



Weston Solutions, Inc.
2300 Clayton Road, Suite 900
Concord, CA 94520
www.westonsolutions.com

September 2, 2022

Mr. Jeremy Johnstone
Federal On-Scene Coordinator
U. S. Environmental Protection Agency
Region 9, Emergency Response Section
75 Hawthorne Street
San Francisco, CA 94105

**Subject: Sawmill, AZ Asbestos Removal Assessment
Sawmill Chapter, Navajo Nation, Arizona
Task Order (TO) No.: 68HE0919F0081-20
Document Control No.: 0145-08-AAXL**

Dear Mr. Johnstone:

Under TO No. 68HE0919F0081-20, the U.S. Environmental Protection Agency (EPA) Region 9 tasked the Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) to assist the EPA Federal On-Scene Coordinator (FOSC) at the Sawmill, AZ Asbestos Removal Assessment in Sawmill, Apache County, Arizona, in the Sawmill Chapter of the Navajo Nation (**Figure 1**). The objective of this Removal Assessment was to further evaluate the presence of asbestos associated with the former Drying Kiln Building as well as perform an assessment of the building material debris located throughout the Site. This letter report summarizes the support activities provided by START for the Sawmill, AZ Asbestos Removal Assessment.

SITE DESCRIPTION

The Sawmill, AZ Asbestos Site is near Indian Service Route 7 in Sawmill, Apache County, Arizona, in the Sawmill Chapter of the Navajo Nation. The geographic coordinates for the approximate center of the Site are Longitude 35° 54' 8" North and Latitude 109° 9' 50" West. The Site is approximately 7 acres and includes the former drying kiln area, power plant area, and several unknown features (**Figure 2**).

The Site is approximately 7,675 feet above mean sea level and is flat with regional topography sloping gently to the southeast toward the Quartzite Wash Reservoir, approximately 1 mile away.

BACKGROUND

Construction at the Sawmill, AZ Asbestos Site started in 1939 and the Site was decommissioned after Navajo Forest Product Industries was brought online, around 1962. Historically, several buildings were present on-site, including a drying kiln building, a power plant, and several unknown buildings. It appears all structures have been demolished with only concrete slabs or minimal remnants remaining except for the former Drying Kiln Building. The Site is unfenced with open access and shows obvious signs of trespassing.

A Site visit was conducted by EPA and Navajo Nation Environmental Protection Agency

(NNEPA) in the summer of 2021. Collected samples confirmed the presence of asbestos-containing material (ACM) in building materials. The roof of the former Drying Kiln Building has collapsed but the walls are standing. Analytical results from previous sampling show asbestos concentration of the black wall coating is 3% chrysotile and the concrete was non-detect.

FIELD ACTIVITIES – JULY 12, 2022

On July 12, 2022, EPA and START personnel participated in a Site walk with NNEPA. The Site walk was performed to further evaluate the building materials associated with the former Drying Kiln Building for the presence of asbestos. In addition, an assessment was performed during a Site walk to evaluate building material debris located throughout the Site for the presence of asbestos. Samples were collected from the former Drying Kiln Building, a concrete trough to the west, and from the former Power Supply Building. A certified asbestos building inspector performed the sampling. Sampling locations were selected by the EPA FOSC and the asbestos building inspector in the field.

To perform the assessment, START collected 12 bulk asbestos samples from the Site (**Figure 3**). Analytical reports and chain-of-custody documentation are included in **Appendix B**.

The bulk asbestos samples collected at the Site were sealed in the appropriate sample container, assigned a discrete sample identification number, and submitted using proper chain-of-custody procedures. The bulk building material samples were submitted to EMC Labs Inc. (EMC) and analyzed by polarized light microscopy (PLM) by EPA Method 600/R-93/116. EMC is an accredited laboratory in the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis.

ANALYTICAL RESULTS

Twelve bulk samples were collected, and 13 separate layers were analyzed. Of the 13 bulk samples collected, nine samples contained asbestos at concentrations ranging from 3% to 80% chrysotile. Sample results are shown below in **Table 1**. **Figure 3** shows the location of the asbestos bulk samples collected at the Site.

