REQUEST FOR PROPOSALS (RFP)

The City of Morgan City is interested in demolishing the Municipal Steam Plant, including all components for generation, located at 585 Myrtle Street and will received proposals on May 20, 2021 at 10:00 am in the City Hall Conference Room, 512 First Street.

The demolition will include the building and all components (piping, valves, turbines, generators, walkways, electrical, overhead cranes, blowers, air compressors, boilers, etc. The parking lot must not be damaged. There is a minimum bid of \$250,000. NOTE: There is some asbestos on the apparatuses and a complete report is attached.

The intent of this RFP is to totally demolish the steam plant with as little effect possible on the surrounding areas. The city will remove all cement, bricks, but the contractor must not leave any debris on the site. A \$50,000 cash or bond deposit must be presented to ensure debris is removed.

Anyone interested in submitting such a proposal must do so, in writing, no later than the abovementioned time. Any proposal received after this time will be returned unopened.

Vendor must submit, for evaluation, a detailed proposal. A site visit will be necessary and can be set up by contacting Bill Cefalu at 985-397-1445 or by email to <u>b.cefalu@cityofmc.com</u>.

CITY OF MORGAN CITY

Lee Dragna Mayor

PUBLISH:

April 20, 2021 May 4, 2021 May 11, 2021















































































































FED Environmental LLC

24215 Jase St Plaquemine, LA 70764 1-833-333-2019 www.fedenvironmental.com

April 15, 21

Mr. Cefalu,

FED Environmental has completed the inspection and lab testing of both the steam plant and the diesel plant looking at all suspect asbestos materials to help eliminate addional cost for remediation while preparing our proposal to you.

There were 224 tests performed in the Steam Plant of which 94 came back positive and we performed 12 tests at the Diesel Plant of which 9 came back positive. Please reference attached lab results along with our sketches and pictures of the tested areas.

We will provide you a competitive estimate to remove all asbestos that has tested positive in both the Steam Plant and Diesel Plant and will have that to you by Friday March 8⁴.

The estimate will be broken in to the following sections:

- Asbestos Removal of all Asbestos inside and outside of the Steam Plant
- Removal of Transite from all 3 cooling Towers
- Asbestos Removal from the Diesel Plant
- Transite Roof Removal from the Diesel Plant

We anticipate that all this can be completed in less than 60 days and look forward to discussing this further.

Sincerely;

James W Foster

President

CA Labs, L.L.C.

12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

FED Environmental

24215 Jase St. Plaquemine, LA 70764 Attn: James FosterCustomer Project:MC2019 Steam PlantReference #:CBR19031081

Date:

3/6/2019

Analysis and Method

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated of asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found be PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one these disciplines .Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. This report is not covered by the scope of AIHA accreditation. Analysis performed at CA Labs, LLC 12232 Industriplex, Suite 32 Baton Rouge, LA 70809.

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types
4	1	White Fibrous Insulation with Tan Debris	Trace Chrysotile	White Fik	prous Insulation with Tan Debr sulation
8	1	White Insulation	14% Amosite 6% Chrysotile	Red Debris White Wrap Silver and Blue Surfaced White In Bod Surfaced White Weyen Wrap	'is ap d Blue Surfaced White Insulat
9	2	Red Debris	10% Chrysotile	Green Flo Black Ma	oor Tile stic
10	1	White Wrap	40% Chrysotile	-	
11	1	White Insulation	14% Amosite 6% Chrysotile	_	
12	1	Silver and Blue Surfaced White Insulation	10% Chrysotile	-	
13	1	White Insulation	15% Amostie 10% Chrysotile	_	
14	1	Red Surfaced White Woven Wrap	45% Chrysotile	_	

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate pe - perlite fg - fiberglass gypsum - gypsum qu - quartz mw - mineral wool bi - binder wo - wollastinite or - organic ta - talc ma - matrix sy - synthetic mi - mica ce - cellulose ve - vermiculite br - brucite ot - other ka - kaolin (clay)

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pa - palygorskite (clay)

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Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project	:	MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building rial Types
15	1	White Wrap	40% Chrysotile	_	
16	1	White Insulation	15% Amostie 10% Chrysotile	_	
17	1	Green Floor Tile	3% Chrysotile	_	
	2	Black Mastic	4% Chrysotile	_	
26	1	Gray Floor Tile	4% Chrysotile	_	
	2	Black Mastic	6% Chrysotile	_	
30	1	White Insulation	14% Amosite 6% Chrysotile	_	
31	1	Tan Insulation	45% Amosite		

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum bi - bindor	qu - quartz	mw - mineral wool	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	cted Building ial Types

