 816 East Durst Ave. Greenwood, SC 29649
	Customer Phone/Beeper:	507-4764 20730	Attention: Carl Burrell, 864-229-4413

Washington Savannah River Company
Aiken, SC 29808

Environmental Services Section
Waste Sample Management Group

COC creation date. 3/20/09

Matrix: S=Soil,SO=Solid,SL=Sludge,O=Organic,A=Aqueous, SM=Smear

Sample Analysis Requested

	Sample ID:	Sample ID:	Sample ID:
	09070-7047D090302-26A		
Collect Date	3/2/09		
Collect Time	0800		
No. Containers	1		
Matrix	SOLID		
TEM for Asbestos (362)			

14 Day TAT

RAD SCREEN REQUIRED? NO

STR Authorization RWL for J. Koch

1 Relinquished by:	Date/Time	Received by:	2 Relinquished by:	Date/Time	Received by:
(Print) C E R M Cooke	Date 3/23/09	(Print) C E Lewis	(Print) C E Lewis	Date 3/23/09	(Print) Minnie Hightower
(Sign) R M Cooke	Time 1355	(Sign) C E Lewis	(Sign) C E Lewis	Time 1420	(Sign) Minnie Hightower
3 Relinquished by:	**Date/Time**	**Received by:**	**4 Relinquished by:**	**Date/Time**	**Received by:**
(Print) Minnie Hightower	3/24/09	(Print) C.L.S	(Print)	3.25.09	(Print) Lisa S. McCall
(Sign) Minnie Hightower	Time 1000	(Sign) Shipping	(Sign)	Time 11:15	(Sign) Lisa S. McCall

Cooler 0530

P5

P6

RJ Lee *Group*, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: (724) 325-1776 | Fax: (724) 733-1799

Final Laboratory Report

TEM Compositional Analysis

Mr. John H. McCord, Jr.
Davis & Floyd, Inc.
P.O. Drawer 428
Greenwood, SC 29649
USA

Report Date: 4/1/2009
Sample Receipt Date: 3/27/2009
RJ Lee Group Job No.: ATH903026
Authorization/P.O. No.:
Samples Received: 10
Client Job No./Name: 62664_01

Method: Chatfield Technical Consulting Limited, SOP-1988-02.Rev1.

Client Sample Number	RJLG Sample Number	Sample Description	Starting Weight (gm)	Weight Percent						Amphibole Type
				Organic	Acid Soluble	Residue	Chry	Amph	Total Asbestos	
09070-7047D09 0302-03E	0165220.HT		0.24690	28	63	9	0	0	0	
09070-7047D09 0302-04D	0165221.HT		0.21130	95	Trace	4	0	0	0	
09070-7047D09 0302-02B	0165222.HT		0.21560	21	49	31	0	0	0	
09070-7047D09 0302-01C	0165223.HT		0.20010	48	7	45	0	0	0	
09070-7047D09 0302-21A	0165224.HT		0.21660	18	80	3	0	0	0	
09070-7047D09 0302-22A	0165225.HT		0.20850	18	80	2	0	0	0	
09070-7047D09 0302-23A	0165226.HT		0.23380	59	0	42	0	0	0	
09070-7047D09 0302-24C	0165227.HT		0.20020	94	2	4	0	0	0	
09070-7047D09 0302-25C	0165228.HT		0.23820	27	32	42	0	0	0	
09070-7047D09 0302-26A	0165229.HT		0.24090	50	35	15	0	0	0	

Notes:
1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Trace indicates <1% asbestos was identified.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, NSD-No Structures Detected.
6. Samples will be held for 90 days and then disposed of per Federal regulations.
7. These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.

RJ Lee *Group*, Inc.

Final Laboratory Report (cont'd)

RJ Lee Group Job No: ATH903026
Client Job No/Name: 62664_01

Davis & Floyd, Inc.
Report Date: 4/1/2009

Title: TEM Compositional Analysis

Client Sample Number	RJLG Sample Number	Sample Description	Starting Weight (gm)	Weight Percent						Amphibole Type
				Organic	Acid Soluble	Residue	Chry	Amph	Total Asbestos	

Authorized Signature: _____ /mb

Kimberly A. Allison, Manager - TEM Analysis

Notes:
1. "<" indicates results less than analytical sensitivity. "---" indicates that sample was not analyzed.
2. Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA #100364, NVLAP #101208-0, NY ELAP #10844) facility.
3. If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratory's results are limited to the reported values.
4. Trace indicates <1% asbestos was identified.
5. Abbreviations: N/A-Not Applicable, Chry-Chrysotile Asbestos, Amph-Amphibole Asbestos, NSD-No Structures Detected.
6. Samples will be held for 90 days and then disposed of per Federal regulations.
7. These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.

