	WR Oroville Dam Air Quality Monitoring Sa December 15	mpling an Analysis Summary Report 5, 2017 through December 28, 2017
Appendix A – Laboratory Rep	orts	
Р	age 100 of 101	



EMSL Order: 041735918 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: 2017.12.15 Upper Area (Oroville EM OP)

Fax:

Received Date: 12/17/2017 11:30 AM **Analysis Date:** 12/19/2017

Collected Date: 12/15/2017

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

		Area Volume Analyzed Non Asbestos							Asbestos	
		Volume			on Asbestos	#Structi	ıres	Sensitivity	Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1215-OFD-PMT-01	WP246 AM Intake Yard	1906.70	0.2080	1	Actinolite	1	0	0.0010	4.80	0.00097
041735918-0001										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-PMT-02	WP247 AM Upper Overlook Entry	1890.00	0.2080	1	None Detected			0.0010	<4.80	<0.0010
041735918-0002										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-PMT-03	WP248 AM Upper Overlook	1906.70	0.2080	0	None Detected			0.0010	<4.80	<0.0010
041735918-0003										
1215-OFD-PMT-04	WP249 AM Canyon Drive	1883.00	0.2080	3	None Detected	·		0.0010	<4.80	<0.0010
041735918-0004										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-PMT-05	WP246 PM Intake Yard	2117.00	0.2080	2	None Detected			0.0009	<4.80	<0.0009
041735918-0005										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-PMT-06	WP247 PM Upper Overlook Entry	2119.70	0.1820	0	None Detected			0.0010	<5.50	<0.0010
041735918-0006	•									
1215-OFD-PMT-07	WP248 PM Upper Overlook	1934.90	0.2080	0	None Detected			0.0010	<4.80	<0.0010
041735918-0007										
1215-OFD-PMT-08	WP249 PM Canyon Drive	2119.70	0.1820	1	None Detected			0.0010	<5.50	<0.0010
041735918-0008	•									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-PMT-FB	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
1										
041735918-0009										
1215-OFD-PMT-FB 2	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
041735918-0010										

Initial Report From: 12/20/2017 14:39:44



Attention: Dave Beadle, CIH

EMSL Order: 041735918 **Customer ID:** SMGS78B

Customer PO:

Project ID: Oroville EM OP

Phone: (661) 699-9375

Fax:

Received Date: 12/17/2017 11:30 AM

Analysis Date: 12/19/2017 **Collected Date**: 12/15/2017

Project: 2017.12.15 Upper Area (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

			Area				Analytical	Asbe	stos
		Volume	Analyzed	Non	Asbestos	#Structures	Sensitivity	Concer	itration
Sample	Location	(Liters)	(mm²)	Asb	Types	>0.5u < 5 >5u	(S/cc)	(S/mm²)	(S/cc)

Analyst(s)

William Nguyen (10)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/20/2017 14:39:44



EMSL Order: 041735919 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: 2017.12.15 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/17/2017 11:30 AM

Analysis Date: 12/19/2017 Collected Date: 12/15/2017

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

			Area				Analytical	Asbestos	
		Volume	Analyzed	Non	Asbestos	#Structures	Sensitivity		ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1215-OFD-TPT-01	WP278 AM N. Diversion Dam	1926.80	0.2080	1	None Detected		0.0010	<4.80	<0.0010
041735919-0001									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1215-OFD-TPT-02	WP019A AM E. Diversion Dam	1907.80	0.2080	2	None Detected		0.0010	<4.80	<0.0010
041735919-0002									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1215-OFD-TPT-03	WP020A AM SE Canal	1924.10	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0003									
1215-OFD-TPT-04	WP021A AM SW Canal	1921.40	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0004		.020	0.2000	·	20.00.00		0.0010	41.00	10.0010
1215-OFD-TPT-05	WP281 AM Cherokee Road	1937.70	0.2080	1	None Detected		0.0010	<4.80	<0.0010
041735919-0005									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1215-OFD-TPT-06	WP278 PM N. Diversion Dam	1941.10	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0006									
1215-OFD-TPT-07	WP019A PM E. Diversion Dam	1948.40	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0007									
1215-OFD-TPT-08	WP020A PM SE Canal	1937.60	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0008									
1215-OFD-TPT-09	WP021A PM SW Canal	1940.30	0.2080	1	None Detected		0.0010	<4.80	<0.0010
041735919-0009									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1215-OFD-TPT-10	WP281 PM Cherokee Road	1934.10	0.2080	0	None Detected		0.0010	<4.80	<0.0010
041735919-0010	• •								
1215-OFD-TPT-FB	Field Blank 1	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
1		3.00		-	20.00.00				
041735919-0011									
1215-OFD-TPT-FB	Field Blank 2	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
- 041735919-0012									

Initial Report From: 12/20/2017 14:41:20



EMSL Order: 041735919 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: 2017.12.15 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/17/2017 11:30 AM

Analysis Date: 12/19/2017 Collected Date: 12/15/2017

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)

William Nguyen (12)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/20/2017 14:41:20



EMSL Order: 041735921 **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:
 12/17/2017 11:30 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/19/2017 - 12/20/2017

Oroville, CA 95965 Collected Date: 12/15/2017

Project: 2017.12.15 Burma Road (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	ires	Sensitivity	Conce	entration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1215-OFD-BPT-01	WP017A AM Burma Road 01	1935.90	0.2080	1	None Detected			0.0010	<4.80	<0.0010
041735921-0001										
1215-OFD-BPT-02	WP036A AM Burma Road 02	1941.30	0.2080	0	None Detected			0.0010	<4.80	<0.0010
041735921-0002										
1215-OFD-BPT-03	WP037A AM Burma Road 03	1949.40	0.2080	2	Actinolite	0	1	0.0010	4.80	0.00095
041735921-0003										
Non-asbestos structure	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-BPT-04	WP017A PM Burma Road 01	1953.90	0.2080	3	None Detected			0.0009	<4.80	<0.0010
041735921-0004										
Non-asbestos structure	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-BPT-05	WP036A PM Burma Road 02	1943.10	0.2080	2	None Detected			0.0010	<4.80	<0.0010
041735921-0005										
Non-asbestos structure	s reported include a contribution from	non-regulated an	nphiboles.							
1215-OFD-BPT-06	WP037A PM Burma Road 03	1926.00	0.2080	0	None Detected			0.0010	<4.80	<0.0010
041735921-0006										
1215-OFD-BPT-FB 1	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
041735921-0007										
1215-OFD-BPT-FB 2 041735921-0008	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Ana	lyst((s)

William Nguyen (8)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/20/2017 14:38:04



EMSL Order: 041735920 **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: 12/17/2017 11:30 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/20/2017
Oroville, CA 95965 Collected Date: 12/15/2017

Project: 2017.12.15 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)
1215-OFD-LRP-01	WP009A AM Launch Ramp Parking	1884.60	0.2080	0	Actinolite	2	0	0.0010	9.60	0.0020
041735920-0001										
1215-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1891.60	0.2080	0	Actinolite	3	0	0.0010	14.00	0.0029
041735920-0002										
1215-OFD-LRP-03	WP009A PM Launch Ramp Parking	2132.80	0.1820	1	None Detected			0.0010	<5.50	<0.0010
041735920-0003										
Non-asbestos structures	s reported include a contribution fro	m non-regulated am	phiboles.							
1215-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	2130.30	0.1820	2	None Detected			0.0010	<5.50	<0.0010
041735920-0004	·									
Non-asbestos structures	s reported include a contribution fro	m non-regulated am	phiboles.							
1215-OFD-LRP-FB 1	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
041735920-0005										
1215-OFD-LRP-FB 2	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
041735920-0006										

Analyst(s)	

William Nguyen (6)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/20/2017 14:45:56



EMSL Order: 341713258 **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:** 12/19/2017 11:15 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/19/2017
Oroville, CA 95965 Collected Date: 12/16/2017

Project: 2017.12.16 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)
1216-OFD-PMT-01	WP246 AM Intake Yard	1914.90	0.2140	0	None Detected			0.0009	<4.70	<0.0009
341713258-0001										
1216-OFD-PMT-02	WP247 AM Upper Overlook Entry	1892.70	0.2140	1	None Detected			0.0009	<4.70	<0.0010
341713258-0002										
Non-asbestos structures	reported include a contribution from	non-regulated ar	nphiboles.							
1216-OFD-PMT-03	WP248 AM Upper Overlook	1894.30	0.2140	3	None Detected			0.0009	<4.70	<0.0010
341713258-0003										
1216-OFD-PMT-04	WP249 AM Canyon Drive	1879.20	0.2140	0	None Detected			0.0010	<4.70	<0.0010
341713258-0004										
1216-OFD-PMT-05	WP246 PM Intake Yard	1858.80	0.2140	0	None Detected			0.0010	<4.70	<0.0010
341713258-0005										
1216-OFD-PMT-06	WP247 PM Upper Overlook Entry	1861.50	0.2140	1	None Detected			0.0010	<4.70	<0.0010
341713258-0006										
1216-OFD-PMT-07	WP248 PM Upper Overlook	1866.90	0.2140	2	Actinolite	1	0	0.0010	4.70	0.00096
341713258-0007										
Non-asbestos structures	reported include a contribution from	non-regulated ar	nphiboles.							
1216-OFD-PMT-08	WP249 PM Canyon Drive	1863.00	0.2140	1	None Detected			0.0010	<4.70	<0.0010
341713258-0008										
Non-asbestos structures	reported include a contribution from	non-regulated ar	nphiboles.							
1216-OFD-PMT-FB	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
1										
341713258-0009										
1216-OFD-PMT-FB 2	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713258-0010										