32	1	Tan Insulation	45% Amosite
33	1	Tan Insulation	45% Amosite
			15% Amosite
34	1	White Insulation	10% Chrysotile
35	1	Tan Insulation	45% Amosite
36	1	Tan Insulation	45% Amosite
			15% Amosite
37	1	White Insulation	10% Chrysotile
			14% Amosite
38	2	White Insulation	6% Chrysotile
			15% Amosite
39	1	White Insulation	10% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Proj	ject:	MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types
40	1	White Insulation	15% Amosite 10% Chrysotile	_	
42	1	White Insulation	14% Amosite 6% Chrysotile	_	
43	1	Tan Floor Tile	2% Chrysotile	_	
	2	Black Mastic	6% Chrysotile	_	
45	1	Tan Insulation	45% Amosite	_	
46	1	Tan Insulation	45% Amosite	_	
47	1	White Insulation	15% Amosite 10% Chrysotile	_	
49	2	White and Tan Insulation	10% Chrysotile		

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate pe - perlite fg - fiberglass pa - palygorskite (clay) mw - mineral wool gypsum - gypsum qu - quartz wo - wollastinite bi - binder ta - talc or - organic ma - matrix sy - synthetic mi - mica ce - cellulose ve - vermiculite br - brucite ka - kaolin (clay) ot - other

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Materi	cted Building al Types

		15% Amosite
51	1 White Insulation	10% Chrysotile
		15% Amosite
53	1 White Insulation	10% Chrysotile
		15% Amosite
54	1 White Insulation	10% Chrysotile
		15% Amosite
55	1 White Insulation	10% Chrysotile
		15% Amosite
56	1 White Insulation	10% Chrysotile
		15% Amosite
57	1 White Insulation	10% Chrysotile
		15% Amosite
58	1 White Insulation	10% Chrysotile
		15% Amosite
59	1 White Insulation	10% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:	MC2019 Steam Plant		CA Labs Project #:	CBR19031081	
Sample # Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types	

<u> </u>		15% Amosite
60	1 White Insulation	10% Chrysotile
61	1 White Insulation	15% Amosite 10% Chrysotile
62	1 Tan Insulation	45% Amosite
63	1 White Insulation	15% Chrysotile
65	1 White Insulation	15% Chrysotile
68	1 White Insulation	15% Chrysotile
72	1 White Insulation	20% Amosite
73	1 White Insulation	5% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Materi	cted Building al Types

74	1	White Insulation	5% Chrysotile
75	1	White Insulation	20% Chrysotile
76	1	White Insulation	20% Chrysotile
78	1	White Insulation	20% Chrysotile
			15% Amosite
79	1	White Insulation	5% Chrysotile
122	1	White Sealant on Mesh	5% Chrysotile
123	1	No Sample Submitted	
124	1	No Sample Submitted	

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass
gypsum - gypsum bi - binder	qu - quartz	mw - mineral wool wo - wollastinite
or - organic		ta - talc
ma - matrix		sy - synthetic
mi - mica		ce - cellulose
ve - vermiculite		br - brucite
ot - other		ka - kaolin (clay)

pa - palygorskite (clay)

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127

128

130

132

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #: CBR19031081	
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building rial Types
125	1	No Sample Submitted		_	
126	1	No Sample Submitted			

10% Chrysotile

15% Chrysotile

6% Chrysotile

5% Chrysotile

40% Amosite

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

1

1

1

1

1

1

No Sample Submitted

White Insulation

White Insulation

Black and Tan Debris

Black and White Debris

Tan Surfaced White Insulation

ca - carbonate	pe - perlite	fg - fiberglass
gypsum - gypsum	qu - quartz	mw - mineral wool
bi - binder		wo - wollastinite
or - organic		ta - talc
ma - matrix		sy - synthetic
mi - mica		ce - cellulose
ve - vermiculite		br - brucite
ot - other		ka - kaolin (clay)

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pa - palygorskite (clay)

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types

137	1	White Insulation	20% Amosite
138	2	White Insulation	15% Amosite 5% Chrysotile
140	2	Gray Insulation	20% Chrysotile
141	2	White Insulation	10% Amosite 10% Chrysotile
142	2	White Insulation	10% Amosite 10% Chrysotile
143	2	White Insulation	10% Amosite 10% Chrysotile
144	1	Gray Insulation	20% Chrysotile
145	1	Yellow Surfaced Gray Insulation	20% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate gypsum - gypsum bi - binder	pe - perlite qu - quartz	fg - fiberglass mw - mineral wool wo - wollastinite
or - organic		ta - talc
ma - matrix		sy - synthetic
mi - mica		ce - cellulose
ve - vermiculite		br - brucite
ot - other		ka - kaolin (clay)

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pa - palygorskite (clay)

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Overview of Project Sample Material Containing Asbestos