Table 1
Bulk Sample Results – July 2022

<u>Sample Number</u>	<u>Bulk Sample Description</u>	<u>Asbestos (% / Type)</u>
SAZ-BS-001	Membrane, Black	5% Chrysotile
SAZ-BS-002	Membrane, Black	5% Chrysotile
SAZ-BS-003	Membrane, Black	5% Chrysotile
SAZ-BS-004 (Layer 1)	Transite, Off White	15% Chrysotile
SAZ-BS-004 (Layer 2)	Corrugated Roofing, Gray	8% Chrysotile

<u>Sample Number</u>	<u>Bulk Sample Description</u>	<u>Asbestos (% / Type)</u>
SAZ-BS-005	Asphaltic Roofing, Black	Not Detected
SAZ-BS-006	Asphaltic Roofing, Black / Gray	Not Detected
SAZ-BS-007	Concrete, Off White w/ Black	Not Detected
SAZ-BS-008	Patch, Black	5% Chrysotile
SAZ-BS-009	Patch, Black / Gray	10% Chrysotile
SAZ-BS-010	Concrete under Corrugated Roof, Off White	3% Chrysotile
SAZ-BS-011	Fiberboard / Aircell, Black/ Gray	80% Chrysotile
SAZ-BS-012	Mortar, Beige/Gray	Not Detected

Note: * Samples were analyzed by PLM by EPA Method 600/R-93/116 by EMC Labs Inc.

DISCUSSION

Based on the analytical results of the samples collected during the Site walk, building materials are present at the Site with an asbestos content in excess of 1%. The ACM can be found scattered throughout the Site and in the area around the former Drying Kiln Building.

Building materials associated with the former Drying Kiln Building have an asbestos content in excess of 1%. Because the concentrations are above 1%, the materials are designated as ACM. **Table 2** below serves to provide an estimate for the quantities of building materials estimated to contain asbestos greater than 1%. The estimates are based on a structure size of approximately 85 feet in length by 80 feet in width by 25 feet in height. Minimal asbestos coating was observed on the interior walls of the former Drying Kiln Building.

Table 2
Former Drying Kiln Building Material Estimates – July 2022

Material Type	Quantity
Asphaltic Roofing with Mastic	6,800 SF
Coating on Interior Concrete Walls	3,000 SF
Corrugated Transite Roofing	6,800 SF

Notes:

SF = square feet

The building materials identified to be ACM associated with the former Drying Kiln Building have deteriorated and have been dispersed by the wind to the surrounding area. Visibly identifiable ACM was observed in significant quantities at varying distances along each side of the structure ranging from 20 feet to 75 feet. The most significant presence of ACM appears to be located on the north and west side of the structure.



September 2, 2022

An asbestos evaluation was performed for various building material debris that was observed throughout the Site as a result of historical demolition activities. The assessment identified building material debris that contained asbestos in concentrations greater than 1% at various locations throughout the Site. The ACM identified included transite roof panels, fiberboard, corrugated roofing, and a black membrane. The remnants of this ACM appear to be present in various amounts throughout the Site. A majority of the identified ACM is located in and around the former Drying Kiln Building and the Power Supply Building. Some of the ACM is scattered about the Site and is not near one of these large sources.

SUMMARY

EPA tasked START to provide support during the Sawmill, AZ Asbestos Removal Assessment in Sawmill, Arizona. The assessment was performed to further evaluate the building materials surrounding the former Drying Kiln Building for the presence of asbestos. Based on the analytical results of the samples collected during this Site walk, building materials that are ACM are associated with the former Drying Kiln Building. These materials include transite roof panels, fiberboard, corrugated roofing, and a black membrane on the interior concrete of the building.

An asbestos evaluation was performed for remnant building debris that was observed at various locations throughout the Site as a result of historical demolition activities. The assessment identified building material debris that contained asbestos in concentrations greater than 1% at various locations throughout the Site. Based on the data obtained to date, additional assessment activities appear to be required to ensure remnant debris from the historical demolition work is managed and disposed of appropriately.

Should you have any questions regarding the information presented in this letter report, please contact me at (480) 477-4918, or at Greg.Roussos@WestonSolutions.com.

Respectfully,

Weston Solutions, Inc.

A handwritten signature in blue ink that reads "Greg Roussos".