DISCLAIMER

Caution must be applied when interpreting the results of samples prepared using indirect sample preparation techniques. Studies have shown that indirect preparation techniques may result in substantial increases in the fiber count when compared to fiber counts which would have been obtained using direct sample preparation.

RJ Lee Group, Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for select test methods for airborne asbestos analysis (TEM), asbestos fiber analysis (PLM), New York Department of HEALTH Environmental Laboratory Program (ELAP), and by the American Industrial Hygiene Association (AIHA). This test report relates only to the items tested. This report may not be used to claim product endorsement by NVLAP, any agency of the US Government, or any other laboratory accrediting agency. Any reproduction of this document must be in full in order for the report to be valid. This report is not valid unless it bears the name of a NVLAP-approved signatory.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limiting provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, RJ Lee Group will store the samples for a period of ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample.

P9

DAVIS FLOYD

ATH903026

Chain of Custody Record

Page 1 of 1

Client	Project / Site Location	Laboratory Certification Numbers	Office Use Only
Davis & Floyd, Inc. Greenwood, SC 29649	62664_01	Laboratory Certification Numbers: SC - 24110, NC - 25, NELAP - E87633, TN - 2923, VA - 77 816 E. Durst Avenue, Greenwood, SC 29649 (864) 229-4413 Fax: (864) 229-7119 Email: Laboratory@davisfloyd.com Internet : www.davisfloyd.com	Laboratory Work Request

Contact	Report To	Copy To	Requirements	PO / Quote Number	
John H. McCord, Jr.	John H. McCord, Jr.	jmccord@davisfloyd.com	Reporting Requirements: [✓] Standard [ ] Data Package (Specify Level 1 2 3 4) Turnaround Requirements: [✓] Standard [ ] Rush (Specify:)		TC 10

Collected By: Tisa S. McCall/Sample Custodian

Atmospheric Conditions (Optional)

Required Parameters, Containers and Preservatives (P*)

Special Instructions | State | LOGIN

NOTICE:

Sample Description	Sample Collection Date	Sample Collection Time	Time sampling initiated (composite only) Time	Composite	Grab	Matrix Type	Number of Containers Total	PARAMETERS P*	ITEM A											Indicate any known or expected hazards with a "X" HOT	Comments	Fraction
09070-7047D090302-03E	2-Mar	8:00				7	1		1													
09070-7047D090302-04D	2-Mar	8:00				7	1		1													
09070-7047D090302-02B	2-Mar	8:00				7	1		1													
09070-7047D090302-01C	2-Mar	8:00				7	1		1													
09070-7047D090302-21A	2-Mar	8:00				7	1		1													
09070-7047D090302-22A	2-Mar	8:00				7	1		1													
09070-7047D090302-23A	2-Mar	8:00				7	1		1													
09070-7047D090302-24C	2-Mar	8:00				7	1		1													
09070-7047D090302-25C	2-Mar	8:00				7	1		1													
09070-7047D090302-26A	2-Mar	8:00				7	1		1													

ENTER NUMBER OF SAMPLE CONTAINERS

Relinquished By	Date	Time	Relinquished By	Date	Time	Relinquished By	Date	Time	Shipped Via
Tisa S. McCall	3.26.09	1450							(UPS) FEDEX CLIENT COURIER OTHER D & F
Received By	**Date**	**Time**	**Received By**	**Date**	**Time**	**Received in Laboratory By**	**Date**	**Time**	**Tracking Number**
						M. Braxdale	03-27-09	10:42 AM	

Comments

Flow Measurement (Note 1)
Beginning ______
Ending ______
Start Date: ______
Multiplier

Note: Indicate immediate delivery for those shipments in which the temperature does not have adequate time to reach 4°C