Customer Pro	ject:	MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types
146	2	White Insulation	10% Amosite 10% Chrysotile	_	
147	1	Gray Insulation	20% Amosite	_	
148	1	Gray Insulation	20% Amosite	_	
152	1	Red Floor Tile	2% Chrysotile	_	
158	1	Gray Insulation	10% Amosite 5% Chrysotile	_	
161	1	White Insulation	20% Amosite 10% Chrysotile	_	
165	1	White Insulation	10% Chrysotile	_	
166	1	White Covering	2% Chrysotile		

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate pe - perlite fg - fiberglass gypsum - gypsum mw - mineral wool qu - quartz bi - binder wo - wollastinite ta - talc or - organic sy - synthetic ma - matrix mi - mica ce - cellulose ve - vermiculite br - brucite ka - kaolin (clay) ot - other

pa - palygorskite (clay)

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Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

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Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types

169	1	Silver Surfaced Black Covering	3% Chrysotile
172	1	Gray Covering	2% Chrysotile
177	2	White Insulation	70% Chrysotile
186	1	Tan Insulation	15% Chrysotile
188	1	White Insulation	15% Chrysotile
189	1	White Insulation	15% Chrysotile
193	1	White Insulation	10% Chrysotile
196	1	Brown Insulation	10% Amosite

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Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite
gypsum - gypsum	qu - quartz
bi - binder	
or - organic	
ma - matrix	
mi - mica	
ve - vermiculite	
ot - other	

pa - palygorskite (clay)

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fg - fiberglass

mw - mineral wool wo - wollastinite ta - talc sy - synthetic ce - cellulose br - brucite ka - kaolin (clay)

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample # La	ayer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Mater	ected Building ial Types

197 1 White Insulation		15% Chrysotile	
198	1	Gray Insulation	40% Amosite
			20% Amosite
199	1	White Insulation	10% Chrysotile
203	1	White Insulation	15% Amosite
204	1	Tan Insulation	10% Amosite
			20% Amosite
206	1	White Insulation	10% Chrysotile
212	1	White Insulation	15% Chrysotile
213	1	White Insulation	15% Chrysotile
			-

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate	pe - perlite	fg - fiberglass
gypsum - gypsum	qu - quartz	mw - mineral wool
bi - binder		wo - wollastinite
or - organic		ta - talc
ma - matrix		sy - synthetic
mi - mica		ce - cellulose
ve - vermiculite		br - brucite
ot - other		ka - kaolin (clay)

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pa - palygorskite (clay)

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Overview of Project Sample Material Containing Asbestos

Customer Project:		MC2019 Steam Plant		CA Labs Project #:	CBR19031081
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affe Materi	cted Building al Types

214	1	White Insulation	15% Chrysotile
			20% Amosite
221	1	White Insulation	10% Chrysotile
			20% Amosite
222	1	White Insulation	10% Chrysotile
			20% Amosite
223	1	White Insulation	10% Chrysotile
224	1	Silver Surfaced Black Covering	4% Chrysotile

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other

pe - perlite qu - quartz fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: Attn: James Foster FED Environmental		Custom	er Project:	CA Labs Project #: CBR19031081			
24215 Jase	e St.	704		MC2019)		
Plaquemin	e, la 70	0764		Steam F	Plant	Date:	3/6/2019
Dh	045.0	04.040		Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Fax #	615-9	81-218	30			Date Of Sampling: Purchase Order #:	03/04-05/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
1		1	Tan Woven Wrap	Y	None Detected	100% fg	
		2	White Fibrous Insulation	Y	None Detected	100% fg	
2		1	White Insulation	Y	None Detected	2% fg 2% ce	96% qu, ma, ca
3		1	White Fibrous Insulation with Red Debris	N	None Detected	95% fg	5% qu, ma
4	7	1	White Fibrous Insulation with Tan Debris	N	Trace Chrysotile	100% fg	
5		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
6		1	White Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

 ca - carbonate
 mi - mica

 gypsum - gypsum
 ve - vermiculite

 bi - binder
 ot -other

 or - organic
 pe - perlite

 ma - matrix
 qu - quartz

Kyle Hoffpauir

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

Layer not analyzed - attached to previous positive layer and contamination is suspected
 Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

