	DWR Oroville Dam Air Quality Monitoring Sampling an Analysis Summary Report September 21, 2018 through October 04, 2018
Appendix A – Laboratory Re	ports
	Page 107 of 108



Project: 2018.09.21 Upper Area (Oroville EM OP)

**EMSL Order:** 341812932 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

 1001 Brad Freeman Trail
 Received Date:
 9/24/2018 9:00 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 09/25/2018 - 09/27/2018

Oroville, CA 95965 **Collected Date**: 09/21/2018

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structures		Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80921-OFD-PMT-0 1	WP083A AM Dan Beebe Trail	1914.30	0.2110	6	Actinolite	0	2	0.0010	9.50	0.0019
341812932-0001										
80921-OFD-PMT-0 2	WP249 AM Canyon Drive	1888.40	0.2110	12	Actinolite	1	0	0.0010	4.70	0.00097
341812932-0002										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80921-OFD-PMT-0 3 341812932-0003	WP084A AM SE Upper Overlook	1884.60	0.2110	3	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80921-OFD-PMT-0 4	WP246 AM Intake Yard	1865.30	0.2110	2	Chrysotile	0	1	0.0010	4.70	0.00098
341812932-0004										
80921-OFD-PMT-0 5	WP083A PM Dan Beebe Trail	1996.50	0.1980	6	None Detected			0.0010	<5.00	<0.0010
341812932-0005										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80921-OFD-PMT-0 6 341812932-0006	WP249 PM Canyon Drive	1986.40	0.1980	6	Actinolite	0	1	0.0010	5.00	0.00098
	s reported include a contribution from	non-regulated an	nnhiboles							
80921-OFD-PMT-0 7	WP084A PM SE Upper Overlook	1994.60	0.1980	2	Chrysotile	0	1	0.0010	5.00	0.00097
341812932-0007										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80921-OFD-PMT-0 8	WP246 PM Intake Yard	2010.10	0.1980	0	None Detected			0.0010	<5.00	<0.0010
341812932-0008										
80921-OFD-PMT-F B1 341812932-0009	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
80921-OFD-PMT-F B2 341812932-0010	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Initial report from: 09/27/2018 10:25:28



**EMSL Order:** 341812932 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems

 1001 Brad Freeman Trail
 Received Date:
 9/24/2018 9:00 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 09/25/2018 - 09/27/2018

Oroville, CA 95965 Collected Date: 09/21/2018

Project: 2018.09.21 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asb	estos	
		Volume	Analyzed	Non	Asbestos	#Structu	ires	Sensitivity	Conce	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Gerald lannuzzi (10)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



Attention: Dave Beadle, CIH

**EMSL Order:** 041828746 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

**Phone:** (661) 699-9375

Fax:

**Received Date:** 9/24/2018 9:00 AM

**Analysis Date:** 09/24/2018 - 09/25/2018

Collected Date: 09/21/2018

Project: 2018.09.21 Burma Road (Oroville EM OP)

Trailer #2 / Safety Mgmt Systems

Safety Management Systems

1001 Brad Freeman Trail

Oroville, CA 95965

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80921-OFD-BPT-0 1	WP086A AM Burma Road 01	1969.80	0.2080	4	Actinolite Tremolite	1 0	2	0.0009	14.00 4.80	0.0028 0.00094
041828746-0001	•					-			18.80	0.0037
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.			• • • • • • • • • • • • • • • • • • • •				
80921-OFD-BPT-0 2 041828746-0002	WP086A PM Burma Road 01	1878.00	0.2080	3	Actinolite	4	2	0.0010	29.00	0.0059
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80921-OFD-BPT-F B1 041828746-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80921-OFD-BPT-F B2 041828746-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)
Patrick Carr (4)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ



**EMSL Order:** 341812933 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail

Received Date: 9/24/2018 9:00 AM

Trailer #2 / Safety Mgmt Systems

Analysis Date: 09/25/2018

Oroville, CA 95965

Collected Date: 09/25/2018

Project: 2019.09.21 Launch Ramp (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80921-OFD-LRP-0 1 341812933-0001	WP009A AM Launch Ramp Parking	1868.40	0.2110	15	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	reported include a contribution from no	n-regulated am	phiboles.							
80921-OFD-LRP-0 2 341812933-0002	WP081A AM Launch Ramp Turnaround	1868.40	0.2110	6	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	reported include a contribution from no	n-regulated am	phiboles.							
80921-OFD-LRP-0 3 341812933-0003	WP009A PM Launch Ramp Parking	2019.60	0.1980	0	Actinolite	1	0	0.0010	5.00	0.00096
80921-OFD-LRP-0 4 341812933-0004	WP081A PM Launch Ramp Turnaround	1664.30	0.2360	4	None Detected			0.0010	<4.20	<0.0010
Non-asbestos structures	reported include a contribution from no	n-regulated am	phiboles.							
80921-OFD-LRP-F B1 341812933-0005	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
80921-OFD-LRP-F B2 341812933-0006	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Analyst(s)	

Gerald Iannuzzi (6)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



**EMSL Order:** 091820787 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems
1001 Brad Freeman Trail

 1001 Brad Freeman Trail
 Received Date:
 9/23/2018 1:00 PM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 09/26/2018 - 09/28/2018

Oroville, CA 95965 Collected Date: 09/22/2018

Project: 2018.09.22 UPPER AREA (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

						Analytical	Asbestos			
		Volume	Analyzed	Non	Asbestos	#Structu		Sensitivity		ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80922-OFD-PMT-0	WP083A AM DAN BEEBE	1922.40	0.2070	2	None Detected			0.0010	<4.80	<0.0010
1 091820787-0001	TRAIL									
80922-OFD-PMT-0	WP249 AM CANYON	1927.80	0.2070	5	None Detected			0.0010	<4.80	<0.0010
2 091820787-0002	DRIVE									
80922-OFD-PMT-0	WP084A AM SE UPPER	1914.30	0.2070	2	None Detected			0.0010	<4.80	<0.0010
3 091820787-0003	OVERLOOK									
80922-OFD-PMT-0	WP246 AM INTAKE YARD	1908.90	0.2070	3	None Detected			0.0010	<4.80	<0.0010
4 091820787-0004										
-										
80922-OFD-PMT-0 5	WP083A PM DAN BEEBE TRAIL	1963.80	0.2070	4	Actinolite	0	1	0.0009	4.80	0.00095
091820787-0005	IRAIL									
	s reported include a contribution from i	non-regulated an	nnhiholes							
	<u> </u>		·		Non-Batastad			0.0000	-4.00	
80922-OFD-PMT-0 6	WP249 PM CANYON DRIVE	1967.50	0.2070	0	None Detected			0.0009	<4.80	<0.0009
091820787-0006	DITIVE									
	WP084A PM SE UPPER	1953.00	0.2070		None Detected			0.0010	-14.00	40.004.0
80922-OFD-PMT-0 7	OVERLOOK	1955.00	0.2070	0	None Detected			0.0010	<4.80	<0.0010
091820787-0007	OVERLOOK									
80922-OFD-PMT-0	WP246 PM INTAKE YARD	1950.20	0.2070	2	None Detected			0.0010	<4.80	<0.0010
8	WF240 FW INTAKE TAKE	1930.20	0.2070	2	None Detected			0.0010	<b>\4.00</b>	<0.0010
091820787-0008										
80922-OFD-PMT-F	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
B1		0.00	0.1220	•				14// 1	-0.20	10/5
091820787-0009										
80922-OFD-PMT-F	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
B2		0.00	0.1220	•				14// 1	-0.20	107
091820787-0010										

Initial Report From: 09/28/2018 19:18:12



Project: 2018.09.22 UPPER AREA (Oroville EM OP)

**EMSL Order:** 091820787 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems

 1001 Brad Freeman Trail
 Received Date:
 9/23/2018 1:00 PM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 09/26/2018 - 09/28/2018

Oroville, CA 95965 Collected Date: 09/22/2018

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by

Area Analytical **Asbestos** Volume Non Asbestos **#Structures** Concentration Analyzed Sensitivity Location (Liters) (mm<sup>2</sup>) Types ≥0.5µ < 5 (S/cc) (S/mm<sup>2</sup>) (S/cc) Sample

**CARB-Modified AHERA** 

Analyst(s)

Matthew Batongbacal (10)

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA



EMSL Order: 091820789 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.22 BURMA RD (Oroville EM OP)

Fax:

Received Date: 9/23/2018 1:00 PM

**Analysis Date:** 09/28/2018

Collected Date: 09/22/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80922 -OFD-BPT-01 091820789-0001	WP086A AM BURMA ROAD 01	2014.20	0.1950	1	None Detected			0.0010	<5.10	<0.0010
80922 -OFD-BPT-02 091820789-0002	WP086A PM BURMA ROAD 01	1908.90	0.2070	0	None Detected			0.0010	<4.80	<0.0010
80922 -OFD-BPT-FB1 091820789-0003	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
80922 -OFD-BPT-FB2 091820789-0004	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A