Greg Roussos
START Project Manager

Attachments:

- A – Figures
- B – Analytical Data Packages
- C – Photographic Log

cc: WESTON START DCN File

ATTACHMENT A
FIGURES

Legend

★ Site Location



0 Miles 30

Contract:
68HE0919D0002
Task Order:
68HE0919F0081-20
DCN:
0145-08-AAXL

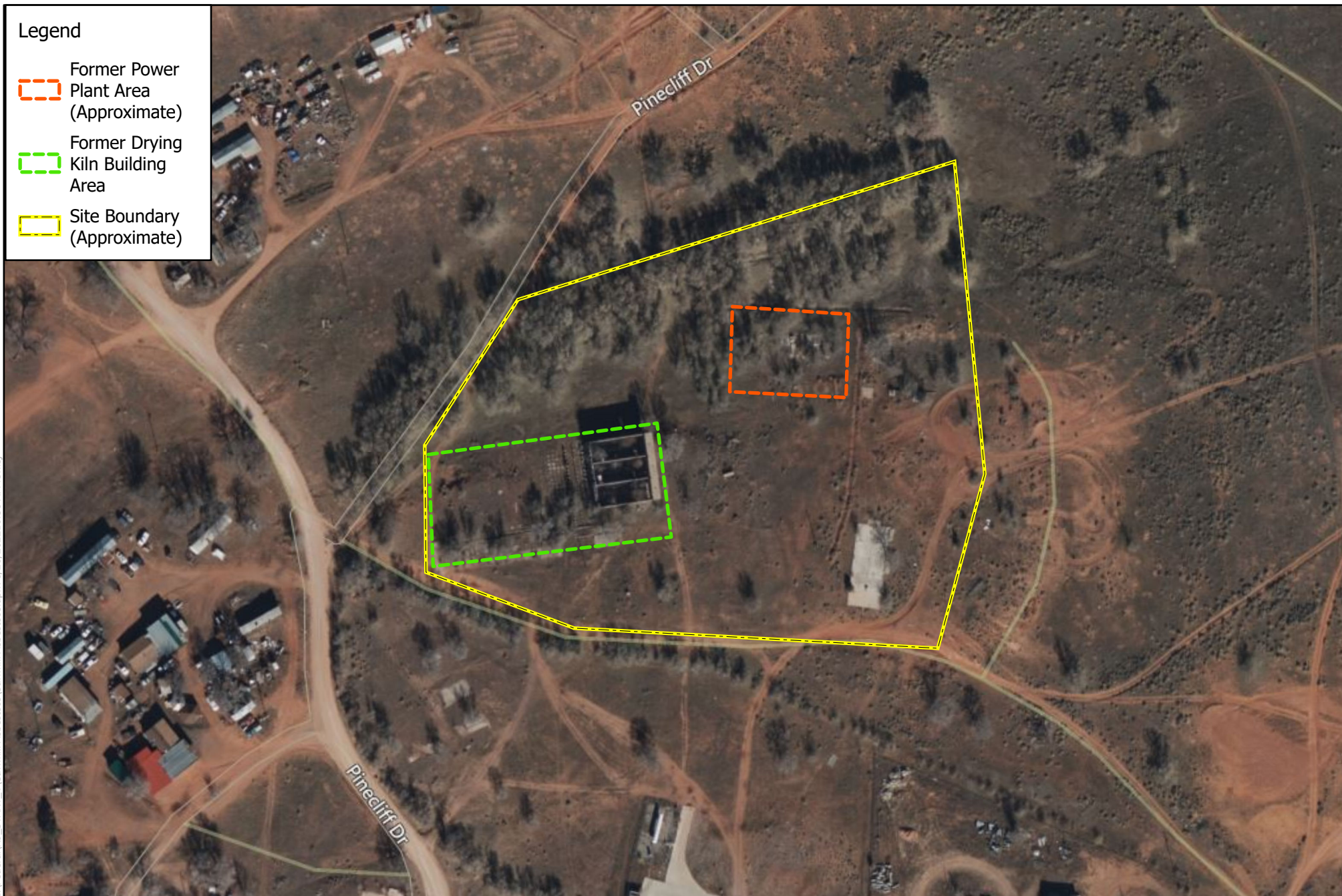
Prepared For
EPA Region 9
Pacific Southwest
Prepared By
Weston Solutions, Inc.
Long Beach, CA 90805
August 2022



FIGURE 1
Site Location
Sawmill, Arizona Asbestos
Removal Assessment
Sawmill Chapter, Navajo Nation
Sawmill, Apache County, AZ