Receipt Information
Cooler ID (if available): ______
On Ice: Yes / No Temp(C) ______
Immediate Delivery: Yes / No
Custody Seal: Intact / Broken / None

Matrix Type Definitions 1 - Drinking Water 2 - Clean Water 5 - Groundwater 7 - Soil/Sediment 8 - Liquid Sludge 9 - Oil 12 - Air
(P) Preservative Definitions A - None B - H2SO4 C - HCl D - HNO3 E - NaOH F - Filtered G - Other

(Note 1) For Discharge Measurements

Davis & Floyd, Inc.
FL02_02 (04/05)

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 1 of 7

Cost Code: PRD70391E

Lab Log-In No. _____

Contaminant(s): SUSPECT ASBESTOS 704-7D

Lab Report No. Required (•) EBL ( ) F/H Lab

Lab Method No. and Name: NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09-0176

Disk No.

EBL-IH

Submitted By (Print/Signature): Charles Carter Charles Carter

Audited By (Print/Signature): R. Cochrane

2009-0121-

Verbal Results Given (To Whom)

How (Check One) ( ) Person ( ) Voice Mail

Date/Time Verbal Results Given /

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-03A		3-16-09	<1% asb	1% asb	H01OB Roof Shingles
7047D090302-03B		3-16-09	<1% asb		H01OB Roof Shingles
7047D090302-03C		3-16-09	<1% asb		H01OB Roof Shingles
7047D090302-03D		3-16-09	<1% asb		H01OB Roof Shingles
7047D090302-03E		3-16-09	<1% asb		H01OB Roof Shingles
7047D090302-04A		3-16-09	<1% asb		H02OB Felt Paper
7047D090302-04B		3-16-09	<1% asb		H02OB Felt Paper
7047D090302-04C		3-16-09	<1% asb		H02OB Felt Paper

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RW Chavous	3-13-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature: RM Cooke	Date Report Mailed: 3-17-09	Report Received By (Print)	Signature (Field Use Only)	Date Received

Comments: Samples rec'd in good condition MB 3/17/09

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter	Charles Carter	3/4/2009	0900	RM Cooke	RM Cooke	3/5/09	0850

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 2 of 7

Cost Code: PRD70391E

Lab Log-In No.

Contaminant(s): SUSPECT ASBESTOS 704-7D

Lab Report No.

Required (•) EBL ( ) F/H Lab

EBL-IH

2009-0121-

Lab Method No. and Name: NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09-0176

Disk No.

Submitted By (Print/Signature): Charles Carter Charles P Carter

Audited By (Print/Signature): R. Cochrane

Verbal Results Given (To Whom)

How (Check One) ( ) Person ( ) Voice Mail

Date/Time Verbal Results Given /

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-04D		3-16-09	< 1%	1% asb	H02OB Felt Paper
7047D090302-04E		3-16-09	< 1%		H02OB Felt Paper
7047D090302-05A		3-16-09	Chry 1-5%		H03OB Black Roof Mastic
7047D090302-05B		3-16-09	< 1%		H03OB Black Roof Mastic
7047D090302-05C		3-16-09	Chry 1-5%		H03OB Black Roof Mastic
7047D090302-02A		3-16-09	<1%		H04OB Grey Caulking RMC
7047D090302-02B		3-16-09	<1%		H04OB Grey Caulking RMC
7047D090302-02C		3-16-09	<1%		H04OB Grey Caulking RMC

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RM Cooke RM Cooke	3-13-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature	Date Report Mailed	Report Received By (Print)	Signature (Field Use Only)	Date Received
RM Cooke	3-17-09			

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter	Charles Carter	3/4/2009	0900	RM Cooke	RM Cooke	3/5/09	0950

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 3 of 7

Cost Code: PRD70391E

Lab Log-In No. _____

Contaminant(s): SUSPECT ASBESTOS 704-7D

Lab Report No. Required (•) EBL ( ) F/H Lab

Lab Method No. and Name: NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09-0176

Disk No.:

Submitted By (Print/Signature): Charles Carter

Audited By (Print/Signature): R. Cochrane

EBL-IH

2009-0121-

Verbal Results Given (To Whom)