Analyst(s)	
Matthew Batongbacal (4)	

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA



**EMSL Order:** 091820782 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail

Received Date: 9/23/2018 1:00 PM

Trailer #2 / Softh March Suptage 9/23/2018

Trailer #2 / Safety Mgmt Systems Analysis Date: 09/28/2018
Oroville, CA 95965 Collected Date: 09/22/2018

Project: 2018.09.22 LAUNCH RAMP (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	20.5μ < 5	ου ≥5μ	(S/cc)	(S/mm²)	(S/cc)
80922-OFD-LRP-0 1 091820782-0001	WP009A AM LAUNCH RAMP PARKING	1884.60	0.2070	3	None Detected	•		0.0010	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from r	on-regulated am	nphiboles.							
80922-OFD-LRP-0 2 091820782-0002	WP081A AM LAUNCH RAMP TURNAROUND	1875.30	0.2070	1	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from r	on-regulated am	nphiboles.							
80922-OFD-LRP-0 3 091820782-0003	WP009A PM LAUNCH RAMP PARKING	1958.40	0.2070	1	None Detected			0.0009	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from r	on-regulated am	nphiboles.							
80922-OFD-LRP-0 4 091820782-0004	WP081A PM LAUNCH RAMP TURNAROUND	2016.90	0.1950	1	None Detected			0.0010	<5.10	<0.0010
Non-asbestos structures	s reported include a contribution from r	on-regulated am	nphiboles.							
80922-OFD-LRP-F B1 091820782-0005	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
80922-OFD-LRP-F B2 091820782-0006	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A

Analyst(s)	
Matthew Batonghacal	6

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA



520 Mission Street South Pasadena, CA 91030 Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321821938 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

**Project:** 2018.09.23 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

**Received Date:** 9/25/2018 9:25 AM **Analysis Date:** 09/27/2018 - 09/28/2018

**Collected Date:** 09/23/2018

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structu	ıres	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80923-OFD-PMT-0 1 321821938-0001	WP083A AM Dan Beebe Trail	1911.60	0.2060	6	Actinolite Chrysotile <b>Total fo</b>	0 0 or all types	1 1	0.0010	4.80 4.80 <b>9.60</b>	0.00098 0.00098 <b>0.0020</b>
80923-OFD-PMT-0 2 321821938-0002	WP249 AM Canyon Drive	1905.50	0.2060	4	None Detected			0.0010	<4.80	<0.0010
80923-OFD-PMT-0 3 321821938-0003	WP084A AM SE Upper Overlook	1912.60	0.2060	5	None Detected			0.0010	<4.80	<0.0010
80923-OFD-PMT-0 4 321821938-0004	WP246 AM Intake Yard	1919.70	0.2060	3	None Detected			0.0010	<4.80	<0.0010
80923-OFD-PMT-0 5 321821938-0005	WP083A PM Dan Beebe Trail	1965.60	0.2060	3	None Detected			0.0009	<4.80	<0.0010
80923-OFD-PMT-0 6 321821938-0006	WP249 PM Canyon Drive	1963.70	0.2060	6	None Detected			0.0010	<4.80	<0.0010
80923-OFD-PMT-0 7 321821938-0007	WP084A PM SE Upper Overlook	1961.00	0.2060	4	Actinolite	1	0	0.0010	4.80	0.00095
80923-OFD-PMT-0 8 321821938-0008	WP246 PM Intake Yard	1981.00	0.2060	3	None Detected			0.0009	<4.80	<0.0009
80923-OFD-PMT-F B1 321821938-0009	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
80923-OFD-PMT-F B2 321821938-0010	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

Initial Report From: 09/28/2018 16:46:02



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321821938 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.23 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/25/2018 9:25 AM

Analysis Date: 09/27/2018 - 09/28/2018

Collected Date: 09/23/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asb	estos	
		Volume	Analyzed Non		Asbestos	#Structures		Sensitivity	Concentration		
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Kyeong Corbin (10)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA

Initial Report From: 09/28/2018 16:46:02



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321821933 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.23 Burma Rd (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/25/2018 9:25 AM

**Analysis Date:** 09/26/2018

Collected Date: 09/23/2018

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA** 

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80923-OFD-BPT-0 1 321821933-0001	WP086A AM Burma Road 01	1966.40	0.2060	2	None Detected			0.0009	<4.80	<0.0010
80923-OFD-BPT-0 2 321821933-0002	WP086A PM Burma Road 01	1883.00	0.2060	7	Actinolite	0	1	0.0010	4.80	0.00099
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80923-OFD-BPT-F B1 321821933-0003	Filed Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
80923-OFD-BPT-F B2 321821933-0004	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

Analyst(s)

Kyeong Corbin (4)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA

Initial Report From: 09/26/2018 11:11:15



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321821935 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Received Date: 9/25/2018 9:25 AM

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.23 Launch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

**Analysis Date:** 09/26/2018

Collected Date: 09/23/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area			#04		Analytical		estos
Sample	Location	Volume (Liters)	Analyzed (mm²)	Non Asb	Asbestos Types	#Structı ≥0.5µ < 5	ures ≥5µ	Sensitivity (S/cc)	(S/mm²)	ntration (S/cc)
080923-OFD-LRP- 01 321821935-0001	WP009A AM Launch Ramp Parking	1859.90	0.2190	9	Actinolite	0	2	0.0009	9.10	0.0019
080923-OFD-LRP- 02 321821935-0002	WP081A AM Launch Ramp Turnaround	1455.00	0.2710	4	None Detected			0.0010	<3.70	<0.0010
080923-OFD-LRP- 03 321821935-0003	WP009A PM Launch Ramp Parking	2006.10	0.1940	6	Actinolite	0	1	0.0010	5.20	0.00099
Non-asbestos structures	reported includes a contribution from	non-regulated a	mphiboles.							
080923-OFD-LRP- 04 321821935-0004	WP081A PM Launch Ramp Turnaround	2016.90	0.1940	9	None Detected			0.0010	<5.20	<0.0010
Non-asbestos structures	reported includes a contribution from	non-regulated a	mphiboles.							
080923-OFD-LRP- FB1 321821935-0005	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
080923-OFD-LRP- FB2 321821935-0006	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

Anal	yst(s)

Kyeong Corbin (6)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA

Initial Report From: 09/26/2018 16:43:13



**EMSL Order:** 161819003 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 9/27/2018 10:05 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/01/2018
Oroville, CA 95965 Collected Date: 09/24/2018

Project: 2018.09.24 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structu	ıres	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80924-OFD-PMT-0 1	WP083A AM Dan Beebe Trail	1939.40	0.2110	3	Actinolite	1	2	0.0009	14.00	0.0028
161819003-0001	s reported include a contribution from	non regulated an	nnhiholes							
	<u> </u>		0.2110	5	None Detected			0.0010	-4.70	-0.0040
80924-OFD-PMT-0 2 161819003-0002	WP249 AM Canyon Drive	1911.60	0.2110	5	None Detected			0.0010	<4.70	<0.0010
80924-OFD-PMT-0 3 161819003-0003	WP084A AM SE Upper Overlook	1899.10	0.2110	4	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80924-OFD-PMT-0 4 161819003-0004	WP246 AM Intake Yard	1904.50	0.2110	2	None Detected			0.0010	<4.70	<0.0010
	M/D000A DM Dee Deebe	4000.00	0.4000		Nama Datastad			0.0040	-F 40	-0.0040
80924-OFD-PMT-0 5 161819003-0005	WP083A PM Dan Beebe Trail	1962.90	0.1980	2	None Detected			0.0010	<5.10	<0.0010
80924-OFD-PMT-0 6 161819003-0006	WP249 PM Canyon Drive	1969.10	0.1980	3	None Detected			0.0010	<5.10	<0.0010
80924-OFD-PMT-0 7 161819003-0007	WP084A PM SE Upper Overlook	1981.80	0.1980	1	None Detected			0.0010	<5.10	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80924-OFD-PMT-0 8	WP246 PM Intake Yard	1971.80	0.1980	0	None Detected			0.0010	<5.10	<0.0010
161819003-0008										
80924-OFD-PMT-F B1 161819003-0009	Field Blank 1	0.00	0.1320	0	None Detected			N/A	<7.60	N/A
80924-OFD-PMT-F B2 161819003-0010	Field Blank 2	0.00	0.1320	0	None Detected			N/A	<7.60	N/A

Initial report from: 10/01/2018 07:36:02



EMSL Order: 161819003 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 9/27/2018 10:05 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/01/2018
Oroville, CA 95965 Collected Date: 09/24/2018