Initial report from: 12/19/2017 17:49:14



EMSL Order: 341713258 **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: 12/19/2017 11:15 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/19/2017
Oroville, CA 95965 Collected Date: 12/16/2017

Project: 2017.12.16 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	ures	Sensitivity	Concer	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 NVLAP Lab Code 101151-0

Initial report from: 12/19/2017 17:49:14



EMSL Order: 241705385 **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:
 12/17/2017 4:15 PM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/21/2017 - 12/22/2017

Oroville, CA 95965 Collected Date: 12/16/2017

Project: 2017.12.16 DIVERSION DAM (Oroville EM OP)

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

			Area	A . I	A-b4 #044			Asbestos		
Sample	Location	Volume (Liters)	Analyzed (mm²)	Non Asb	Asbestos Types	#Structur ≥0.5µ < 5	res ≥5µ	Sensitivity (S/cc)	(S/mm²)	ntration (S/cc)
1216-OFD-TPT-01	WP278 AM N. DIVERSION DAM	1937.70	0.2100	0	None Detected	20.9μ < 9	≥əµ	0.0009	<4.80	<0.0010
241705385-0001										
1216-OFD-TPT-02	WP019A AM E. DIVERSION DAM	1927.80	0.2100	0	None Detected			0.0010	<4.80	<0.0010
241705385-0002										
1216-OFD-TPT-03 241705385-0003	WP020A AM SE CANAL	1941.30	0.2100	1	None Detected			0.0009	<4.80	<0.0010
1216-OFD-TPT-04 241705385-0004	WP021A AM SW CANAL	1938.60	0.2100	1	None Detected			0.0009	<4.80	<0.0010
1216-OFD-TPT-05	WP281 AM CHEROKEE RD.	1967.30	0.1970	0	None Detected			0.0010	<5.10	<0.0010
241705385-0005										
1216-OFD-TPT-06	WP278 PM N. DIVERSION DAM	1926.90	0.2100	1	None Detected			0.0010	<4.80	<0.0010
241705385-0006										
1216-OFD-TPT-07	WP019A PM E DIVERSION DAM	1939.50	0.2100	0	None Detected			0.0009	<4.80	<0.0010
241705385-0007										
1216-OFD-TPT-08 241705385-0008	WP020A PM SE CANAL	1928.70	0.2080	1	None Detected			0.0010	<4.80	<0.0010
1216-OFD-TPT-09 241705385-0009	WP021A PM SW CANAL	1941.30	0.2100	3	None Detected			0.0009	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from r	on-regulated an	nphiboles.							
1216-OFD-TPT-10	WP281 PM CHEROKEE RD.	1936.80	0.2100	1	None Detected			0.0009	<4.80	<0.0010
241705385-0010										
1216-OFD-TPT-FB 1	FIELD BLANK 1	0.00	0.1310	0	None Detected			N/A	<7.60	N/A
241705385-0011										
1216-OFD-TPT-FB 2 241705385-0012	FIELD BLANK 2	0.00	0.1310	0	None Detected			N/A	<7.60	N/A

Initial report from: 12/22/2017 17:19:27



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705385 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: 2017.12.16 DIVERSION DAM (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/17/2017 4:15 PM

Analysis Date: 12/21/2017 - 12/22/2017

Collected Date: 12/16/2017

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

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

Analyst(s)

Almedina Hodzic (12)

Lauren Brennan, Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0, CT PH-0322, MA AA000191, RI AAL-108T3, VT AL357101

Initial report from: 12/22/2017 17:19:27



EMSL Order: 341713259 **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:
 12/19/2017 11:15 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/19/2017 - 12/20/2017

Oroville, CA 95965 Collected Date: 12/16/2017

Project: 2017.12.16 Burma Rd (Oroville EM OP)

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

		Volume	Area	Non	Asbestos	#Structi	iroe	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	Analyzed (mm²)	Asb	Types	#5tructi	⊿ies ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1216-OFD-BPT-01	WP017A AM Burma Road 01	1941.30	0.2010	0	None Detected			0.0010	<5.00	<0.0010
341713259-0001										
1216-OFD-BPT-02	WP036A AM Burma Road 02	1963.80	0.2010	0	None Detected			0.0010	<5.00	<0.0010
341713259-0002										
1216-OFD-BPT-03	WP037A AM Burma Road 03	1971.10	0.2010	1	Tremolite	0	1	0.0010	5.00	0.00097
341713259-0003										
1216-OFD-BPT-04	WP017A PM Burma Road 01	1940.40	0.2010	1	Actinolite	1	1	0.0010	10.00	0.0020
341713259-0004										
1216-OFD-BPT-05	WP036A PM Burma Road 02	1930.50	0.2010	0	None Detected			0.0010	<5.00	<0.0010
341713259-0005										
1216-OFD-BPT-06	WP037A PM Burma Road 03	1954.70	0.2010	3	None Detected			0.0010	<5.00	<0.0010
341713259-0006										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1216-OFD-BPT-FB 1 341713259-0007	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
1216-OFD-BPT-FB 2 341713259-0008	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A

Analyst(s)	

Gerald Iannuzzi (8)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from: 12/20/2017 11:03:01



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705384 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: 2017.12.16 LAUNCH RAMP (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/17/2017 4:15 PM

Analysis Date: 12/20/2017 - 12/21/2017

Collected Date: 12/16/2017

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

			Area					Analytical		estos
0		Volume	Analyzed	Non Asb	Asbestos	#Structi		Sensitivity		ntration
Sample	Location	(Liters)	(mm²)		Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1216-OFD-LRP-01	WP009A AM LAUNCH RAMP PARKING	1906.70	0.2100	0	None Detected			0.0010	<4.80	<0.0010
241705384-0001										
1216-OFD-LRP-02	WP010A AM LAUNCH RAMP TURNAROUND	1906.70	0.2100	0	None Detected			0.0010	<4.80	<0.0010
241705384-0002										
1216-OFD-LRP-03	WP009A PM LAUNCH RAMP PARKING	1881.90	0.2100	0	None Detected			0.0010	<4.80	<0.0010
241705384-0003										
1216-OFD-LRP-04	WP010A PM LAUNCH RAMP TURNAROUND	1866.90	0.2100	1	Actinolite	1	1	0.0010	9.50	0.0020
241705384-0004										
Non-asbestos structures	s reported include a contribution from	n non-regulated an	nphiboles.							
1216-OFD-LRP-FB 1	FIELD BLANK 1	0.00	0.1310	0	None Detected			N/A	<7.60	N/A
241705384-0005										
1216-OFD-LRP-FB 2 241705384-0006	FIELD BLANK 2	0.00	0.1310	0	None Detected			N/A	<7.60	N/A

Almedina Hodzic (6)

Lauren Brennan, Asbestos Lab Manager

or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0, CT PH-0322, MA AA000191, RI AAL-108T3, VT AL357101

Initial report from: 12/21/2017 10:11:04



EMSL Order: 051705674 **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:
 12/19/2017 9:40 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/26/2017 - 12/27/2017

Oroville, CA 95965 Collected Date: 12/17/2017

Project: 2017.12.17 Upper Area (Oroville EM OP)