How (Check One) ( ) Person ( ) Voice Mail

Date/Time Verbal Results Given /

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-01A		3-16-09	<1%	1% add	H05OB Mastic On Polyisocyanurate
7047D090302-01B		3-16-09	<1%		H05OB Mastic On Polyisocyanurate
7047D090302-01C		3-16-09	<1%		H05OB Mastic On Polyisocyanurate
7047D090302-06		3-16-09	<1%		H06 Sheet linoleum W/ Mastic
7047D090302-07		3-16-09	<1%		H06 Sheet linoleum W/ Mastic
7047D090302-08		3-16-09	<1%		H06 Sheet linoleum W/ Mastic
7047D090302-09		3-16-09	<1%		H07 Suspended Ceiling Tile
7047D090302-10		3-16-09	<1%		H07 Suspended Ceiling Tile

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RW Chavous	3-13-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature: RM Cooke	Date Report Mailed: 3-17-09	Report Received By (Print)	Signature (Field Use Only)	Date Received

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter	Charles Carter	3/4/2009	0900	RM Cooke	RM Cook	3/5/09	0850

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 4 of 7

Cost Code: PRD70391E

Lab Log-In No. _____

Contaminant(s): SUSPECT ASBESTOS 704-7D

Lab Report No.
Required (•) EBL ( ) F/H Lab

EBL-IH

2009-0121-

Lab Method No. and Name: NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09-0

Disk No.: 176

Submitted By (Print/Signature): Charles Carter

Audited By (Print/Signature): R. Cochrane

Verbal Results Given (To Whom)

How (Check One) ( ) Person ( ) Voice Mail

Date/Time Verbal Results Given /

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-11		3-16-09	<1%	1% asb	H07 Suspended Ceiling Tile
7047D090302-12		3-16-09	<1%		H08 Sheet Linoleum W/ Mastic
7047D090302-13		3-16-09	<1%		H08 Sheet Linoleum W/ Mastic
7047D090302-14		3-16-09	<1%		H08 Sheet Linoleum W/ Mastic
7047D090302-15		3-16-09	<1%		H09 Suspended Ceiling Tile
7047D090302-16		3-16-09	<1%		H09 Suspended Ceiling Tile
7047D090302-017		3-16-09	<1%		H09 Suspended Ceiling Tile
7047D090302-18		3-16-09	<1%		H10 Suspended Ceiling Tile

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RW Chavous	3-13-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature	Date Report Mailed	Report Received By (Print)	Signature (Field Use Only)	Date Received
RM Cooke	3-17-09			

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter	Charles Carter	3/4/2009	0900	RM Cooke	RM Cooke	3/5/09	0850

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 5 of 7

Contaminant(s)
SUSPECT ASBESTOS
704-7D

Cost Code
PRD70391E

Lab Report No.
Required (•) EBL ( ) F/H Lab
EBL-IH
2009-0121-

Lab Log-In No. _____

Lab Method No. and Name
NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09-0176
Disk No.:

Submitted By (Print/Signature)
Charles Carter

Verbal Results Given (To Whom)
How (Check One) ( ) Person ( ) Voice Mail

Audited By (Print/Signature)
R. Cochrane

Date/Time Verbal Results Given
/

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-19		3-16-09	< 1%	1% asb	H10 Suspended Ceiling Tile
7047D090302-20		3-16-09	< 1%		H10 Suspended Ceiling Tile
7047D090302-21A		3-16-09	< 1%		H11OB Floor Tile
7047D090302-21B		3-16-09	< 1%		H11OB Floor Tile
7047D090302-21C		3-16-09	< 1%		H11OB Floor Tile
7047D090302-22A		3-16-09	< 1%		H12OB Mastic On Floor Tile
7047D090302-22B		3-16-09	< 1%		H12OB Mastic On Floor Tile
7047D090302-22C		3-16-09	< 1%		H12OB Mastic On Floor Tile

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
BW Chambers	3-13-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature	Date Report Mailed	Report Received By (Print)	Signature (Field Use Only)	Date Received
RM Cook	3-17-09			

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter	Charles Carter	3/4/2009	0900	RM Cook	RM Cook	3/5/09	0850