**Project:** 2018.09.24 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asbe	estos
		Volume	Analyzed	Non	Asbestos	#Structu	ires	Sensitivity	Concei	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	>0 5u < 5	>5u	(S/cc)	(S/mm²)	(S/cc)

Analyst(s)
Craig Nixon (10)

Richard Harding, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN



EMSL Order: 161819005 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.24 Burma Rd. (Oroville EM OP)

Fax:

Received Date: 9/27/2018 10:05 AM

Analysis Date: 10/01/2018 - 10/02/2018

Collected Date: 09/24/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80924-OFD-BPT-0 1 161819005-0001	WP086A AM Burma Road 01	1996.00	0.1980	4	Actinolite	1	0	0.0010	5.10	0.00097
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80924-OFD-BPT-0 2 161819005-0002	WP086A PM Burma Road 01	1909.40	0.2110	0	Actinolite	1	0	0.0010	4.70	0.00095
80924-OFD-BPT-0 3 161819005-0003	Field Blank 1	0.00	0.1320	0	None Detected			N/A	<7.60	N/A
80924-OFD-BPT-0 4 161819005-0004	Field Blank 2	0.00	0.1320	0	None Detected			N/A	<7.60	N/A

Analyst(s)	
Craig Nixon (4)	

Richard Harding, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN



**EMSL Order:** 161819011 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 9/27/2018 10:05 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/02/2018
Oroville, CA 95965 Collected Date: 09/24/2018

Project: 2018.09.24 Launch Ramp (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80924-OFD-LRP-0 1 161819011-0001	WP009A AM Launch Ramp Parking	1890.00	0.2110	3	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80924-OFD-LRP-0 2 161819011-0002	WP081A AM Launch Ramp Turnaround	1876.50	0.2110	1	Actinolite	1	0	0.0010	4.70	0.00097
80924-OFD-LRP-0 3 161819011-0003	WP009A PM Launch Ramp Parking	1955.60	0.1980	4	Actinolite	1	0	0.0010	5.10	0.00099
80924-OFD-LRP-0 4 161819011-0004	WP081A PM Launch Ramp Turnaround	1997.30	0.1980	3	None Detected			0.0010	<5.10	<0.0010
80924-OFD-LRP-F B1 161819011-0005	Field Blank 1	0.00	0.1320	0	None Detected			N/A	<7.60	N/A
80924-OFD-LRP-F B2 161819011-0006	Field Blank 2	0.00	0.1320	0	None Detected			N/A	<7.60	N/A

Analyst(s)	
Craig Nixon (6)	

Richard Harding, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN



**EMSL Order:** 311801416 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.25 Upper Area (Oroville EM OP)

Fax:

Received Date: 9/27/2018 9:30 AM

**Analysis Date:** 09/28/2018 - 10/02/2018

Collected Date: 09/25/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structu	ıres	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80925-OFD-PMT-0	WP083A AM Dan Beebe	1932.20	0.2030	7	Actinolite	1	0	0.0010	4.90	0.00098
1	Trail									
311801416-0001										
Non-asbestos structures	reported include a contribution from	non-regulated an	nphiboles.							
80925-OFD-PMT-0 2	WP249 AM Canyon Drive	1901.80	0.2030	8	None Detected			0.0010	<4.90	<0.0010
311801416-0002										
80925-OFD-PMT-0 3	WP084A AM SE Upper Overlook	1708.10	0.2290	2	Actinolite	1	0	0.0010	4.40	0.00099
311801416-0003										
Non-asbestos structures	s reported include a contribution from	non-regulated an	·							
80925-OFD-PMT-0 4	WP246 AM Intake Yard	1903.50	0.2030	13	Actinolite	1	0	0.0010	4.90	0.0010
311801416-0004										
Non-asbestos structures	reported include a contribution from	non-regulated an	nphiboles.							
80925-OFD-PMT-0	WP083A PM Dan Beebe	1952.10	0.2030	16	Actinolite	1	1	0.0010	9.80	0.0019
5 311801416-0005	Trail									
80925-OFD-PMT-0	WP249 PM Canyon Drive	1952.10	0.2030	2	None Detected			0.0010	<4.90	<0.0010
6 311801416-0006										
311001410-0000										
80925-OFD-PMT-0	WP084A PM SE Upper	1972.90	0.2030	2	None Detected			0.0010	<4.90	<0.0010
7 311801416-0007	Overlook									
	M/DOAO DAA latalaa Maral	4074.00	0.0000		Name Data da d			0.0040		
80925-OFD-PMT-0 8	WP246 PM Intake Yard	1971.00	0.2030	5	None Detected			0.0010	<4.90	<0.0010
311801416-0008										
80925-OFD-PMT-F	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
B1 311801416-0009										
80925-OFD-PMT-F B2 311801416-0010	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Initial Report From: 10/02/2018 14:27:26



6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120

Tel/Fax: (702) 931-3532 / (702) 931-3533 http://www.EMSL.com / lasvegaslab@EMSL.com EMSL Order: 311801416 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.25 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/27/2018 9:30 AM

Analysis Date: 09/28/2018 - 10/02/2018

Collected Date: 09/25/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos	
		Volume	Analyzed	Non	Asbestos	#Structi	ures	Sensitivity	Concer	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)

Analyst(s)

William Bradford (10)

Shannon Ferguson, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/02/2018 14:27:26



6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120

Tel/Fax: (702) 931-3532 / (702) 931-3533 http://www.EMSL.com / lasvegaslab@EMSL.com EMSL Order: 311801413 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.25 Burma Road (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/27/2018 9:30 AM

Analysis Date: 09/27/2018 - 09/28/2018

Collected Date: 09/25/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80925-OFD-BPT-0 1 311801413-0001	WP086A AM Burma Road 01	1981.80	0.2030	5	None Detected			0.0010	<4.90	<0.0010
80925-OFD-BPT-0 2 311801413-0002	WP086A PM Burma Road 01	1907.80	0.2030	4	None Detected			0.0010	<4.90	<0.0010
80925-OFD-BPT-F B1 311801413-0003	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
80925-OFD-BPT-F B2 311801413-0004	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Analyst(s)

William Bradford (4)

Shannon Ferguson, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/02/2018 13:58:21



6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120

Tel/Fax: (702) 931-3532 / (702) 931-3533 http://www.EMSL.com / lasvegaslab@EMSL.com EMSL Order: 311801414 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.25 Launch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/27/2018 9:30 AM

**Analysis Date:** 10/02/2018 - 10/04/2018

Collected Date: 09/25/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos	
Sample	Location	Volume (Liters)	Analyzed (mm²)	Non Asb	Asbestos Types	#Structi ≥0.5µ < 5	ures ≥5µ	Sensitivity (S/cc)	Conce (S/mm²)	ntration (S/cc)
80925-OFD-LRP-0 1 311801414-0001	WP009A AM Launch Ramp Parking	1901.80	0.2030	14	None Detected	20.5μ < 5	<u>25µ</u>	0.0010	<4.90	<0.0010
80925-OFD-LRP-0 2 311801414-0002	WP081A AM Launch Ramp Turnaround	1888.90	0.2160	7	None Detected			0.0009	<4.60	<0.0009
80925-OFD-LRP-0 3 311801414-0003	WP009A PM Launch Ramp Parking	1988.30	0.2030	4	Actinolite	1	0	0.0010	4.90	0.00095
Non-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80925-OFD-LRP-0 4 311801414-0004	WP081A PM Launch Ramp Turnaround	2035.80	0.1910	5	None Detected			0.0010	<5.20	<0.0010
Non-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80925-OFD-LRP-F B1 311801414-0005	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
80925-OFD-LRP-F B2 311801414-0006	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Analyst(s)

William Bradford (6)

Shannon Ferguson, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437 http://www.EMSL.com / rochesterlab@EMSL.com

Customer ID: SMGS78B **Customer PO:** 

Project ID: Oroville EM OP

EMSL Order: 531800308

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-09-26 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/28/2018 10:38 AM

**Analysis Date:** 10/02/2018 - 10/03/2018

Collected Date: 09/26/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structures		Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80926-OFD-PMT-0 1	WP083A AM Dan Beebe Trail	1938.60	0.2080	3	Actinolite	1	1	0.0010	9.60	0.0019
531800308-0001										
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	mphiboles.							
80926-OFD-PMT-0 2	WP249 AM Canyon Drive	1909.90	0.2080	3	None Detected			0.0010	<4.80	<0.0010
531800308-0002										
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	mphiboles.							
80926-OFD-PMT-0 3	WP084A AM SE Upper Overlook	1912.60	0.2080	2	None Detected			0.0010	<4.80	<0.0010
531800308-0003										
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	mphiboles.							
80926-OFD-PMT-0 4	WP246 AM Intake Yard	1907.20	0.2080	2	Actinolite	1	0	0.0010	4.80	0.00097
531800308-0004										
80926-OFD-PMT-0 5	WP083A PM Dan Beebe Trail	1942.20	0.2080	10	Actinolite	0	2	0.0010	9.60	0.0019
531800308-0005										
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	mphiboles.							
80926-OFD-PMT-0 6	WP249 PM Canyon Drive	1954.80	0.2080	0	None Detected			0.0009	<4.80	<0.0010
531800308-0006										
80926-OFD-PMT-0 7	WP084A PM SE Upper Overlook	2020.20	0.1950	2	None Detected			0.0010	<5.10	<0.0010
531800308-0007										
80926-OFD-PMT-0 8	WP246 PM Intake Yard	2003.40	0.1950	1	None Detected			0.0010	<5.10	<0.0010
531800308-0008										
80926-OFD-PMT-F B1 531800308-0009	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80926-OFD-PMT-F B2 531800308-0010	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Initial report from: 10/03/2018 13:25:55