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

		Volume	Area	Nan	Asbestos	#Structu		Analytical		estos entration
Sample	Location	(Liters)	Analyzed (mm²)	Non Asb	Types	#Struction	ires ≥5µ	Sensitivity (S/cc)	(S/mm²)	(S/cc)
1217-OFD-PMT-01 051705674-0001	WP246 AM Intake Yard	1912.20	0.2110	1	Actinolite	0	1	0.0010	4.70	0.00096
1217-OFD-PMT-02	WP247 AM Upper Overlook Entry	1905.10	0.2110	1	None Detected			0.0010	<4.70	<0.0010
051705674-0002										
1217-OFD-PMT-03	WP248 AM Upper Overlook	1902.40	0.2110	0	None Detected			0.0010	<4.70	<0.0010
051705674-0003										
1217-OFD-PMT-04 051705674-0004	WP249 AM Canyon Drive	1900.80	0.2110	1	None Detected			0.0010	<4.70	<0.0010
1217-OFD-PMT-05 051705674-0005	WP246 PM Intake Yard	1981.80	0.1980	4	None Detected			0.0010	<5.00	<0.0010
1217-OFD-PMT-06	WP247 PM Upper Overlook Entry	1968.30	0.1980	5	None Detected			0.0010	<5.00	<0.0010
051705674-0006										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1217-OFD-PMT-07	WP248 PM Upper Overlook	1971.00	0.1980	0	None Detected			0.0010	<5.00	<0.0010
051705674-0007										
1217-OFD-PMT-08 051705674-0008	WP249 PM Canyon Drive	1958.30	0.1980	7	Actinolite	1	1	0.0010	10.00	0.0020
Non-asbestos structures	s reported above include a contributio	n from non-regula	ated ambhibole:	s.						
1217-OFD-PMT-FB 1	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
051705674-0009										
1217-OFD-PMT-FB 2 051705674-0010	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Analyst(s)

Nicholas Maslowski (3) Susan Pollack (7)

Chaiyut Sae Lao, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Piscataway, NJ NYS ELAP 11423, NVLAP Lab Code 101048-2, NJ NELAC 12037, Philadelphia 289

Initial report from: 12/27/2017 12:12:56



EMSL Order: 151708740 **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:
 12/19/2017 10:20 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/21/2017 - 12/22/2017

Oroville, CA 95965 Collected Date: 12/17/2017

Project: 2017.12.17 Diversion Dam (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		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	#otructures ≥0.5μ < 5 ≥5μ	(S/cc)	(S/mm²)	(S/cc)
1217-OFD-TPT-01	WP278 AM N. Diversion Dam	1955.70	0.1980	1	None Detected		0.0010	<5.00	<0.0010
151708740-0001									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1217-OFD-TPT-02	WP019A AM E. Diversion Dam	1934.10	0.2110	2	None Detected		0.0009	<4.70	<0.0009
151708740-0002									
1217-OFD-TPT-03 151708740-0003	WP020A AM SE Canal	1945.80	0.1980	0	None Detected		0.0010	<5.00	<0.0010
1217-OFD-TPT-04 151708740-0004	WP021A AM SW Canal	1943.10	0.1980	2	None Detected		0.0010	<5.00	<0.0010
1217-OFD-TPT-05 151708740-0005	WP281 AM Cherokee Rd.	1947.50	0.1980	1	None Detected		0.0010	<5.00	<0.0010
1217-OFD-TPT-06	WP278 PM N. Diversion Dam	1922.40	0.2110	4	None Detected		0.0010	<4.70	<0.0010
151708740-0006									
1217-OFD-TPT-07	WP019A PM E. Diversion Dam	1934.10	0.2110	2	None Detected		0.0009	<4.70	<0.0009
151708740-0007									
1217-OFD-TPT-08 151708740-0008	WP020A PM SE Canal	1928.70	0.2110	1	None Detected		0.0009	<4.70	<0.0010
1217-OFD-TPT-09 151708740-0009	WP021A PM SW Canal	1938.60	0.2110	2	None Detected		0.0009	<4.70	<0.0009
1217-OFD-TPT-10 151708740-0010	WP281 PM Cherokee Rd.	1934.10	0.2110	2	None Detected		0.0009	<4.70	<0.0009
1217-OFD-TPT-FB 1 151708740-0011	Field Blank 1	0.00	0.1240	0	None Detected		N/A	<8.10	N/A
1217-OFD-TPT-FB 2 151708740-0012	Field Blank 2	0.00	0.1240	0	None Detected		N/A	<8.10	N/A

Initial report from: 12/22/2017 14:25:35



EMSL Order: 151708740 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: 2017.12.17 Diversion Dam (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/19/2017 10:20 AM

Analysis Date: 12/21/2017 - 12/22/2017

Collected Date: 12/17/2017

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

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

Analyst(s)

Michelle Leggett (12)

Michelle Leggett, Laboratory Manager or other approved signatory

Whitelle

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Samples analyzed by EMSL Analytical, Inc. Houston, TX NVLAP Lab Code 102106-0, AZ 0925, CO AL-15355, LA 04126, TX 300159

Initial report from: 12/22/2017 14:25:35



EMSL Order: 051705673 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: 2017.12.17 Burma Rd (Oroville EM OP)

Fax:

Received Date: 12/19/2017 9:40 AM

Analysis Date: 12/26/2017

Collected Date: 12/17/2017

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	Conce	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1217-OFD-BPT-01	WP017A AM Burma Road 01	1967.50	0.1980	0	None Detected		0.0010	<5.00	<0.0010
051705673-0001									
1217-OFD-BPT-02	WP036A AM Burma Road 02	1967.50	0.1980	1	None Detected		0.0010	<5.00	<0.0010
051705673-0002									
Non-asbestos structure	s reported above include a contributio	n from non-regula	ated amphiboles	S.					
1217-OFD-BPT-03	WP037A AM Burma Road 03	1969.30	0.1980	0	None Detected		0.0010	<5.00	<0.0010
051705673-0003									
1217-OFD-BPT-04	WP017A PM Burma Road 01	1918.00	0.2110	5	None Detected		0.0010	<4.70	<0.0010
051705673-0004									
Non-asbestos structure	s reported above include a contributio	n from non-regula	ated amphiboles	S.					
1217-OFD-BPT-05	WP036A PM Burma Road 02	1934.90	0.2110	10	None Detected		0.0009	<4.70	<0.0009
051705673-0005									
Non-asbestos structure	s reported above include a contributio	n from non-regula	ated amphiboles	S.					
1217-OFD-BPT-06	WP037A PM Burma Road 03	1930.50	0.2110	15	None Detected		0.0009	<4.70	<0.0010
051705673-0006									
Non-asbestos structure	s reported above include a contributio	n from non-regula	ated amphiboles	S.					
1217-OFD-BPT-FB 1	Field Blank 1	0.00	0.1240	0	None Detected		N/A	<8.10	N/A
051705673-0007									
1217-OFD-BPT-FB 2 051705673-0008	Field Blank 2	0.00	0.1240	0	None Detected		N/A	<8.10	N/A

Analyst(s)	

Susan Pollack (8)

Chaiyut Sae Lao, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Piscataway, NJ NYS ELAP 11423, NVLAP Lab Code 101048-2, NJ NELAC 12037, Philadelphia 289

Initial report from: 12/26/2017 15:32:07



EMSL Order: 151708738 **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: 12/19/2017 10:20 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/20/2017
Oroville, CA 95965 Collected Date: 12/17/2017

Project: 2017.12.17 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)
1217-OFD-LRP-01	WP009A AM Launch Ramp Parking	1905.10	0.2110	2	None Detected		·	0.0010	<4.70	<0.0010
151708738-0001										
1217-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1899.70	0.2110	2	None Detected			0.0010	<4.70	<0.0010
151708738-0002										
1217-OFD-LRP-03	WP009A PM Launch Ramp Parking	1971.80	0.1980	2	None Detected			0.0010	<5.00	<0.0010
151708738-0003										
1217-OFD-LRP-04	WP109A PM Launch Ramp Turnaround	1977.20	0.1980	1	None Detected			0.0010	<5.00	<0.0010
151708738-0004										
1217-OFD-LRP-FB 1	Field Blank 1	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
151708738-0005										
1217-OFD-LRP-FB 2	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A
151708738-0006										

Ana	lyst((s)

Michelle Leggett (6)

Michelle Leggett, Laboratory Manager or other approved signatory

Whitelle

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Samples analyzed by EMSL Analytical, Inc. Houston, TX NVLAP Lab Code 102106-0, AZ 0925, CO AL-15355, LA 04126, TX 300159

Initial report from: 12/20/2017 17:36:23



Attention: Dave Beadle, CIH

EMSL Order: 141706473 **Customer ID:** SMGS78B

Customer PO:

Project ID: Oroville EM OP

Phone: (661) 699-9375

Fax:

Received Date: 12/20/2017 11:29 AM

Analysis Date: 12/21/2017 **Collected Date**: 12/18/2017

Project: 2017.12.18 Upper Area (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	Non	Asbestos	#Structures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	Analyzed (mm²)	Asb	Types	#3tructures ≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1218-OFD-PMT-01 141706473-0001	WP246 AM Intake Yard	1913.30	0.2130	0	None Detected		0.0009	<4.70	<0.0010
1218-OFD-PMT-02	WP247 AM Uper Overlook Entry	1932.20	0.2000	0	None Detected		0.0010	<5.00	<0.0010
141706473-0002									
1218-OFD-PMT-03	WP248 AM Upper Overlook	1939.40	0.2000	0	None Detected		0.0010	<5.00	<0.0010
141706473-0003									
1218-OFD-PMT-04 141706473-0004	WP249 AM Canyon Drive	1933.20	0.2000	1	None Detected		0.0010	<5.00	<0.0010
Non-asbestos structures	s reported includes a contribution from	n non-regulated a	mphiboles						
1218-OFD-PMT-05 141706473-0005	WP246 PM Injtake Yard	1933.20	0.2000	0	None Detected		0.0010	<5.00	<0.0010
1218-OFD-PMT-06	WP247 PM Upper Overlook Entry	1935.90	0.2000	0	None Detected		0.0010	<5.00	<0.0010
141706473-0006									
1218-OFD-PMT-07	WP248 PM Upper Overlook	1933.20	0.2000	0	None Detected		0.0010	<5.00	<0.0010
141706473-0007									
1218-OFD-PMT-08 141706473-0008	WP249 PM Canyon Drive	1928.70	0.2130	0	None Detected		0.0009	<4.70	<0.0009
1218-OFD-PMT-FB 1 141706473-0009	Field Blank 1	0.00	0.1330	0	None Detected		N/A	<7.50	N/A
1218-OFD-PMT-FB 2 141706473-0010	Field Blank 2	0.00	0.1330	0	None Detected		N/A	<7.50	N/A

Analyst(s)	
Mark Tate (10)	

Rhonda McGee, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Depew, NY NYS ELAP 11606, NVLAP Lab Code 200056-0

Initial report from: 12/21/2017 15:23:33



EMSL Order: 341713329 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: 2017.12.18 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/20/2017 11:10 AM **Analysis Date:** 12/21/2017 - 12/22/2017

Collected Date: 12/18/2017

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)
1218-OFD-TPT-01	WP278 AM N. Diversion Dam	1958.40	0.2010	8	Actinolite	1	0	0.0010	5.00	0.00098
341713329-0001										
Non-asbestos structures	reported include a contribution from	non-regulated an	nphiboles.							
1218-OFD-TPT-02	WP019A AM E. Diversion Dam	1957.40	0.2010	11	None Detected			0.0010	<5.00	<0.0010
341713329-0002										
1218-OFD-TPT-03 341713329-0003	WP020A AM SE Canal	1944.00	0.2010	5	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-04 341713329-0004	WP021A AM SW Canal	1948.50	0.2010	2	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-05 341713329-0005	WP281 AM Cherokee Rd.	1955.70	0.2010	0	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-06	WP278 PM N. Diversion Dam	1929.60	0.2010	4	Actinolite	2	0	0.0010	10.00	0.0020
341713329-0006										
1218-OFD-TPT-07	WP019A PM E. Diversion Dam	1952.10	0.2010	2	None Detected			0.0010	<5.00	<0.0010
341713329-0007										
Non-asbestos structures	reported include a contribution from	non-regulated am	nphiboles.							
1218-OFD-TPT-08 341713329-0008	WP020A PM SE Canal	1946.70	0.2010	1	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-09 341713329-0009	WP021A PM SW Canal	1944.00	0.2010	1	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-10 341713329-0010	WP281 PM Cherokee Rd.	1945.80	0.2010	3	None Detected			0.0010	<5.00	<0.0010
1218-OFD-TPT-FB 1	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713329-0011										
1218-OFD-TPT-FB 2 341713329-0012	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A

Initial report from: 12/22/2017 09:21:52



EMSL Order: 341713329 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: 2017.12.18 Diversion Dam (Oroville EM OP)

(661) 699-9375

Fax:

Received Date: 12/20/2017 11:10 AM **Analysis Date:** 12/21/2017 - 12/22/2017

Collected Date: 12/18/2017

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) (mm²) Types ≥0.5µ < 5 (S/cc) (S/mm²) (S/cc) Sample

Analyst(s)

Gerald lannuzzi (12)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from: 12/22/2017 09:21:52



Attention: Dave Beadle, CIH

EMSL Order: 141706472 **Customer ID:** SMGS78B

Customer PO:

Project ID: Oroville EM OP

Phone: (661) 699-9375

Fax:

Received Date: 12/20/2017 11:29 AM

Analysis Date: 12/21/2017 **Collected Date**: 12/18/2017

Project: 2017.12.18 Burma Rd (Oroville EM OP)

Safety Management Systems

Trailer #2 / Safety Mgmt 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	#Structi	ıros	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	#otructi ≥0.5μ < 5	25µ	(S/cc)	(S/mm²)	(S/cc)
1218-OFD-BPT-01	WP017A AM Burma Road 01	1976.40	0.2000	0	None Detected	•		0.0010	<5.00	<0.0010
141706472-0001										
1218-OFD-BPT-02	WP036A AM Burma Road 02	1983.70	0.2000	0	None Detected			0.0010	<5.00	<0.0010
141706472-0002										
1218-OFD-BPT-03	WP037A AM Burma Road 03	2011.20	0.2000	0	None Detected			0.0010	<5.00	<0.0010
141706472-0003										
1218-OFD-BPT-04	WP017A PM Burma Road 01	1916.00	0.2130	0	Actinolite	0	1	0.0009	4.70	0.00094
141706472-0004										
1218-OFD-BPT-05	WP036A PM Burma Road 02	1910.50	0.2130	0	None Detected			0.0009	<4.70	<0.0010
141706472-0005										
1218-OFD-BPT-06	WP037A PM Burma Road 03	1903.50	0.2130	0	None Detected			0.0010	<4.70	<0.0010
141706472-0006										
1218-OFD-BPT-FB 1 141706472-0007	Field Blank 1	0.00	0.1330	0	None Detected			N/A	<7.50	N/A
1218-OFD-BPT-FB 2 141706472-0008	Field Blank 2	0.00	0.1330	0	None Detected			N/A	<7.50	N/A

Analyst(s)	
Mark Tate (8)	

Rhonda McGee, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Depew, NY NYS ELAP 11606, NVLAP Lab Code 200056-0



EMSL Order: 341713327 **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: 12/20/2017 11:10 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/20/2017
Oroville, CA 95965 Collected Date: 12/18/2017

Project: 2017.12.18 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	ıres	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1218-OFD-LRP-01	WP009A AM Launch Ramp Parking	1914.90	0.2140	4	Actinolite	1	2	0.0009	14.00	0.0028
341713327-0001										
1218-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1914.90	0.2140	5	Actinolite	0	1	0.0009	4.70	0.00094
341713327-0002										
1218-OFD-LRP-03	WP009A PM Launch Ramp Parking	1946.70	0.2010	1	None Detected			0.0010	<5.00	<0.0010
341713327-0003										
1218-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	1931.40	0.2140	1	None Detected			0.0009	<4.70	<0.0009
341713327-0004										
1218-OFD-LRP-FB	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713327-0005										
1218-OFD-LRP-FB 2 341713327-0006	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A

Gerald lannuzzi (6)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from: 12/20/2017 18:38:44



EMSL Order: 241705417 **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:** 12/21/2017 12:20 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017 Oroville, CA 95965 Collected Date: 12/19/2017

Project: 2017.12.19 UPPER AREA (Oroville EM OP)

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

			Area				Analytical		estos
		Volume	Analyzed	Non	Asbestos	#Structures	Sensitivity		entration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1219-OFD-PMT-01 241705417-0001	WP246 AM INTAKE YARD	1944.00	0.2080	2	None Detected		0.0010	<4.80	<0.0010
1219-OFD-PMT-02	WP247 AM UPPER OVERLOOK ENTRY	1946.70	0.2080	3	None Detected		0.0010	<4.80	<0.0010
241705417-0002									
1219-OFD-PMT-03	WP248 AM UPPER OVERLOOK	1949.40	0.2080	2	None Detected		0.0010	<4.80	<0.0010
241705417-0003									
Non-asbestos structures	reported include a contribution from	non-regulated ar	nphiboles.						
1219-OFD-PMT-04	WP249 AM CANYON DRIVE	1579.00	0.2470	2	None Detected		0.0010	<4.00	<0.0010
241705417-0004									
1219-OFD-PMT-05	WP246 PM INTAKE YARD	1996.50	0.1950	1	None Detected		0.0010	<5.10	<0.0010
241705417-0005									
Filter wet upon arrival, d	ried at lab.								
1219-OFD-PMT-06	WP247 PM UPPER OVERLOOK ENTRY	1981.00	0.1950	1	None Detected		0.0010	<5.10	<0.0010
241705417-0006									
Filter wet upon arrival, d	ried at lab.								
1219-OFD-PMT-07	WP248 PM UPPER OVERLOOK	1988.30	0.1950	0	None Detected		0.0010	<5.10	<0.0010
241705417-0007									
Filter wet upon arrival, d	ried at lab.								
1219-OFD-PMT-08	WP249 PM CANYON DRIVE	1952.10	0.2080	2	None Detected		0.0009	<4.80	<0.0010
241705417-0008									
Non-asbestos structures	reported include a contribution from	non-regulated ar	nphiboles.						
1219-OFD-PMT-FB	FIELD BLANK 1	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
241705417-0009									
1219-OFD-PMT-FB 2	FIELD BLANK 2	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
241705417-0010									