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 6 of 7

Contaminant(s)
SUSPECT ASBESTOS
704-7D

Cost Code
PRD70391E

Lab Report No.
Required (•) EBL ( ) F/H Lab

EBL-IH
2009-0121-

Lab Log-In No. _____

Lab Method No. and Name
NIOSH 9002 PLM

Lab Book and Page No.
09-0122- 09-0

Disk No.
176

Submitted By (Print/Signature)
Charles Carter

Audited By (Print/Signature)
R. Cochrane

Verbal Results Given (To Whom)

How (Check One)
( ) Person ( ) Voice Mail

Date/Time Verbal Results Given
/

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-23A		3-16-09	<1%	1% ASB	H13OB Mastic Under Carpet RMC
7047D090302-23B		3-16-09	<1%		H13OB Mastic Under Carpet
7047D090302-23C		3-16-09	<1%		H13OB Mastic Under Carpet
7047D090302-24A		3-16-09	<1%		H14OB Linoleum Seam Filler
7047D090302-24B		3-16-09	<1%		H14OB Linoleum Seam Filler
7047D090302-24C		3-16-09	<1%		H14OB Linoleum Seam Filler
7047D090302-25A		3-16-09	<1%		H15OB Electrical Putty (Grey)
7047D090302-25B		3-16-09	<1%	✓	H15OB Electrical Putty (Grey)

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RM Cook	3-16-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature	Date Report Mailed	Report Received By (Print)	Signature (Field Use Only)	Date Received
RM Cook	3-17-09			

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter		3/4/2009	0900	RM Cook	RM Cook	3/5/09	0810

*TAT - Turn Around Time
Retention - Permanent

Disk No. - Only applicable to asbestos fiber counting.

OSR 4-434 (Rev 10-11-2006)

Industrial Hygiene Chain of Custody Lab Report

Washington Savannah River Company
Industrial Hygiene Laboratory
Building 735-B, Room 310
Aiken, SC 29808
Phone: (803) 952-7449/7459
Fax: (803) 952-7881

Page 7 of 7

Cost Code: PRD70391E

Lab Log-In No. _____

Contaminant(s): SUSPECT ASBESTOS 704-7D

Lab Report No.

Required (•) EBL ( ) F/H Lab

EBL-IH

2009-0121-

Lab Method No. and Name: NIOSH 9002 PLM

Lab Book and Page No.: 09-0122 - 09

Disk No.: 0176

Submitted By (Print/Signature): Charles Carter

Verbal Results Given (To Whom)

How (Check One) ( ) Person ( ) Voice Mail

Audited By (Print/Signature): R. Cochrane

Date/Time Verbal Results Given: /

Sample ID	Sample Media/Size	Requested TAT*	Results/Unit	Reporting Limit	Remarks
7047D090302-25C		3-16-09	<1%	1% ASB	H15OB Electrical Putty (Grey)
7047D090302-26A		3-16-09	<1%		H16OB Mastic On Vinyl Base
7047D090302-26B		3-16-09	<1%		H16OB Mastic On Vinyl Base
7047D090302-26C		3-16-09	<1%		H16OB Mastic On Vinyl Base
7047D090302-27A		3-16-09	Chry 15-30%		H17OB Black Mastic
7047D090302-27B		3-16-09	Chry 5-15%		H17OB Black Mastic
7047D090302-27C		3-16-09	Chry 5-15%		H17OB Black Mastic

NOTE: Results relate only to the items tested.
NOTE: Results are not corrected for contamination based on the field blank or other analytical blank.

Analyst/Signature	Date Analyzed	Reviewed By (Print)	Signature (Lab Director or Designee)	Date
RM Cooke	3-16-09	M Bernard 3-17-09	Maureen Bernard	3-17-09
Analyst/Signature	Date Report Mailed	Report Received By (Print)	Signature (Field Use Only)	Date Received
RM Cooke	3-17-09			

Comments

Chain of Custody

NOTE: Samples from Radiological Contamination areas must be submitted to 772-F unless free release criteria are met.

Relinquished By				Received By			
Name	Signature	Date	Time	Name	Signature	Date	Time
Charles Carter		3/4/2009	0900	RM Cooke	RM Cooke	3/5/09	0850

*TAT - Turn Around Time Disk No. - Only applicable to asbestos fiber counting.
Retention - Permanent