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437

http://www.EMSL.com / rochesterlab@EMSL.com

Phone: (661) 699-9375

Project ID: Oroville EM OP

EMSL Order: 531800308

Customer ID: SMGS78B

Fax:

Received Date: 9/28/2018 10:38 AM

**Analysis Date:** 10/02/2018 - 10/03/2018

**Customer PO:** 

Collected Date: 09/26/2018

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-09-26 Upper Area (Oroville EM OP)

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

Area Analytical **Asbestos** Volume Non Asbestos **#Structures** Concentration Analyzed Sensitivity Location (Liters) (mm<sup>2</sup>) Types ≥0.5µ < 5 (S/cc) (S/mm<sup>2</sup>) (S/cc) Sample

Analyst(s)

Peter Donato (10)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY

Initial report from: 10/03/2018 13:25:55



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437 http://www.EMSL.com / rochesterlab@EMSL.com

Customer ID: SMGS78B **Customer PO:** 

Project ID: Oroville EM OP

EMSL Order: 531800305

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-9-26 Burma Rd (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/28/2018 10:06 AM

**Analysis Date:** 10/01/2018

Collected Date: 09/26/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos entration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80926-OFD-BPT-0 1 531800305-0001	WP086A AM Burma Rd 01	1984.50	0.1950	3	Actinolite	0	1	0.0010	5.10	0.00099
80926-OFD-BPT-0 2 531800305-0002	WP086A PM Burma Rd 01	1914.90	0.2080	0	None Detected			0.0010	<4.80	<0.0010
80926-OFD-BPT-F B1 531800305-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80926-OFD-BPT-F B2 531800305-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)

Peter Donato (4)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY

Initial report from: 10/01/2018 15:11:45



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437 http://www.EMSL.com / rochesterlab@EMSL.com EMSL Order: 531800306 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-09-26 Launch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/28/2018 10:20 AM

**Analysis Date:** 10/01/2018

Collected Date: 09/26/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80956-OFD-LRP-0 1 531800306-0001	WP009A AM Launch Ramp Parking	1896.50	0.2080	3	Actinolite	2	0	0.0010	9.60	0.0020
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80956-OFD-LRP-0 2 531800306-0002	WP081A AM Launch Ramp Turnaround	1886.20	0.2080	4	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80956-OFD-LRP-0 3 531800306-0003	WP009A PM Launch Ramp Parking	2001.40	0.1950	2	None Detected			0.0010	<5.10	<0.0010
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80956-OFD-LRP-0 4 531800306-0004	WP081A PM Launch Ramp Turnaround	2008.80	0.1950	0	None Detected			0.0010	<5.10	<0.0010
80956-OFD-LRP-F B1 531800306-0005	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80956-OFD-LRP-F B2 531800306-0006	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)	

Peter Donato (6)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY

Initial Report From: 10/01/2018 18:09:13



5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

http://www.LATesting.com / gardengrovelab@latesting.com

LA Testing Order: 331819415 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

**Project:** 2018.09.27 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/29/2018 9:00 AM

**Analysis Date:** 10/03/2018 - 10/08/2018

**Collected Date:** 09/27/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structu	ıres	Analytical Sensitivity		estos entration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80927-OFD-PMT-0 1	WP083A AM DAN BEEBE TRAIL	1934.90	0.2030	14	Actinolite	0	1	0.0010	4.90	0.00098
331819415-0001										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80927-OFD-PMT-0 2	WP249 AM CANYON DRIVE	1918.00	0.2030	8	Actinolite	1	1	0.0010	9.80	0.0020
331819415-0002										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80927-OFD-PMT-0 3	WP084A AM SE UPPER OVERLOOK	1879.20	0.2160	10	None Detected			0.0009	<4.60	<0.0010
331819415-0003										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80927-OFD-PMT-0 4	WP246 AM INTAKE YARD	1866.90	0.2160	1	None Detected			0.0010	<4.60	<0.0010
331819415-0004										
80927-OFD-PMT-0 5	WP083A PM DAN BEEBE TRAIL	1962.00	0.2030	12	Actinolite	3	0	0.0010	15.00	0.0029
331819415-0005										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80927-OFD-PMT-0 6	WP249 PM CANYON DRIVE	1962.00	0.2030	7	None Detected			0.0010	<4.90	<0.0010
331819415-0006										
80927-OFD-PMT-0 7	WP084A PM SE UPPER OVERLOOK	1975.60	0.2030	3	None Detected			0.0010	<4.90	<0.0010
331819415-0007										
80927-OFD-PMT-0 8	WP246 PM INTAKE YARD	1968.30	0.2030	6	None Detected			0.0010	<4.90	<0.0010
331819415-0008										
80927-OFD-PMT-F B1	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
331819415-0009										
80927-OFD-PMT-F B2 331819415-0010	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Initial Report From: 10/08/2018 12:53:40



5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

http://www.LATesting.com / gardengrovelab@latesting.com

LA Testing Order: 331819415 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.27 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/29/2018 9:00 AM

**Analysis Date:** 10/03/2018 - 10/08/2018

Collected Date: 09/27/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos	
		Volume	Analyzed	Non	Asbestos	#Structi	ures	Sensitivity	Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)

Analyst(s)

William Bradford (10)

Michael DeCavallas, Laboratory Manager

or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/08/2018 12:53:40



LA Testing Order: 331819413 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems **Analysis Date:** 10/04/2018

Oroville, CA 95965

Project: 2018.09.27 Burma Rd (Oroville EM OP)

Fax:

Received Date: 9/29/2018 9:00 AM

Collected Date: 09/27/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structi	#Structures			estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80927-OFD-BPT-0 1 331819413-0001	WP086A AM Burma Road 01	1986.40	0.1950	1	Chrysotile	1	0	0.0010	5.10	0.00099
80927-OFD-BPT-0 2 331819413-0002	WP086A PM Burma Road 01	1914.90	0.2080	5	Actinolite	1	1	0.0010	9.60	0.0019
Non-asbestos structure	s reported includes a contribution from	n non-regulated a	mphiboles.							
80927-OFD-BPT-F B1 331819413-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80927-OFD-BPT-F B2 331819413-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s) Peter Donato (4)

Michael DeCavallas, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY



LA Testing Order: 331819412 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail

Received Date: 9/29/2018 9:00 AM

Trailer #2 / Safety Mgmt Systems

Analysis Date: 10/05/2018

Oroville, CA 95965

Collected Date: 09/27/2018

Project: 2018.09.27 Launch Ramp (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80927-OFD-LRP-0 1 331819412-0001	WP009A AM Launch Ramp Parking	1873.80	0.2080	1	None Detected			0.0010	<4.80	<0.0010
80927-OFD-LRP-0 2 331819412-0002	WP081A AM Launch Ramp Turnaround	1881.90	0.2080	1	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80927-OFD-LRP-0 3 331819412-0003	WP009A PM Launch Ramp Parking	1975.60	0.1950	2	Actinolite	1	0	0.0010	5.10	0.0010
80927-OFD-LRP-0 4 331819412-0004	WP081A PM Launch Ramp Turnaround	1968.30	0.2080	3	None Detected			0.0009	<4.80	<0.0009
80927-OFD-LRP-F B1 331819412-0005	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80927-OFD-LRP-F B2 331819412-0006	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)	
Peter Donato	(6)

Michael DeCavallas, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY



EMSL Order: 341813257 Customer ID: SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Received Date: 9/30/2018 9:30 AM Trailer #2 / Safety Mgmt Systems **Analysis Date:** 10/02/2018 - 10/03/2018 **Collected Date:** 09/28/2018