Initial report from: 12/27/2017 15:45:56



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com **EMSL Order:** 241705417 **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: 2017.12.19 UPPER AREA (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/21/2017 12:20 PM

Analysis Date: 12/27/2017 **Collected Date**: 12/19/2017

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) (mm²) Types ≥0.5µ < 5 (S/cc) (S/mm²) (S/cc) Sample

Analyst(s)

Almedina Hodzic (10)

Lauren Brennan, Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0, CT PH-0322, MA AA000191, RI AAL-108T3, VT AL357101

Initial report from: 12/27/2017 15:45:56



EMSL Order: 411709805 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: 2017.12.19 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/21/2017 2:40 PM

Analysis Date: 12/22/2017 **Collected Date:** 12/19/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1219-OFD-TPT-01	WP278 AM N. Diversion Dam	1943.10	0.2080	0	None Detected		0.0010	<4.80	<0.0010
411709805-0001									
1219-OFD-TPT-02	WP019A AM E. Diversion Dam	1930.50	0.2080	0	None Detected		0.0010	<4.80	<0.0010
411709805-0002									
1219-OFD-TPT-03 411709805-0003	WP020A AM SE Canal	1945.80	0.2080	0	None Detected		0.0010	<4.80	<0.0010
1219-OFD-TPT-04 411709805-0004	WP021A AM SW Canal	1938.60	0.2080	0	None Detected		0.0010	<4.80	<0.0010
1219-OFD-TPT-05 411709805-0005	WP281 AM Cherokee Rd.	1944.00	0.2080	0	None Detected		0.0010	<4.80	<0.0010
1219-OFD-TPT-06	WP278 PM N. Diversion Dam	1949.40	0.2080	0	None Detected		0.0010	<4.80	<0.0010
411709805-0006									
1219-OFD-TPT-07	WP019A PM E. Diversion Dam	1956.60	0.2080	0	None Detected		0.0009	<4.80	<0.0010
411709805-0007									
1219-OFD-TPT-08 411709805-0008	WP020A PM SE Canal	1948.50	0.2080	1	None Detected		0.0010	<4.80	<0.0010
Non-asbestos structure	s reported above includes a contributi	on from non-regu	lated amphibol	es					
1219-OFD-TPT-09 411709805-0009	WP021A PM SW Canal	1953.90	0.2080	0	None Detected		0.0009	<4.80	<0.0010
1219-OFD-TPT-10 411709805-0010	WP281 PM Cherokee Rd.	1958.40	0.2080	0	None Detected		0.0009	<4.80	<0.0010
1219-OFD-TPT-FB 1	Field Blank 1	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
411709805-0011									
1219-OFD-TPT-FB 2 411709805-0012	Field Blank 2	0.00	0.1300	0	None Detected		N/A	<7.70	N/A

Initial Report From: 12/26/2017 11:52:57



EMSL Order: 411709805 **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: 12/21/2017 2:40 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/22/2017
Oroville, CA 95965 Collected Date: 12/19/2017

Project: 2017.12.19 Diversion Dam (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	ıres	Sensitivity	Concer	ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

Derrick Young (12)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial Report From: 12/26/2017 11:52:57



EMSL Order: 241705416 **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:** 12/21/2017 12:20 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/26/2017
Oroville, CA 95965 Collected Date: 12/19/2017

Project: 2017.12.19 BURMA RD (Oroville EM OP)

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

			Area					Analytical		estos
		Volume	Analyzed	Non	Asbestos	#Structu	res	Sensitivity		ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1219-OFD-BPT-01	WP017A AM BURMA ROAD 01	1954.80	0.2080	3	None Detected			0.0009	<4.80	<0.0010
241705416-0001										
Non-asbestos structures	reported include a contribution fro	m non-regulated an	nphiboles.							
1219-OFD-BPT-02	WP036A AM BURMA ROAD 02	1950.30	0.2080	7	None Detected			0.0009	<4.80	<0.0010
241705416-0002										
Non-asbestos structures	s reported include a contribution fro	m non-regulated an	nphiboles.							
1219-OFD-BPT-03	WP037A AM BURMA ROAD 03	1949.40	0.2080	5	None Detected			0.0010	<4.80	<0.0010
241705416-0003										
Non-asbestos structures	s reported include a contribution fro	m non-regulated an	nphiboles.							
1219-OFD-BPT-04	WP017A PM BURMA ROAD 01	1948.50	0.2080	1	None Detected			0.0010	<4.80	<0.0010
241705416-0004										
Filter damp upon arrival,	, dried at lab.									
1219-OFD-BPT-05	WP036A PM BURMA ROAD 02	1938.60	0.2080	1	None Detected			0.0010	<4.80	<0.0010
241705416-0005										
Filter damp upon arrival,	, dried at lab.									
1219-OFD-BPT-06	WP037A PM BURMA ROAD 03	1945.80	0.2080	2	Actinolite Tremolite	0 4	1 1	0.0010	4.80 24.00	0.00095 0.0048
241705416-0006					Total fo	r all types			28.80	0.0058
Filter damp upon arrival,	, dried at lab.									
1219-OFD-BPT-FB 1	FIELD BLANK 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
241705416-0007										
1219-OFD-BPT-FB 2	FIELD BLANK 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Initial report from: 12/26/2017 17:04:34



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com **EMSL Order:** 241705416 **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: 2017.12.19 BURMA RD (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/21/2017 12:20 PM

Analysis Date: 12/26/2017

Collected Date: 12/19/2017

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)

Almedina Hodzic (8)

Lauren Brennan, Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0, CT PH-0322, MA AA000191, RI AAL-108T3, VT AL357101

Initial report from: 12/26/2017 17:04:34



EMSL Order: 411709806 **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: 12/21/2017 2:40 PM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/22/2017
Oroville, CA 95965 Collected Date: 12/19/2017

Project: 2017.12.19 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)
1219-OFD-LRP-01	WP009A AM Launch Ramp Parking	1933.20	0.2080	2	None Detected			0.0010	<4.80	<0.0010
411709806-0001										
Non-asbestos structures	reported above includes a contribution	on from non-regu	lated amphibole	es						
1219-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1936.80	0.2080	0	None Detected			0.0010	<4.80	<0.0010
411709806-0002										
1219-OFD-LRP-03	WP009A PM Launch Ramp Parking	2001.90	0.2080	6	None Detected			0.0009	<4.80	<0.0009
411709806-0003	· · ·									
Non-asbestos structures	s reported above includes a contribution	on from non-regu	lated amphibole	es						
1219-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	1984.50	0.1950	0	None Detected			0.0010	<5.10	<0.0010
411709806-0004										
1219-OFD-LRP-FB 1	Field Blank 1	0.00	0.1300	0	None Detected			N/A	<7.70	N/A
411709806-0005										
1219-OFD-LRP-FB 2 411709806-0006	Field Blank 2	0.00	0.1300	0	None Detected			N/A	<7.70	N/A

Derrick Young (6)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial Report From: 12/26/2017 11:57:37



EMSL Analytical, Inc.

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: 311700840 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: 2017.12.20 Upper Area (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date:

12/22/2017 11:15 AM

Analysis Date: 12/28/2017

Collected Date: 12/20/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1220-OFD-PMT-01 311700840-0001	WP246 AM Intake Yard	1898.10	0.2080	0	None Detected	-	0.0010	<4.80	<0.0010
1220-OFD-PMT-02	WP247 AM Upper Overlook Entry	1916.00	0.2080	0	None Detected		0.0010	<4.80	<0.0010
311700840-0002									
1220-OFD-PMT-03	WP248 AM Upper Overlook	1930.10	0.2080	0	None Detected		0.0010	<4.80	<0.0010
311700840-0003									
1220-OFD-PMT-04 311700840-0004	WP249 AM Canyon Drive	1918.00	0.2080	5	None Detected		0.0010	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1220-OFD-PMT-05 311700840-0005	WP246 PM Intake Yard	1953.90	0.2080	0	None Detected		0.0009	<4.80	<0.0010
1220-OFD-PMT-06	WP247 PM Upper Overlook Entry	1946.70	0.2080	0	None Detected		0.0010	<4.80	<0.0010
311700840-0006									
1220-OFD-PMT-07	WP248 PM Upper Overlook	1944.00	0.2080	0	None Detected		0.0010	<4.80	<0.0010
311700840-0007									
1220-OFD-PMT-08 311700840-0008	WP249 PM Canyon Drive	1942.20	0.2080	1	None Detected		0.0010	<4.80	<0.0010
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.						
1220-OFD-PMT-FB 1	Field Blank 1	0.00	0.1300	0	None Detected		N/A	<7.70	N/A
311700840-0009									
1220-OFD-PMT-FB 2 311700840-0010	Field Blank 2	0.00	0.1300	0	None Detected		N/A	<7.70	N/A