E:\Federal\19_START_V\Sawmill Asbestos\Sawmill Asbestos.aprx 8/26/2022 10:58 AM [lewis]

- Legend
- Former Power Plant Area (Approximate)
 - Former Drying Kiln Building Area
 - Site Boundary (Approximate)



0 Feet 360

Contract:
68HE0919D0002
Task Order:
68HE0919F0081-20
DCN:
0145-08-AAXL

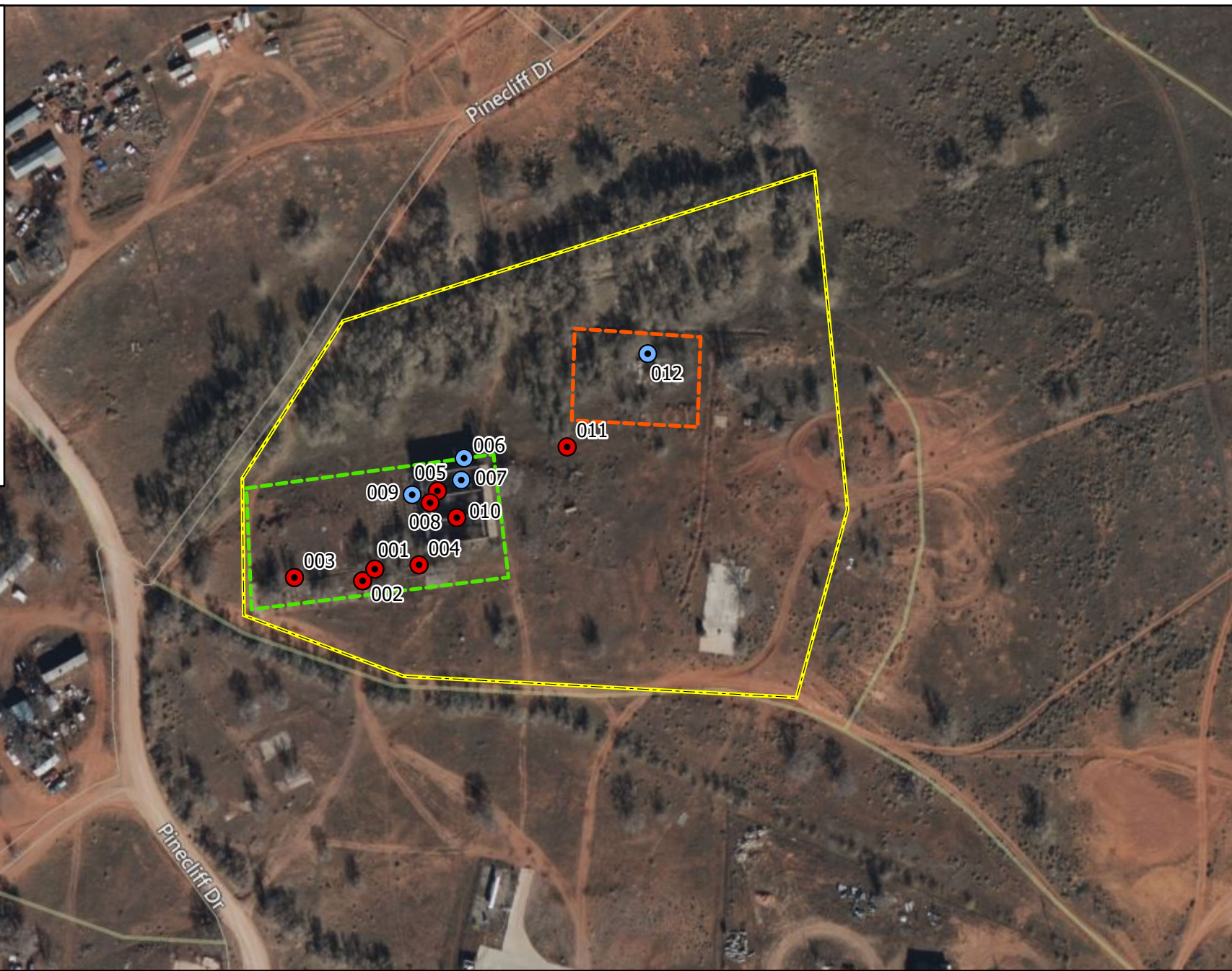
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EPA Region 9
Pacific Southwest
Prepared By
Weston Solutions, Inc.
Long Beach, CA 90805
August 2022