Oroville, CA 95965

Project: 2018.09.28 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos		
		Volume	7y=0			#Structures		Sensitivity	Concentration		
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)	
80928-OFD-PMT-0 1	WP083A AM Dan Beebe Trail	1933.20	0.2110	11	Actinolite	1	2	0.0009	14.00	0.0028	
341813257-0001											
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 2	WP249 AM Canyon Drive	1916.20	0.2110	7	Actinolite	0	2	0.0010	9.50	0.0019	
341813257-0002											
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 3 341813257-0003	WP084A AM SE Upper Overlook	1909.90	0.2110	11	None Detected			0.0010	<4.70	<0.0010	
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 4 341813257-0004	WP246 AM Intake Yard	1920.70	0.2110	2	Actinolite	0	2	0.0010	9.50	0.0019	
	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 5	WP083A PM Dan Beebe Trail	1939.50	0.2110	4	None Detected			0.0009	<4.70	<0.0009	
341813257-0005											
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 6	WP249 PM Canyon Drive	1963.80	0.1980	5	Actinolite	0	1	0.0010	5.00	0.00099	
341813257-0006											
80928-OFD-PMT-0 7 341813257-0007	WP084A PM SE Upper Overlook	1957.50	0.1980	5	None Detected			0.0010	<5.00	<0.0010	
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-0 8 341813257-0008	WP246 PM Intake Yard	1962.00	0.1980	8	None Detected			0.0010	<5.00	<0.0010	
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.								
80928-OFD-PMT-F B1 341813257-0009	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A	
80928-OFD-PMT-F B2 341813257-0010	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A	

Initial report from: 10/04/2018 10:18:13



EMSL Order: 341813257 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone:

> Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.28 Upper Area (Oroville EM OP)

(661) 699-9375

Fax:

Received Date: 9/30/2018 9:30 AM

**Analysis Date:** 10/02/2018 - 10/03/2018

Collected Date: 09/28/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	estos		
		Volume	Analyzed	Non	Asbestos	#Structu	ures	Sensitivity	Concentration		
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Gerald Iannuzzi (10)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



**EMSL Order:** 041829455 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail

Received Date: 9/30/2018 9:30 AM

Trailer #2 / Safety Mgmt Systems

Analysis Date: 10/01/2018

Oroville, CA 95965

Collected Date: 09/28/2018

Project: 2018.09.28 Burma Rd (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structi	Analytical Structures Sensitivity		Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80928-OFD-BPT-0 1	WP086A AM Burma Road 01	1981.80	0.1950	8	Actinolite	4	5	0.0010	46.00	0.0090
041829455-0001										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80928-OFD-BPT-0	WP086A PM Burma Road	1920.30	0.2080	4	Actinolite	2	1	0.0010	14.00	0.0029
2	01				Chrysotile	1	1		9.60	0.0019
041829455-0002					Total fo	or all types			23.60	0.0048
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
80928-OFD-BPT-F B1 041829455-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
80928-OFD-BPT-F B2 041829455-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)	
William Nguyen (4)	

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ

Initial report from: 10/01/2018 13:00:16



EMSL Order: 341813254 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail

Received Date: 9/30/2018 9:30 AM

Trailer #2 / Safety Mgmt Systems

Analysis Date: 10/02/2018

Oroville, CA 95965 Collected Date: 09/28/2018

Project: 2018.09.28 Launch Ramp (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structures		Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80928-OFD-LRP-0 1 341813254-0001	WP009A AM Launch Ramp Parking	1921.40	0.2110	5	Chrysotile	0	1	0.0010	4.70	0.00095
Non-asbestos structures	s reported include a contribution from n	ion-regulated an	nphiboles.							
80928-OFD-LRP-0 2 341813254-0002	WP081A AM Launch Ramp Turnaround	1917.00	0.2110	3	None Detected			0.0010	<4.70	<0.0010
Non-asbestos structures	reported include a contribution from n	ion-regulated an	nphiboles.							
80928-OFD-LRP-0 3 341813254-0003	WP009A PM Launch Ramp Parking	1978.30	0.1980	3	None Detected			0.0010	<5.00	<0.0010
Non-asbestos structures	reported include a contribution from n	ion-regulated an	nphiboles.							
80928-OFD-LRP-0 4 341813254-0004	WP081A PM Launch Ramp Turnaround	1962.90	0.1980	2	Chrysotile	1	0	0.0010	5.00	0.00099
80928-OFD-LRP-F B1 341813254-0005	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
80928-OFD-LRP-F B2 341813254-0006	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Analyst(s)	

Gerald Iannuzzi (6)

Carlos Rivadeneyra, Laboratory Director

or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



**EMSL Order:** 091821344 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 9/30/2018 12:30 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/01/2018
Oroville, CA 95965 Collected Date: 09/29/2018

Project: 2018.09.29 - UPPER AREA (Oroville EM OP)

# Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Valores	Area	N.	<b>A</b> = b = = 4 = =	#04		Analytical		estos
Sample	Location	Volume (Liters)	Analyzed (mm²)	Non Asb	Asbestos Types	#Struct ≥0.5µ < 5		Sensitivity (S/cc)	(S/mm²)	ntration (S/cc)
80929-OFD-PMT-0	WP083A AM DAN BEEBE	1922.40	0.2070	0	None Detected	≥0.5µ < 5	≥5µ	0.0010	(S/IIIII-) <4.80	<0.0010
1	TRAIL	1022.10	0.2070	Ů	None Detected			0.0010	4.00	10.0010
091821344-0001										
80929-OFD-PMT-0 2	WP249 AM CANYON DRIVE	1917.00	0.2070	1	None Detected			0.0010	<4.80	<0.0010
091821344-0002										
Non-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80929-OFD-PMT-0 3	WP084A AM SE UPPER OVERLOOK	1912.60	0.2070	1	None Detected			0.0010	<4.80	<0.0010
091821344-0003										
80929-OFD-PMT-0 4	WP246 AM INTAKE YARD	1914.30	0.2070	3	None Detected			0.0010	<4.80	<0.0010
091821344-0004										
Non-asbestos structures	s reported include a contribution from r	non-regulated an	•							
80929-OFD-PMT-0 5	WP083A PM DAN BEEBE TRAIL	1977.40	0.1950	1	None Detected			0.0010	<5.10	<0.0010
091821344-0005										
Non-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80929-OFD-PMT-0 6	WP249 PM CANYON DRIVE	1971.00	0.2070	1	None Detected			0.0009	<4.80	<0.0009
091821344-0006										
lon-asbestos structures	s reported include a contribution from r	non-regulated an	nphiboles.							
80929-OFD-PMT-0 7	WP084A PM SE UPPER OVERLOOK	1958.30	0.2070	0	None Detected			0.0009	<4.80	<0.0010
091821344-0007										
80929-OFD-PMT-0 8	WP246 PM INTAKE YARD	1958.30	0.2070	0	None Detected			0.0009	<4.80	<0.0010
091821344-0008										
80929-OFD-PMT-F B1 091821344-0009	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
80929-OFD-PMT-F B2 091821344-0010	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A

Initial Report From: 10/02/2018 18:56:57



**EMSL Order:** 091821344 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 9/30/2018 12:30 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/01/2018
Oroville, CA 95965 Collected Date: 09/29/2018

Project: 2018.09.29 - UPPER AREA (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asbestos		
		Volume	Analyzed	Non	Asbestos	#Structu	ıres	Sensitivity	Concei	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Matthew Batongbacal (10)

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial Report From: 10/02/2018 18:56:57



**EMSL Order:** 091821341 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems

1001 Brad Freeman Trail Received Date: 9/30/2018 12:30 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/02/2018
Oroville, CA 95965 Collected Date: 09/29/2018

Project: 2018.09.29 - BURMA RD (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80929-OFD-BPT-0 1 091821341-0001	WP086A AM BURMA ROAD 01	1992.60	0.1950	1	None Detected			0.0010	<5.10	<0.0010
80929-OFD-BPT-0 2 091821341-0002	WP086A PM BURMA ROAD 01	1897.00	0.2070	0	None Detected			0.0010	<4.80	<0.0010
80929-OFD-BPT-F B1 091821341-0003	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
80929-OFD-BPT-F B2 091821341-0004	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A

Analyst(s)
Matthew Batongbacal (4)

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial Report From: 10/02/2018 18:45:26



EMSL Order: 091821343 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.29 - LAUNCH RAMP (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 9/30/2018 12:30 PM

**Analysis Date:** 10/02/2018

Collected Date: 09/29/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	n Asbestos	#Structi	ıres	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
80929-OFD-LRP-0 1 091821343-0001	WP009A AM LAUNCH RAMP PARKING	1918.70	0.2070	4	None Detected			0.0010	<4.80	<0.0010
80929-OFD-LRP-0 2 091821343-0002	WP081A AM LAUNCH RAMP TURNAROUND	1920.30	0.2070	1	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from	n non-regulated am	nphiboles.							
80929-OFD-LRP-0 3 091821343-0003	WP009A PM LAUNCH RAMP PARKING	1981.80	0.1950	0	None Detected			0.0010	<5.10	<0.0010
80929-OFD-LRP-0 4 091821343-0004	WP081A PM LAUNCH RAMP TURNAROUND	1981.80	0.1950	0	None Detected			0.0010	<5.10	<0.0010
80929-OFD-LRP-F B1 091821343-0005	FIELD BLANK 1	0.00	0.1220	0	None Detected			N/A	<8.20	N/A
80929-OFD-LRP-F B2 091821343-0006	FIELD BLANK 2	0.00	0.1220	0	None Detected			N/A	<8.20	N/A