Almedina Hodzic (10)

Shannon Ferguson, Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. Results reported in both structures/cm3 and structures/mm2 are dependent on the volume of Airsampled and measured by non-laboratory personnel are not the responsibility of EMSL and are not covered by the laboratory's NVLAP accreditation. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0, CT PH-0322, MA AA000191, RI AAL-108T3, VT AL357101

Initial report from: 12/28/2017 16:26:14



EMSL Order: 041736426 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: 2017.12.20 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/22/2017 10:55 AM

Analysis Date: 12/26/2017

Collected Date: 12/20/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	#301 detailes ≥0.5μ < 5 ≥5μ	(S/cc)	(S/mm²)	(S/cc)
1220-OFD-TPT-01	WP278 AM N. Diversion Dam	1961.10	0.2060	1	None Detected		0.0010	<4.80	<0.0010
041736426-0001									
Non-asbestos structure	s reported include a contribution from	non-regulated an	nphiboles.						
1220-OFD-TPT-02	WP019A AM E. Diversion Dam	1951.20	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736426-0002									
1220-OFD-TPT-03 041736426-0003	WP020A AM SE Canal	1944.00	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-04 041736426-0004	WP021A AM SW Canal	1941.30	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-05 041736426-0005	WP281 AM Cherokee Rd.	1953.00	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-06	WP278 PM N. Diversion Dam	1917.10	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736426-0006									
1220-OFD-TPT-07	WP019A PM E. Diversion Dam	1931.40	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736426-0007									
1220-OFD-TPT-08 041736426-0008	WP020A PM SE Canal	1935.90	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-09 041736426-0009	WP021A PM SW Canal	1935.90	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-10 041736426-0010	WP281 PM Cherokee Rd.	1930.50	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1220-OFD-TPT-FB 1 041736426-0011	Field Blank 1	0.00	0.1290	0	None Detected		N/A	<7.80	N/A
1220-OFD-TPT-FB 2 041736426-0012	Field Blank 2	0.00	0.1290	0	None Detected		N/A	<7.80	N/A

Initial Report From: 12/27/2017 08:05:34



EMSL Order: 041736426 **Customer ID:** SMGS78B

Customer PO:

Project ID: Oroville EM OP

Attention: Dave Beadle, CIH

Phone: (661) 699-9375

Fax:

Received Date: 12/22/2017 10:55 AM

Analysis Date: 12/26/2017 **Collected Date**: 12/20/2017

Project: 2017.12.20 Diversion Dam (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

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

Analyst(s)

Matthew Dare (12)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/27/2017 08:05:34



EMSL Analytical, Inc.

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: 311700839 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: 2017.12.20 Burma Road (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/22/2017 11:15 AM

Analysis Date: 12/28/2017

Collected Date: 12/20/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structi	ıres	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1220-OFD-BPT-01	WP017A AM Burma Road 01	1941.30	0.2030	0	None Detected		•	0.0010	<4.90	<0.0010
311700839-0001										
1220-OFD-BPT-02	WP036A AM Burma Road 02	1945.80	0.2030	0	None Detected			0.0010	<4.90	<0.0010
311700839-0002										
1220-OFD-BPT-03	WP037A AM Burma Road 03	1951.20	0.2030	0	None Detected			0.0010	<4.90	<0.0010
311700839-0003										
1220-OFD-BPT-04	WP017A PM Burma Road 01	1925.10	0.2030	0	None Detected			0.0010	<4.90	<0.0010
311700839-0004										
1220-OFD-BPT-05	WP036A PM Burma Road 02	1923.30	0.2030	0	None Detected			0.0010	<4.90	<0.0010
311700839-0005										
1220-OFD-BPT-06	WP037A PM Burma Road 03	1937.70	0.2030	0	None Detected			0.0010	<4.90	<0.0010
311700839-0006										
1220-OFD-BPT-FB 1	Field Blank 1	0.00	0.1270	0	None Detected			N/A	<7.90	N/A
311700839-0007										
1220-OFD-BPT-FB 2 311700839-0008	Field Blank 2	0.00	0.1270	0	None Detected			N/A	<7.90	N/A

Anal	yst((s)

William Bradford (8)

Shannon Ferguson, Laboratory Manager or other approved signatory

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

Initial Report From: 12/28/2017 13:26:45



EMSL Order: 041736425 **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:
 12/22/2017 10:55 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/24/2017 - 12/26/2017

Oroville, CA 95965 Collected Date: 12/20/2017

Project: 2017.12.20 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)
1220-OFD-LRP-01	WP009A AM Launch Ramp Parking	1898.60	0.2060	0	None Detected		·	0.0010	<4.80	<0.0010
041736425-0001										
1220-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1904.00	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736425-0002	•									
1220-OFD-LRP-03	WP009A PM Launch Ramp Parking	1945.80	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736425-0003										
1220-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	1953.00	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736425-0004	•									
1220-OFD-LRP-FB 1	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
041736425-0005										
1220-OFD-LRP-FB 2 041736425-0006	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

Analyst(s)	
Matthew Dare (6)	

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/27/2017 08:08:28



EMSL Order: 051705733 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

Received Date:

Trailer #2 / Safety Mgmt Systems Oroville, CA 95965

Project: Oroville EM OP-2017/ 12-21 Upper Area (Oroville EM OP)

Fax:

12/23/2017 10:20 AM

Analysis Date: 12/28/2017 Collected Date: 12/21/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1221-OFD-PMT-01 051705733-0001	WP246 AM Intake Yard	1947.60	0.1980	0	None Detected		0.0010	<5.00	<0.0010
1221-OFD-PMT-02	WP247 AM Upper Overlook Entry	1935.90	0.2110	0	None Detected		0.0009	<4.70	<0.0009
051705733-0002									
1221-OFD-PMT-03	WP248 AM Upper Overlook	1948.50	0.1980	4	None Detected		0.0010	<5.00	<0.0010
051705733-0003									
Non-asbestos structures	s reported above include a contribution	n from non-regula	ated amphiboles	3.					
1221-OFD-PMT-04 051705733-0004	WP249 AM Canyon Drive	1909.90	0.2110	6	None Detected		0.0010	<4.70	<0.0010
Non-asbestos structures	s reported above include a contribution	n from non-regula	ated amphiboles	S.					
1221-OFD-PMT-05 051705733-0005	WP246 PM Intake Yard	1922.40	0.2110	1	None Detected		0.0010	<4.70	<0.0010
1221-OFD-PMT-06	WP247 PM Upper Overlook Entry	1928.70	0.2110	1	None Detected		0.0009	<4.70	<0.0010
051705733-0006									
1221-OFD-PMT-07	WP248 PM Upper Overlook	1926.00	0.2110	1	None Detected		0.0009	<4.70	<0.0010
051705733-0007									
1221-OFD-PMT-08 051705733-0008	WP249 PM Canyon Drive	1947.60	0.1980	0	None Detected		0.0010	<5.00	<0.0010
1221-OFD-PMT-FB 1	Field Blank 1	0.00	0.1240	0	None Detected		N/A	<8.10	N/A
051705733-0009									
1221-OFD-PMT-FB 2 051705733-0010	Field Blank 2	0.00	0.1240	0	None Detected		N/A	<8.10	N/A

Anaiy	St(s	S)	
	_		 ,

Susan Pollack (10)

Chaiyut Sae Lao, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Piscataway, NJ NYS ELAP 11423, NVLAP Lab Code 101048-2, NJ NELAC 12037, Philadelphia 289

Initial report from: 12/28/2017 14:38:58



LA Testing

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: 331725839 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: 2017.12.21 Diversion Dam (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/23/2017 9:20 AM