FIGURE 2
Site Layout
Sawmill, Arizona Asbestos
Removal Assessment
Sawmill Chapter, Navajo Nation
Sawmill, Apache County, AZ

Legend

- Former Power Plant Area (Approximate)
- Former Drying Kiln Building Area
- Site Boundary (Approximate)
- Negative Bulk Asbestos Sample Detection
- Positive Bulk Asbestos Sample Detection



0 Feet 360

Contract:
68HE0919D0002
Task Order:
68HE0919F0081-20
DCN:
0145-08-AAXL

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EPA Region 9
Pacific Southwest
Prepared By
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Long Beach, CA 90805
August 2022



FIGURE 3
Bulk Asbestos Sample Locations
Sawmill, Arizona Asbestos
Removal Assessment
Sawmill Chapter, Navajo Nation
Sawmill, Apache County, AZ

ATTACHMENT B
ANALYTICAL DATA PACKAGES

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report

0276130

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	WESTON SOLUTIONS	Job# / P.O. #:	
Address:	2300 CLAYTON RD, STE 900	Date Received:	07/15/2022
	CONCORD, CA 94520	Date Analyzed:	07/22/2022
Collected:	07/12/2022	Date Reported:	07/22/2022
Project Name:	SAWMILL, AZ ASBESTOS	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	GREG ROUSSOS
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0276130-001 SAZ-BS-001		Membrane, Black	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0276130-002 SAZ-BS-002		Membrane, Black	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0276130-003 SAZ-BS-003		Membrane, Black	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0276130-004 SAZ-BS-004		LAYER 1 Transite, Off White	Yes	Chrysotile 15%	Carbonates Gypsum Quartz Binder/Filler 85%
		LAYER 2 Corrugated Roofing, Gray	Yes	Chrysotile 8%	Cellulose Fiber 2% Carbonates Gypsum Quartz Binder/Filler 90%
0276130-005 SAZ-BS-005		Asphaltic Roofing, Black	No	None Detected	Cellulose Fiber 18% Synthetic Fiber 2% Carbonates Gypsum Quartz Binder/Filler 80%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
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Laboratory Report

0276130

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Collected:	07/12/2022	Date Reported:	07/22/2022
Project Name:	SAWMILL, AZ ASBESTOS	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	GREG ROUSSOS
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0276130-006 SAZ-BS-006		Asphaltic Roofing, Black / Gray	No	None Detected	Cellulose Fiber 15% Carbonates Quartz Binder/Filler 85%
0276130-007 SAZ-BS-007		Concrete, Off White w/ Black	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler 100%
0276130-008 SAZ-BS-008		Patch, Black	Yes	Chrysotile 5%	Carbonates Quartz Binder/Filler 95%
0276130-009 SAZ-BS-009		Patch, Black / Gray	Yes	Chrysotile 10%	Carbonates Quartz Binder/Filler 90%
0276130-010 SAZ-BS-010		Concrete under Corrugated Roof, Off White	Yes	Chrysotile 3%	Carbonates Gypsum Quartz Binder/Filler 97%
0276130-011 SAZ-BS-011		Fiberboard / Aircell, Black/ Gray	Yes	Chrysotile 80%	Cellulose Fiber 7% Carbonates Quartz Binder/Filler 13%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0276130

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	WESTON SOLUTIONS	Job# / P.O. #:	
Address:	2300 CLAYTON RD, STE 900	Date Received:	07/15/2022
	CONCORD, CA 94520	Date Analyzed:	07/22/2022
Collected:	07/12/2022	Date Reported:	07/22/2022
Project Name:	SAWMILL, AZ ASBESTOS	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	GREG ROUSSOS
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0276130-012 SAZ-BS-012		Mortar, Beige/ Gray	No	None Detected	Gypsum Carbonates Quartz Binder/Filler 100%



Analyst - Matt Kettler



Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicative or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

CHAIN OF CUSTODY

EMC Labs, Inc.

9830 S. 51st St., Ste B-109

Phoenix, AZ 85044

(480) 940-5294 Fax (480) 893-1726

LAB#:

276130

TAT:

35 Days

Rec'd: JUL 15 P.M.