Analyst(s)	

Matthew Batongbacal (6)

Matthew Batongbacal or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial Report From: 10/02/2018 18:42:56



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

**LA Testing Order:** 321822585 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 10/ 2/2018 9:40 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/04/2018
Oroville, CA 95965 Collected Date: 09/30/2018

Project: 2018.09.30 Upper Area (Oroville EM OP)

# Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structu	ıras	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	#otructi	e.3 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
80930-OFD-PMT-0	WP083A AM Dan Beebe	1943.10	0.2060	5	Actinolite	1	0	0.0010	4.80	0.00096
1	Trail				Tremolite	0	1		4.80	0.00096
321822585-0001					Total fo	or all types			9.60	0.0019
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	imphiboles.							
80930-OFD-PMT-0 2	WP249 AM Canyon Drive	1923.30	0.2060	4	Actinolite	0	1	0.0010	4.80	0.00097
321822585-0002 80930-OFD-PMT-0	WP084A AM SE Upper	1920.70	0.2060	3	None Detected			0.0010	<4.80	<0.0010
3 321822585-0003	Overlook	1920.70	0.2000	3	None Detected			0.0010	<4.60	<0.0010
80930-OFD-PMT-0	WP246 AM Intake Yard	1920.70	0.2060	2	Chrysotile	1	0	0.0010	4.80	0.00097
4					•					
321822585-0004										
80930-OFD-PMT-0	WP083A PM Dan Beebe	1949.40	0.2060	2	Actinolite	1	0	0.0010	4.80	0.00096
5	Trail									
321822585-0005										
80930-OFD-PMT-0 6	WP249 PM Canyon Drive	1942.20	0.2060	5	None Detected			0.0010	<4.80	<0.0010
321822585-0006										
80930-OFD-PMT-0	WP084A PM SE Upper	1944.90	0.2060	4	None Detected			0.0010	<4.80	<0.0010
7	Overlook									
321822585-0007										
80930-OFD-PMT-0	WP246 PM Intake Yard	1957.50	0.2060	1	None Detected			0.0010	<4.80	<0.0010
8 321822585-0008										
	s reported include a contribution from	non regulated an	nnhiholoo							
	· ·		·		None Detected			NI/A	47.00	NI/A
80930-OFD-PMT-F B1	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
321822585-0009										
80930-OFD-PMT-F B2 321822585-0010	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321822585 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.30 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/2/2018 9:40 AM

**Analysis Date:** 10/04/2018

00/04/2010

**Collected Date:** 09/30/2018

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asbe	estos
		Volume	Analyzed	Non	Asbestos	#Structu	ıres	Sensitivity	Concer	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)

Analyst(s)
Feng Liang (5)
Kyeong Corbin (5)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321822588 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.30 Burma Rd (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/2/2018 9:40 AM

**Analysis Date:** 10/03/2018

Collected Date: 09/30/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structures		Analytical Sensitivity		estos entration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)	
80930-OFD-BPT-0 1 321822588-0001	WP086 AM Burma Road 01	1983.70	0.2060	3	Chrysotile	0	1	0.0009	4.80	0.00094	
80930-OFD-BPT-0 2 321822588-0002	WP086 PM Burma Road 01	1900.80	0.2060	6	Actinolite	1	0	0.0010	4.80	0.00098	
80930-OFD-BPT-F B1 321822588-0003	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A	
80930-OFD-BPT-F B2 321822588-0004	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A	

Analyst(s)

Feng Liang (4)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA

Initial Report From: 10/03/2018 18:53:13



520 Mission Street South Pasadena, CA 91030

Tel/Fax: (323) 254-9960 / (323) 254-9982

http://www.LATesting.com / pasadenalab@latesting.com

LA Testing Order: 321822589 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.09.30 Launch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/2/2018 9:40 AM

**Analysis Date:** 10/04/2018

Collected Date: 09/30/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos	
Sample	Location	Volume (Liters)	Analyzed (mm²)	Non Asb	Asbestos Types	#Structu ≥0.5µ < 5	ıres ≥5µ	Sensitivity (S/cc)	Conce (S/mm²)	ntration (S/cc)
80930-OFD-LRP-0 1 321822589-0001	WP009A AM Launch Ramp Parking	1914.30	0.2060	2	None Detected		0µ	0.0010	<4.80	<0.0010
80930-OFD-LRP-0 2 321822589-0002	WP081A AM Launch Ramp Turnaround	1918.70	0.2060	2	Actinolite	0	1	0.0010	4.80	0.00097
80930-OFD-LRP-0 3 321822589-0003	WP009A PM Launch Ramp Parking	1957.50	0.2060	4	Actinolite	1	0	0.0010	4.80	0.00095
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80930-OFD-LRP-0 4 321822589-0004	WP081A PM Launch Ramp Turnaround	1966.40	0.2060	3	Actinolite	0	2	0.0009	9.70	0.0019
Non-asbestos structures	s reported includes a contribution from	non-regulated a	mphiboles.							
80930-OFD-LRP-F B1 321822589-0005	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
80930-OFD-LRP-F B2 321822589-0006	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

|--|

Kyeong Corbin (6)

Jerry Drapala Ph.D, Laboratory Manager or other approved signatory

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Samples analyzed by LA Testing South Pasadena, CA

Initial Report From: 10/04/2018 11:04:17



EMSL Order: 411808354 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.01 Upper Area (Oroville EM OP)

Fax:

Received Date: 10/3/2018 9:10 AM

**Analysis Date:** 10/04/2018 Collected Date: 10/01/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Area							Asbestos	
		Volume	Analyzed	Non	Asbestos	#Structu	ıres	Sensitivity	Conce	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5μ	(S/cc)	(S/mm²)	(S/cc)
81001-OFD-PMT-0 1 411808354-0001	WP083A AM Dan Beebe Trail	1937.70	0.2080	2	None Detected			0.0010	<4.80	<0.0010
81001-OFD-PMT-0 2 411808354-0002	WP249 AM Canyon Drive	1935.90	0.2080	5	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported includes a contribution from	n non-regulated a	mphiboles							
81001-OFD-PMT-0 3 411808354-0003	WP084A AM SE Upper Overlook	1940.40	0.2080	3	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structures	s reported includes a contribution from	n non-regulated a	mphiboles							
81001-OFD-PMT-0 4 411808354-0004	WP246 AM Intake Yard	1932.20	0.2080	0	Actinolite	1	0	0.0010	4.80	0.00096
81001-OFD-PMT-0 5 411808354-0005	WP083A PM Dan Beebe Trail	1952.10	0.2080	0	Actinolite	2	0	0.0009	9.60	0.0019
81001-OFD-PMT-0 6 411808354-0006	WP249 PM Canyon Drive	1961.10	0.2080	2	None Detected			0.0009	<4.80	<0.0009
Non-asbestos structures	s reported includes a contribution fron	n non-regulated a	mphiboles							
81001-OFD-PMT-0 7 411808354-0007	WP084A PM SE Upper Overlook	1952.10	0.2080	0	None Detected			0.0009	<4.80	<0.0010
81001-OFD-PMT-0 8 411808354-0008	WP246 PM Intake Yard	1957.50	0.2080	0	Actinolite	0	1	0.0009	4.80	0.00095
81001-OFD-PMT-F B1 411808354-0009	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
81001-OFD-PMT-F B2 411808354-0010	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Initial Report From: 10/04/2018 17:34:16



**EMSL Order:** 411808354 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 10/ 3/2018 9:10 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/04/2018
Oroville, CA 95965 Collected Date: 10/01/2018

**Project:** 2018.10.01 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asbe	estos	
		Volume	Analyzed	Non	Asbestos	#Structi	ures	Sensitivity	Concer	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	>0.5u < 5	>511	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Aaron Hartley (10)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial Report From: 10/04/2018 17:34:16



**EMSL Order:** 411808358 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 10/3/2018 9:10 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/04/2018
Oroville, CA 95965 Collected Date: 10/01/2018

Project: 2018.10.01 Burma Rd. (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structures		Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81001-OFD-BPT-0 1 411808358-0001	WP086A AM Burma Road 01	1984.50	0.1950	0	None Detected			0.0010	<5.10	<0.0010
81001-OFD-BPT-0 2 411808358-0002	WP086A PM Burma Road 01	1907.80	0.2080	0	None Detected			0.0010	<4.80	<0.0010
81001-OFD-BPT-F B1 411808358-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
81001-OFD-BPT-F B2 411808358-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)
Aaron Hartley (4)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC



**EMSL Order:** 411808355 **Customer ID:** SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems Fax:

1001 Brad Freeman Trail Received Date: 10/ 3/2018 9:10 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 10/04/2018
Oroville, CA 95965 Collected Date: 10/01/2018

Project: 2018.10.01 Launch Ramp (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

			Area					Analytical	Asb	estos
		Volume	Analyzed	Non	Asbestos	#Structi	ıres	Sensitivity	Conce	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81001-OFD-LRP-0 1 411808355-0001	WP009A AM Launch Ramp Parking	1932.20	0.2080	0	None Detected			0.0010	<4.80	<0.0010
81001-OFD-LRP-0 2 411808355-0002	WP081A AM Launch Ramp Turnaround	1918.70	0.2080	2	None Detected			0.0010	<4.80	<0.0010
81001-OFD-LRP-0 3 411808355-0003	WP009A PM Launch Ramp Parking	1981.80	0.1950	0	Actinolite	0	1	0.0010	5.10	0.0010
81001-OFD-LRP-0 4 411808355-0004	WP081A PM Launch Ramp Turnaround	1996.50	0.1950	0	Actinolite	0	1	0.0010	5.10	0.00099
81001-OFD-LRP-F B1 411808355-0005	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
81001-OFD-LRP-F B2 411808355-0006	Field Blank 12	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)	

Aaron Hartley (6)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial Report From: 10/04/2018 16:28:53



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437

http://www.EMSL.com / rochesterlab@EMSL.com

Project ID: Oroville EM OP

EMSL Order: 531800316

Customer ID: SMGS78B

**Phone:** (661) 699-9375

Fax:

Received Date: 10/4/2018 10:26 AM

**Analysis Date:** 10/09/2018 - 10/10/2018

**Collected Date:** 10/02/2018

**Customer PO:** 

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-10-02 Upper Area (Oroville EM OP)

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

						Analytical				
		Volume	Analyzed	Non	Asbestos	#Structur		Sensitivity		ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5μ	(S/cc)	(S/mm²)	(S/cc)
81002-OFD-PMT-0 1 531800316-0001	WP083A AM Dan Beebe Trail	1944.80	0.2080	1	None Detected			0.0010	<4.80	<0.0010
81002-OFD-PMT-0 2	WP249 AM Canyon Drive	1930.50	0.2080	1	None Detected			0.0010	<4.80	<0.0010
531800316-0002										
81002-OFD-PMT-0 3 531800316-0003	WP084A AM SE Upper Overlook	1922.40	0.2080	1	None Detected			0.0010	<4.80	<0.0010
81002-OFD-PMT-0 4	WP246 AM Intake Yard	1914.30	0.2080	4	None Detected			0.0010	<4.80	<0.0010
531800316-0004										
Non-asbestos structures	s reported includes a contribution from	n non-regulated a	mphiboles.							
81002-OFD-PMT-0 5	WP083A PM Dan Beebe Trail	1956.60	0.2080	2	None Detected			0.0009	<4.80	<0.0010
531800316-0005										
Non-asbestos structures	s reported includes a contribution from	n non-regulated a	mphiboles.							
81002-OFD-PMT-0 6	WP249 PM Canyon Drive	1959.30	0.2080	0	None Detected			0.0009	<4.80	<0.0010
531800316-0006										
81002-OFD-PMT-0 7	WP084A PM SE Upper Overlook	1967.50	0.2080	0	None Detected			0.0009	<4.80	<0.0009
531800316-0007										
81002-OFD-PMT-0 8 531800316-0008	WP246 PM Intake Yard	1975.60	0.1950	1	None Detected			0.0010	<5.10	<0.0010
81002-OFD-PMT-F	Firld Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
B1 531800316-0009	ו אוואט טוווו ו	0.00	0.1300	U	None Detected			IN/A	<1.1U	N/A
81002-OFD-PMT-F B2 531800316-0010	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Initial report from: 10/10/2018 14:39:15



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437

http://www.EMSL.com / rochesterlab@EMSL.com

**Phone:** (661) 699-9375

Project ID: Oroville EM OP

EMSL Order: 531800316

Customer ID: SMGS78B

**Customer PO:** 

Fax:

**Received Date:** 10/4/2018 10:26 AM **Analysis Date:** 10/09/2018 - 10/10/2018

Collected Date: 10/02/2018

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-10-02 Upper Area (Oroville EM OP)

# Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

Area Analytical Asbestos Volume Non Asbestos **#Structures** Concentration Analyzed Sensitivity Location (Liters) (mm<sup>2</sup>) Types ≥0.5µ < 5 (S/cc) (S/mm<sup>2</sup>) (S/cc) Sample

Analyst(s)

Peter Donato (10)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY

Initial report from: 10/10/2018 14:39:15



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437 http://www.EMSL.com / rochesterlab@EMSL.com **Customer PO:** 

Project ID: Oroville EM OP

EMSL Order: 531800313

Customer ID: SMGS78B

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018-10-02 Burma Rd (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/4/2018 9:58 AM

**Analysis Date:** 10/08/2018

Collected Date: 10/02/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non Ash	Asbestos	#Structures		Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81002-OFD-BPT-0 1 531800313-0001	WP086A AM Burma Road 01	1986.40	0.1950	1	None Detected			0.0010	<5.10	<0.0010
81002-OFD-BPT-0 2 531800313-0002	WP086A PM Burma Road 01	1900.80	0.2080	0	Actinolite	1	1	0.0010	9.60	0.0019
81002-OFD-BPT-F B1 531800313-0003	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
81002-OFD-BPT-F B2 531800313-0004	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s) Peter Donato (4)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY



2975 Brighton Henrietta Town Line Rd ,100 Ste 130 Rochester, NY 14623

Tel/Fax: (585) 957-9436 / (585) 957-9437

Safety Management Systems

Trailer #2 / Safety Mgmt Systems

http://www.EMSL.com / rochesterlab@EMSL.com

**Phone:** (661) 699-9375

Project ID: Oroville EM OP

Fax:

EMSL Order: 531800315

Customer ID: SMGS78B

Received Date: 10/4/2018 10:13 AM

**Analysis Date:** 10/09/2018 Collected Date: 10/02/2018

**Customer PO:** 

Oroville, CA 95965

1001 Brad Freeman Trail

Attention: Dave Beadle, CIH

Project: 2018-10-02 Launch Ramp (Oroville EM OP)

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asbestos	
		Volume	Analyzed	Non	Asbestos	#Structi	ıres	Sensitivity	Conce	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81002-OFD-LRP-0 1 531800315-0001	WP009A AM Launch Ramp Parking	1887.30	0.2080	8	None Detected			0.0010	<4.80	<0.0010
Non-asbestos structure	s reported includes a contribution fi	rom non-regulated a	mphiboles.							
81002-OFD-LRP-0 2 531800315-0002	WP081A AM Launch Ramp Turnaround	1913.70	0.2080	1	Actinolite	1	0	0.0010	4.80	0.00097
81002-OFD-LRP-0 3 531800315-0003	WP009A PM Launch Ramp Parking	1981.80	0.1950	0	None Detected			0.0010	<5.10	<0.0010
81002-OFD-LRP-0 4 531800315-0004	WP081A PM Launch Ramp Turnaround	2001.90	0.1950	3	None Detected			0.0010	<5.10	<0.0010
Non-asbestos structure	s reported includes a contribution fi	rom non-regulated a	mphiboles.							
81002-OFD-LRP-F B1 531800315-0005	Field Blank	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
81002-OFD-LRP-F B2 531800315-0006	Filed Blank	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Analyst(s)	

Peter Donato (6)

Peter Donato Asbestos Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Rochester, NY

Initial report from: 10/09/2018 14:44:44



**EMSL Order:** 311801468 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

 1001 Brad Freeman Trail
 Received Date:
 10/ 5/2018 9:30 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 10/10/2018 - 10/11/2018

Oroville, CA 95965 **Collected Date:** 10/03/2018

Project: 2018.10.03 Upper Area (Oroville EM OP)

## Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area Analyzed	Non	Asbestos	#Structu	res	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81003-OFD-PMT-0 1	WP083A AM Dan Beebe Trail	1941.00	0.2030	4	None Detected	_		0.0010	<4.90	<0.0010
311801468-0001										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
81003-OFD-PMT-0 2 311801468-0002	WP249 AM Canyon Drive	1926.80	0.2030	13	Actinolite	1	0	0.0010	4.90	0.00098
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
81003-OFD-PMT-0 3 311801468-0003	WP084A AM SE Upper Overlook	1924.10	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-PMT-0 4 311801468-0004	W9246 AM Intake Yard	1921.40	0.2030	1	None Detected			0.0010	<4.90	<0.0010
81003-OFD-PMT-0 5 311801468-0005	WP083A PM Dan Beebe Trail	1960.20	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-PMT-0 6 311801468-0006	WP249 PM Canyon Drive	1950.30	0.2030	1	None Detected			0.0010	<4.90	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
81003-OFD-PMT-0 7 311801468-0007	WP084A PM SE Upper Overlook	1960.20	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-PMT-0 8 311801468-0008	W9246 PM Intake Yard	1955.60	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-PMT-F B1 311801468-0009	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
81003-OFD-PMT-F B2 311801468-0010	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Initial Report From: 10/12/2018 16:37:17