Analysis Date: 12/28/2017 - 12/29/2017

Collected Date: 12/21/2017

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

		Volume	Area Analyzed	Non	Asbestos	#Structures	Analytical Sensitivity	estos ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1221-OFD-TPT-01	WP278 AM N. Diversion Dam	1945.80	0.2090	0	None Detected		0.0009	<4.80	<0.0010
331725839-0001									
1221-OFD-TPT-02	WP019 AM E. Diversion Dam	1938.60	0.2090	0	None Detected		0.0010	<4.80	<0.0010
331725839-0002									
1221-OFD-TPT-03 331725839-0003	WP020A AM SE Canal	1941.30	0.2090	3	None Detected		0.0009	<4.80	<0.0010
1221-OFD-TPT-04 331725839-0004	WP021A AM SW Canal	1944.00	0.2090	0	None Detected		0.0009	<4.80	<0.0010
1221-OFD-TPT-05 331725839-0005	WP281 AM Cherokee Rd.	1961.10	0.1970	0	None Detected		0.0010	<5.10	<0.0010
1221-OFD-TPT-06	WP278 PM N. Diversion Dam	1917.90	0.2090	1	None Detected		0.0010	<4.80	<0.0010
331725839-0006									
1221-OFD-TPT-07	WP019A PM E Diversion Dam	1929.60	0.2090	0	None Detected		0.0010	<4.80	<0.0010
331725839-0007									
1221-OFD-TPT-08 331725839-0008	WP020A PM SE Canal	1936.80	0.2090	0	None Detected		0.0010	<4.80	<0.0010
1221-OFD-TPT-09 331725839-0009	WP021A PM SW Canal	1934.10	0.2090	0	None Detected		0.0010	<4.80	<0.0010
1221-OFD-TPT-10 331725839-0010	WP281 PM Cherokee Rd.	1939.40	0.2090	0	None Detected		0.0009	<4.80	<0.0010
1221-OFD-TPT-FB	Field Blank 1	0.00	0.1230	0	None Detected		N/A	<8.10	N/A
331725839-0011									
1221-OFD-TPT-FB 2 331725839-0012	Field Blank 2	0.00	0.1230	0	None Detected		N/A	<8.10	N/A

Initial Report From: 12/29/2017 12:48:46



LA Testing

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: 331725839 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: 2017.12.21 Diversion Dam (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/23/2017 9:20 AM

Analysis Date: 12/28/2017 - 12/29/2017

Collected Date: 12/21/2017

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)

Christopher Miranda (3) Jeffrey Deboo (8) Larry Kolk (1)

Michael DeCavallas, Laboratory Manager or other approved signatory

LA Testing is not responsible for data reported in structures /cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above and may not be reproduced except in full, without written approval by LA Testing. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. LA Testing bears no responsibility for sample collection activities or analytical method limitations. Sample received in acceptable condition unless otherwise noted. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by LA Testing Huntington Beach, CA NVLAP Lab Code 101384-0

Initial Report From: 12/29/2017 12:48:46



EMSL Order: 051705734 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: Oroville EM OP-2017/ 12-21 Burma Road (Oroville EM OP)

Fax:

Received Date: 12/23/2017 10:20 AM

Analysis Date: 12/27/2017 Collected Date: 12/21/2017

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

		Area Volume Analyzed Non Asbestos #				#Structu	ıres	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	20.5µ < 5	oo ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1221-OFD-BPT-01	WP017A AM Burma Rood 01	1931.40	0.2110	5	None Detected		- •	0.0009	<4.70	<0.0010
051705734-0001										
1221-OFD-BPT-02	WP036A AM Burma Road 02	1931.40	0.2110	0	Actinolite	1	1	0.0009	9.50	0.0019
051705734-0002										
1221-OFD-BPT-03	WP037A AM Burma Road 03	1948.50	0.1980	2	None Detected			0.0010	<5.00	<0.0010
051705734-0003										
1221-OFD-BPT-04	WP017A PM Burma Rood 01	1941.30	0.1980	0	None Detected			0.0010	<5.00	<0.0010
051705734-0004										
1221-OFD-BPT-05	WP036A PM Burma Road 02	1941.30	0.1980	3	None Detected			0.0010	<5.00	<0.0010
051705734-0005										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1221-OFD-BPT-06	WP037A PM Burma Road 03	1941.30	0.1980	4	Actinolite	0	1	0.0010	5.00	0.0010
051705734-0006										
1221-OFD-BPT-FB 1 051705734-0007	Field Blank 1	0.00	0.1240	1	None Detected			N/A	<8.10	N/A
1221-OFD-BPT-FB 2 051705734-0008	Field Blank 2	0.00	0.1240	0	None Detected			N/A	<8.10	N/A

Analyst(s)	

Colin Slattery (8)

Chaiyut Sae Lao, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Piscataway, NJ NYS ELAP 11423, NVLAP Lab Code 101048-2, NJ NELAC 12037, Philadelphia 289

Initial report from: 12/27/2017 19:29:09



LA Testing

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: 331725842 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: 2017.12.21 - Launch Ramp (Oroville EM OP)

Phone: (661) 699-9375

Fax:

Received Date: 12/23/2017 9:20 AM

Analysis Date: 12/27/2017 - 12/28/2017

Collected Date: 12/21/2017

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

		Area Volume Analyzed Non Asbestos #\$				#Structi	ures	Analytical Sensitivity	estos entration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1221-OFD-LRP-01	WP009A AM Launch Ramp Parking	1965.60	0.1970	0	None Detected		·	0.0010	<5.10	<0.0010
331725842-0001										
1221-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1974.70	0.1970	0	None Detected			0.0010	<5.10	<0.0010
331725842-0002										
1221-OFD-LRP-03	WP009A PM Launch Ramp Parking	1927.80	0.2090	0	None Detected			0.0010	<4.80	<0.0010
331725842-0003										
1221-OFD-LRP-04	WP010A PM Luanch Ramp Turnaround	1918.00	0.2090	0	None Detected			0.0010	<4.80	<0.0010
331725842-0004										
1221-OFD-LRP-FB 1	Field Blank 1	0.00	0.1230	0	None Detected			N/A	<8.10	N/A
331725842-0005										
1221-OFD-LRP-FB 2	Field Blank 2	0.00	0.1230	0	None Detected			N/A	<8.10	N/A
331725842-0006										

Analyst(s)

Jeffrey Deboo (2) Larry Kolk (4)

Michael DeCavallas, Laboratory Manager or other approved signatory

LA Testing is not responsible for data reported in structures /cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above and may not be reproduced except in full, without written approval by LA Testing. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. LA Testing bears no responsibility for sample collection activities or analytical method limitations. Sample received in acceptable condition unless otherwise noted. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by LA Testing Huntington Beach, CA NVLAP Lab Code 101384-0

Initial Report From: 12/28/2017 10:09:30



EMSL Order: 041736570 **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: 12/24/2017 9:30 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017
Oroville, CA 95965 Collected Date: 12/22/2017

Project: 2017.12.22 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	#Structures	Analytical Sensitivity		estos entration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5 ≥5µ	(S/cc)	(S/mm²)	(S/cc)
1222-OFD-PMT-01	WP246 AM Intake Yard	1906.20	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0001									
1222-OFD-PMT-02	WP247 AM Upper Overlook Entry	1911.60	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0002									
1222-OFD-PMT-03	WP248 AM Upper Overlook	1908.90	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0003									
1222-OFD-PMT-04 041736570-0004	WP249 AM Canyon Drive	1916.00	0.2060	0	None Detected		0.0010	<4.80	<0.0010
1222-OFD-PMT-05	WP246 PM Intake Yard	1957.50	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0005									
1222-OFD-PMT-06	WP247 PM Upper Overlook Entry	1949.40	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0006	•								
1222-OFD-PMT-07	WP248 PM Upper Overlook	1950.30	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0007									
1222-OFD-PMT-08	WP249 PM Canyon Drive	1947.60	0.2060	0	None Detected		0.0010	<4.80	<0.0010
041736570-0008									
1222-OFD-PMT-FB	Field Blank 1	0.00	0.1290	0	None Detected		N/A	<7.80	N/A
041736570-0009									
1222-OFD-PMT-FB 2 041736570-0010	Field Blank 2	0.00	0.1290	0	None Detected		N/A	<7.80	N/A

Ana	lyst((s)

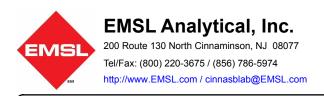
William Nguyen (10)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/27/2017 13:47:02



EMSL Order: 041736571 **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: 2017.12.22 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/24/2017 9:30 AM

Analysis Date: 12/27/2017 **Collected Date**: 12/22/2017

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

		Area Volume Analyzed Non Asbest			Asbestos	#Structu	ıres	Analytical Sensitivity	Asb Conce	(S/cc) (S/cc) (0.0010 (0.0010 (0.0010 (0.0010 (0.0010 (0.0010		
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5		(S/cc)	(S/mm²)			
1222-OFD-TPT-01	WP278 AM N Diversion Dam	1934.90	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
041736571-0001												
1222-OFD-TPT-02	WP019A AM E Diversion Dam	1930.50	0.2060	1	None Detected			0.0010	<4.80	<0.0010		
041736571-0002												
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.									
1222-OFD-TPT-03 041736571-0003	WP020A AM SE Canal	1943.10	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
1222-OFD-TPT-04 041736571-0004	WP021A AM SW Canal	1927.80	0.2060	0	Actinolite	0	1	0.0010	4.80	0.00097		
1222-OFD-TPT-05 041736571-0005	WP281 AM Cherokee Rd	1926.80	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
1222-OFD-TPT-06	WP278 PM N Diversion Dam	1925.10	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
041736571-0006												
1222-OFD-TPT-07	WP019A PM E Diversion Dam	1936.80	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
041736571-0007												
1222-OFD-TPT-08 041736571-0008	WP020A PM SE Canal	1941.30	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
1222-OFD-TPT-09 041736571-0009	WP021A PM SW Canal	1944.00	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
1222-OFD-TPT-10 041736571-0010	WP281 PM Cherokee Rd	1949.40	0.2060	0	None Detected			0.0010	<4.80	<0.0010		
1222-OFD-TPT-FB 1 041736571-0011	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A		
1222-OFD-TPT-FB 2 041736571-0012	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A		