COMPANY NAME:

Weston Solutions

BILL TO:

(If Different Location)

Address:

2300 Clayton Road, Suite 900

Concord, CA 94520

CONTACT:

Greg Roussos

Phone/Fax:

513-604-4797

Email:

Greg.Roussos@WestonSolutions.com

Now Accepting: VISA - MASTERCARD

Price Quoted: \$6.50 / Sample \$ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: {Same-Day-Rush} {1-2 Days} {3-4-5 Days} {6-10 Days}

****Prior confirmation of turnaround time is required

****Additional charges for rush analysis (please call marketing department for pricing details)

****Laboratory analysis may be subject to delay if credit terms are not met

2. TYPE OF ANALYSIS: {Bulk-PLM} {Air-PCM} {Lead} {Point Count} {Fungi: AOC, W-C, Bulk, Swab, Tape}

3. DISPOSAL INSTRUCTIONS: {Dispose of samples at EMC} / {Return samples to me at my expense}

(If you do not indicate preference, EMC will dispose of samples 30 days from analysis.)

4. Project Name: Sawmill, AZ Asbestos

P.O. Number:

Project Number:

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
1	SAZ-BS-001	7-12-22	Black membrane - trough	Y N			
2	SAZ-BS-002		Black membrane - trough	Y N			
3	SAZ-BS-003		Black membrane - trough	Y N			
4	SAZ-BS-004		Corrugated Roofing (transite)	Y N			
5	SAZ-BS-005		Asphaltic Roofing (black)	Y N			
6	SAZ-BS-006		Asphaltic Roofing (black/gray)	Y N			
7	SAZ-BS-007		Lightweight concrete w/ black	Y N			
8	SAZ-BS-008		Wall patch (black) - Kila wall	Y N			
9	SAZ-BS-009		Wall patch (black & gray) - Kila	Y N			
10	SAZ-BS-010		Lightweight concrete under corrugated roof	Y N			
11	SAZ-BS-011		Black/gray gaskets - Ground	Y N			
12	SAZ-BS-012		Mortar - Power Plant	Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS:

Sample Collector: (Print) Mark Williams

(Signature) [Signature]

Relinquished by: [Signature]

Date/Time: 7/13/22

Received by: Fred Esp

Date/Time: 7/13/22

Relinquished by:

Date/Time:

Received by: Diana Federico

Date/Time: 7/15/22

Relinquished by: Diana Federico

Date/Time: 7/15/22

Received by: [Signature]

Date/Time: 7/15/22

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

ATTACHMENT C
PHOTOGRAPHIC LOG

PHOTOGRAPH LOG


Project Name: Sawmill, AZ Asbestos		Site Location: Sawmill Chapter, Navajo Nation Sawmill, Apache County, Arizona	TO No.: 68HE0919F0081-20
Photo No. 1	Date: 9/30/2021		
Direction Photo Taken: Southwest			
Description: Overview of the former Drying Kiln Building			

Photo No. 2	Date: 9/30/2021	
Direction Photo Taken: East		
Description: Example of suspected ACM debris surrounding the former Drying Kiln Building		

PHOTOGRAPH LOG


Project Name: Sawmill, AZ Asbestos		Site Location: Sawmill Chapter, Navajo Nation Sawmill, Apache County, Arizona	TO No.: 68HE0919F0081-20
Photo No. 3	Date: 9/30/2021		
Direction Photo Taken: West			
Description: View inside the former Drying Kiln Building showing collapsed roof			

Photo No. 4	Date: 7/12/2022	
Direction Photo Taken: North		
Description: Sample SAZ-BS-001, black membrane on trough west of the former Drying Kiln Building.		

PHOTOGRAPH LOG

Project Name: Sawmill, AZ Asbestos		Site Location: Sawmill Chapter, Navajo Nation Sawmill, Apache County, Arizona	TO No.: 68HE0919F0081-20
Photo No. 5	Date: 7/12/2022		
Direction Photo Taken: East			
Description: Sample SAZ-BS-004, corrugated roofing material adjacent to former Drying Kiln Building			

Photo No. 6	Date: 7/12/2022		
Direction Photo Taken: North			
Description: Sample SAZ-BS-009, black sealant in cracks along the north wall of bay 2 in the former Drying Kiln Building			