EMSL Order: 311801468 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH **Phone:** (661) 699-9375

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.03 Upper Area (Oroville EM OP)

Fax:

Received Date: 10/5/2018 9:30 AM **Analysis Date:** 10/10/2018 - 10/11/2018

Collected Date: 10/03/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asb	estos	
		Volume	Analyzed	Non	Asbestos	#Structu	ıres	Sensitivity	Conce	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

William Bradford (10)

Shannon Ferguson, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/12/2018 16:37:17



6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120

Tel/Fax: (702) 931-3532 / (702) 931-3533 http://www.EMSL.com / lasvegaslab@EMSL.com EMSL Order: 311801465 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.03 Burma Road (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/5/2018 9:30 AM

**Analysis Date:** 10/08/2018 - 10/09/2018

Collected Date: 10/03/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81003-OFD-BPT-0 1 311801465-0001	WP086A AM Burma Road 01	1994.60	0.2030	2	None Detected			0.0010	<4.90	<0.0010
81003-OFD-BPT-0 2 311801465-0002	WP086A PM Burma Road 01	1891.10	0.2160	0	None Detected			0.0009	<4.60	<0.0009
81003-OFD-BPT-F B1 311801465-0003	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
81003-OFD-BPT-F B2 311801465-0004	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Analyst(s)

William Bradford (4)

Shannon Ferguson, Laboratory Manager

or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/09/2018 10:11:39



6325 Harrison Dr. Suites 3 and 4 Las Vegas, NV 89120

Tel/Fax: (702) 931-3532 / (702) 931-3533 http://www.EMSL.com / lasvegaslab@EMSL.com EMSL Order: 311801467 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Safety Management Systems 1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.03 Launch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/5/2018 9:30 AM

**Analysis Date:** 10/09/2018 - 10/10/2018

Collected Date: 10/03/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81003-OFD-LRP-0 1 311801467-0001	WP009A AM Launch Ramp Parking	1907.80	0.2030	7	None Detected			0.0010	<4.90	<0.0010
81003-OFD-LRP-0 2 311801467-0002	WP081A AM Launch Ramp Turnaround	1930.10	0.2030	1	None Detected			0.0010	<4.90	<0.0010
81003-OFD-LRP-0 3 311801467-0003	WP009A PM Launch Ramp Parking	1967.50	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-LRP-0 4 311801467-0004	WP081A PM Launch Ramp Turnaround	1961.00	0.2030	0	None Detected			0.0010	<4.90	<0.0010
81003-OFD-LRP-F B1 311801467-0005	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
81003-OFD-LRP-F B2 311801467-0006	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Analyst(s)

William Bradford (6)

Shannon Ferguson, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Las Vegas, NV

Initial Report From: 10/10/2018 10:05:05



**EMSL Order:** 341813680 **Customer ID:** SMGS78B

Fax:

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Safety Management Systems Phone: (661) 699-9375

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems Received Date: 10/ 6/2018 9:15 AM

Oroville, CA 95965 Analysis Date: 10/09/2018

Collected Date: 10/04/2018

**Project:** 2018.10.04 Upper Area (Oroville EM OP)

# Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by CARB-Modified AHERA

		Volume	Area	Nan	Asbestos	#Structi		Analytical		estos
Sample	Location	(Liters)	Analyzed (mm²)	Non Asb	Types	#Structi ≥0.5µ < 5	ures ≥5µ	Sensitivity (S/cc)	(S/mm²)	entration (S/cc)
81004-OFD-PMT-0 1	WP083A AM DAN BEEBE TRAIL - WP083A AM DAN BEEBE TRAIL	1940.40	0.2110	1	None Detected	20.5μ < 5	<u> 25µ</u>	0.0009	<4.70	<0.0009
341813680-0001										
81004-OFD-PMT-0 2	WP249 AM CANYON DRIVE - WP249 AM CANYON DRIVE	1943.10	0.1980	5	None Detected			0.0010	<5.00	<0.0010
341813680-0002			1.21 1							
	s reported include a contribution from I	-	-							
81004-OFD-PMT-0 3 341813680-0003	WP084A AM SE UPPER OVERLOOK - WP084A AM SE UPPER OVERLOOK	1940.40	0.2110	0	None Detected			0.0009	<4.70	<0.0009
81004-OFD-PMT-0 4	WP246 AM INTAKE YARD - WP246 AM INTAKE YARD	1930.50	0.2110	0	None Detected			0.0009	<4.70	<0.0010
341813680-0004										
81004-OFD-PMT-0 5	WP083A PM DAN BEEBE TRAIL - WP083A PM DAN BEEBE TRAIL	1956.60	0.1980	0	None Detected			0.0010	<5.00	<0.0010
341813680-0005										
81004-OFD-PMT-0 6	WP249 PM CANYON DRIVE - WP249 PM CANYON DRIVE	1952.10	0.1980	1	Actinolite	1	0	0.0010	5.00	0.00099
341813680-0006										
	s reported include a contribution from I							0.0010		
81004-OFD-PMT-0 7	WP084A PM SE UPPER OVERLOOK - WP084A PM SE UPPER OVERLOOK	1989.10	0.1980	0	None Detected			0.0010	<5.00	<0.0010
341813680-0007										
81004-OFD-PMT-0 8	WP246 PM INTAKE YARD - WP246 PM INTAKE YARD	1989.90	0.1980	0	None Detected			0.0010	<5.00	<0.0010
341813680-0008										
81004-OFD-PMT-L B1 341813680-0009	Field Blank 1 - Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
81004-OFD-PMT-L B2 341813680-0010	Field Blank 2 - Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A



EMSL Order: 341813680 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Safety Management Systems

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.04 Upper Area (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/6/2018 9:15 AM

**Analysis Date:** 10/09/2018

Collected Date: 10/04/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

			Area					Analytical	Asb	estos	
		Volume	Analyzed	Non	Asbestos	#Structu	ires	Sensitivity	Conce	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5u < 5	≥5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s) Gerald lannuzzi (10)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



EMSL Order: 341813677 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Safety Management Systems

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.04 Burma Rd (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/6/2018 9:15 AM

**Analysis Date:** 10/08/2018 Collected Date: 10/04/2018

#### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81004-OFD-BPT-0 1 341813677-0001	WP086A AM Burma Road 01	1976.40	0.1980	4	None Detected			0.0010	<5.00	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
81004-OFD-BPT-0 2 341813677-0002	WP086A PM Burma Road 01	1910.50	0.2110	0	None Detected			0.0010	<4.70	<0.0010
81004-OFD-BPT-F B1 341813677-0003	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
81004-OFD-BPT-F B2 341813677-0004	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Analyst(s)	
Gerald Jannuzzi (4)	

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL



EMSL Order: 341813679 Customer ID: SMGS78B

**Customer PO:** 

Project ID: Oroville EM OP

Attention: Safety Management Systems

1001 Brad Freeman Trail

Trailer #2 / Safety Mgmt Systems

Oroville, CA 95965

Project: 2018.10.04 Lauch Ramp (Oroville EM OP)

**Phone:** (661) 699-9375

Fax:

Received Date: 10/6/2018 9:15 AM

**Analysis Date:** 10/08/2018

Collected Date: 10/04/2018

### Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by **CARB-Modified AHERA**

		Volume	Area Analyzed	Non	Asbestos	#Structi	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
81004-OFD-LRP-0 1 341813679-0001	WP009A AM Lauch Ramp Parking	1935.90	0.2110	2	None Detected			0.0009	<4.70	<0.0009
81004-OFD-LRP-0 2 341813679-0002	WP081A AM Launch Ramp Turnaround	1917.00	0.2110	2	None Detected			0.0010	<4.70	<0.0010
81004-OFD-LRP-0 3 341813679-0003	WP009A PM Lauch Ramp Parking	2016.20	0.1980	1	None Detected			0.0010	<5.00	<0.0010
81004-OFD-LRP-0 4 341813679-0004	WP081A PM Launch Ramp Turnaround	2031.80	0.1980	0	None Detected			0.0010	<5.00	<0.0010
81004-OFD-LRP-F B1 341813679-0005	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
81004-OFD-LRP-F B2 341813679-0006	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Anal	yst(s)

Gerald lannuzzi (6)

Carlos Rivadeneyra, Laboratory Director

or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL

Initial report from: 10/08/2018 18:11:09