Initial Report From: 12/27/2017 10:36:46



EMSL Order: 041736571 **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: 12/24/2017 9:30 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017
Oroville, CA 95965 Collected Date: 12/22/2017

Project: 2017.12.22 Diversion Dam (Oroville EM OP)

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

			Area				Analytical	Asbe	stos	
		Volume	Analyzed	Non	Asbestos	#Structures	Sensitivity	Concen	tration	
Sample	Location	(Liters)	(mm²)	Asb	Types	>0.5u < 5 >5u	(S/cc)	(S/mm²)	(S/cc)	

Analyst(s)

William Nguyen (12)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/27/2017 10:36:46



EMSL Order: 041736572 **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: 12/24/2017 9:30 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017
Oroville, CA 95965 Collected Date: 12/22/2017

Project: 2017.12.22 Burma Rd (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	res	Sensitivity	Conce	ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1222-OFD-BPT-01	WP017A AM Burma Road	1928.70	0.2060	0	None Detected			0.0010	<4.80	<0.0010
	01									
041736572-0001										
1222-OFD-BPT-02	WP036A AM Burma Road 02	1921.60	0.2060	2	None Detected			0.0010	<4.80	<0.0010
041736572-0002										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1222-OFD-BPT-03	WP037A AM Burma Road 03	1918.90	0.2060	1	None Detected			0.0010	<4.80	<0.0010
041736572-0003										
1222-OFD-BPT-04	WP017A PM Burma Road 01	1906.20	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736572-0004										
1222-OFD-BPT-05	WP036A PM Burma Road 02	1903.50	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736572-0005										
1222-OFD-BPT-06	WP037A PM Burma Road 03	1903.50	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736572-0006										
1222-OFD-BPT-FB	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
1										
041736572-0007										
1222-OFD-BPT-FB 2	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
041736572-0008										

_/	41	nai	/St(S)
Ξ	-		

Matthew Dare (8)

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/28/2017 08:11:51



EMSL Order: 041736574 **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:
 12/24/2017 9:30 AM

 Trailer #2 / Safety Mgmt Systems
 Analysis Date:
 12/26/2017 - 12/27/2017

Oroville, CA 95965 Collected Date: 12/22/2017

Project: 2017.12.22 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	ıres	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1222-OFD-LRP-01	WP009A AM Launch Ramp Parking	1898.10	0.2060	0	None Detected		·	0.0010	<4.80	<0.0010
041736574-0001										
1222-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1893.80	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736574-0002										
1222-OFD-LRP-03	WP009A PM Launch Ramp Parking	1952.10	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736574-0003										
1222-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	1956.60	0.2060	0	None Detected			0.0010	<4.80	<0.0010
041736574-0004										
1222-OFD-LRP-FB 1	Field Blank 1	0.00	0.1290	0	None Detected			N/A	<7.80	N/A
041736574-0005										
1222-OFD-LRP-FB 2 041736574-0006	Field Blank 2	0.00	0.1290	0	None Detected			N/A	<7.80	N/A

Analyst(s)	
Matthew Dare (6)	

Benjamin Ellis, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial Report From: 12/27/2017 13:21:49



EMSL Order: 141706575 **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: 12/24/2017 9:00 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/28/2017
Oroville, CA 95965 Collected Date: 12/23/2017

Project: 2017.12.23 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	#Struct	ures	Analytical Sensitivity		estos ntration
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1223-OFD-PMT-01 141706575-0001	WP246 AM Intake Yard	1377.00	0.2930	0	None Detected			0.0010	<3.40	<0.0010
1223-OFD-PMT-02	WP247 AM Upper Overlook Entry	1385.10	0.2930	0	None Detected			0.0010	<3.40	<0.0010
141706575-0002										
1223-OFD-PMT-03	WP248 AM Upper Overlook	1387.80	0.2790	0	None Detected			0.0010	<3.60	<0.0010
141706575-0003										
1223-OFD-PMT-04 141706575-0004	WP249 AM Canyon Drive	1393.20	0.2790	0	None Detected			0.0010	<3.60	<0.0010
1223-OFD-PMT-FB 1	Field Blank 1	0.00	0.1330	0	None Detected			N/A	<7.50	N/A
141706575-0005										
1223-OFD-PMT-FB 2 141706575-0006	Field Blank 2	0.00	0.1330	0	None Detected			N/A	<7.50	N/A

Analyst(s)	
Mark Tate (6)	

ionda Mc Dee

Rhonda McGee, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Depew, NY NYS ELAP 11606, NVLAP Lab Code 200056-0

Initial Report From: 12/28/2017 14:49:25



EMSL Order: 141706574 **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: 2017.12.23 Diversion Dam (Oroville EM OP)

Fax:

Received Date: 12/24/2017 9:00 AM

Analysis Date: 12/28/2017

Collected Date: 12/23/2017

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		(S/cc)	(S/mm²)	(S/cc)
1223-OFD-TPT-01	WP278 AM N. Diversion Dam	1431.00	0.2790	1	None Detected		·	0.0010	<3.60	<0.0010
141706574-0001										
1223-OFD-TPT-02	WP019A AM E. Diversion Dam	1439.20	0.2790	0	None Detected			0.0010	<3.60	<0.0010
141706574-0002										
1223-OFD-TPT-03	WP020A AM SE Canal	1447.20	0.2790	1	None Detected			0.0010	<3.60	<0.0010
141706574-0003										
1223-OFD-TPT-04	WP021A AM SW Canal	1452.60	0.2660	0	None Detected			0.0010	<3.80	<0.0010
141706574-0004										
1223-OFD-TPT-05	WP281 AM Cherokee Rd.	1444.50	0.2790	0	None Detected			0.0010	<3.60	<0.0010
141706574-0005										
1223-OFD-TPT-FB	Field Blank 1	0.00	0.1330	0	None Detected			N/A	<7.50	N/A
141706574-0006										
1223-OFD-TPT-FB	Field Blank 2	0.00	0.1330	0	None Detected			N/A	<7.50	N/A
2 141706574-0007										

Analyst(s)	
Mark Tate (7)	

honda Mc Lee

Rhonda McGee, Laboratory Manager or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Depew, NY NYS ELAP 11606, NVLAP Lab Code 200056-0

Initial Report From: 12/28/2017 11:06:59



EMSL Order: 341713588 **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: 12/24/2017 9:00 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017
Oroville, CA 95965 Collected Date: 12/23/2017

Project: 2017.12.23 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	ıres	Analytical Sensitivity	Asbestos Concentration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1223-OFD-BPT-01	WP017A AM Burma Road 01	1703.70	0.2280	1	None Detected			0.0010	<4.40	<0.0010
341713588-0001										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1223-OFD-BPT-02	WP036A AM Burma Road 02	1707.30	0.2280	0	None Detected			0.0010	<4.40	<0.0010
341713588-0002										
1223-OFD-BPT-03	WP037A AM Burma Road 03	1710.00	0.2280	1	None Detected			0.0010	<4.40	<0.0010
341713588-0003										
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1223-OFD-BPT-FB 1	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713588-0004										
1223-OFD-BPT-FB 2	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713588-0005										

Analyst(s)	
Gerald Jannuzzi (5)	

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0



EMSL Order: 341713585 **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: 12/24/2017 9:00 AM

Trailer #2 / Safety Mgmt Systems Analysis Date: 12/27/2017
Oroville, CA 95965 Collected Date: 12/23/2017

Project: 2017.12.23 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		estos ntration	
Sample	Location	(Liters)	(mm²)	Asb	Types	≥0.5µ < 5	≥5µ	(S/cc)	(S/mm²)	(S/cc)
1223-OFD-LRP-01	WP009A AM Launch Ramp Parking	1377.00	0.2810	2	None Detected			0.0010	<3.60	<0.0010
341713585-0001										
1223-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1379.70	0.2810	4	None Detected			0.0010	<3.60	<0.0010
341713585-0002	•									
Non-asbestos structures	s reported include a contribution from	non-regulated an	nphiboles.							
1223-OFD-LRP-FB	Field Blank 1	0.00	0.1340	0	None Detected			N/A	<7.50	N/A
341713585-0003										
1223-OFD-LRP-FB 2 341713585-0004	Field Blank 2	0.00	0.1340	0	None Detected			N/A	<7.50	N/A

Analyst(s)

Gerald lannuzzi (4)

Carlos Rivadeneyra, Laboratory Director or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0