7. Contamination suspected from other building materials

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Willing

Laboratory Director

Chris Williams

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

h	a				CBR19031081		
			MC2010)	OBITIOODIOOI		
 A 7076	4		Steam F	/ Plant	Date:	3/6/2019	
			Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019	
15-981	-218	6			Date Of Sampling:	03/04-05/2019	
		-			Purchase Order #:		
com La nent	ayer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
		White Fibrous Insulation with					
	1	Tan Debris	N	None Detected	95% fg	5% qu, ma	
		Mits Inculation	V	14% Amosite		80% au ma aa	
	1		Ŷ	6% Chrysothe		80% qu, ma, ca	
	1	White Fibrous Insulation	Y	None Detected	100% fg		
	2	Red Debris	Y	10% Chrysotile		90% qu, ma	
	1	White Wrap	Y	40% Chrysotile		60% qu, ma	
I	2	White Fibrous Insulation	N				
	1	White Insulation	Y	14% Amosite 6% Chrysotile		80% qu, ma, ca	
	15-981 om La ent	15-981-2184 om Layer ent # 1 1 1 2 1 2 1 2	15-981-2186 om Layer Analysts Physical Description of Subsample <i>White Fibrous Insulation with</i> <i>White Insulation</i> <i>White Insulation</i> <i>White Fibrous Insulation</i> <i>White Wrap</i> <i>White Wrap</i> <i>White Fibrous Insulation</i> <i>White Fibrous Insulation</i> <i>White Insulation</i>	Turnard 15-981-2186 om Layer Analysts Physical Description of geneous (Y/N) White Fibrous Insulation with 1 1 Tan Debris N 1 White Insulation Y 1 White Fibrous Insulation Y 1 White Insulation Y 2 Red Debris Y 1 White Wrap Y 2 White Fibrous Insulation N 1 White Fibrous Insulation Y 1 White Fibrous Insulation Y 2 Red Debris Y 1 White Wrap Y 1 White Insulation N 1 White Insulation Y	Turnaround Time: 8 hr 15-981-2186 om Layer Analysts Physical Description of geneo Homo- calibrated visual us Asbestos type / geneo # Subsample geneo calibrated visual estimate percent /// White Fibrous Insulation with 1 N None Detected 1 White Insulation Y 14% Amosite 6% Chrysotile 1 White Fibrous Insulation Y None Detected 1 White Insulation Y None Detected 2 Red Debris Y 10% Chrysotile 1 White Wrap Y 40% Chrysotile 2 White Fibrous Insulation N 1 White Insulation Y 1 White Wrap Y 40% Chrysotile 2 White Fibrous Insulation N 1 White Insulation Y	Turnaround Time: 8 hr Samples Received: Date Of Sampling: Purchase Order #: 15-981-2186 Mon-adjust Physical Description of ent # Homo-Asbestos type / geneo calibrated visual us estimate percent Non-adjust Physical Description of type / percent Non-adjust Physical Description of type / geneo calibrated visual us estimate percent Non-adjust Physical Description of type / percent Non-adjust Physical Description of type / geneo calibrated visual us estimate percent Non-adjust Physical Description of type / percent Non-adjust Physical Description of the fibrous Insulation Non-adjust Physical Description of the fibrous Insulation Non-adjust Physical Description of the fibrous Physical Description Non-adjust Physical Description of the fibrous Physical Description Non-adjust Physical Description Non-adjust Physical Description	

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for

identification of asbestos types by dispersion attaining / becke line method. mi - mica fg - fiberglass ce - cellulose

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

ve - vermiculite

ot -other

pe - perlite

qu - quartz

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

br - brucite

ka - kaolin (clay)

pa - palygorskite (clay)

6. Anthophyllite in association with Fibrous Talc

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Villes

Laboratory Director

Chris Williams

9. < 1% Result point counted positive

10. TEM analysis suggested

Page 16 of 53

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: Attn:		Attn:	t n: James Foster		er Project:	CA Labs Project #:	
FED Envi	ironme	ental				CBR19031081	
24215 Jase	e St.			MC2019)		
Plaquemin	e, LA 70	0764		Steam F	Plant	Date:	3/6/2019
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone # 615-981-2186				Date Of Sampling:	03/04-05/2019		
Fax #						Purchase Order #:	
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	ment	#	Subsample	geneo	calibrated visual	type / percent	/ percent
				(Y/N)	estimate percent		
			Silver and Blue Surfaced White	.,		=0/	85% qu, ma, bi,
12		1	Insulation	N	10% Chrysotile	5% WO	са
					15% Amostie		750/
13		1	White Insulation	Ŷ	10% Chrysotile		75% qu, ma, ca
11		4	Red Suffaced White Woven		150/ Chrusstile		EE ⁰ / au ma ao
14		1	wrap	IN	45% Chrysotile		55% qu, ma, ca
15		1	White Wrap	Y	40% Chrysotile		60% qu, ma, ca
	4	2	White Fibrous Insulation	N			
					15% Amostie		
16		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
17		1	Green Floor Tile	Y	3% Chrysotile		97% qu, ma, ca
					-		•

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Kyle Hoffpauir Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Villes

Laboratory Director

Chris Williams

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: Attn:		Attn:	t n: JamesFoster		er Project:	CA Labs Project #:	
FED Envi	ronme	ental				CBR19031081	
24215 Jase	3 51. 3 1 A 70	1764		MC2019)	Data	2/6/2010
	5, LA A			Steam F	viant	Date:	3/6/2019
Phone #	615-0	081-219	36	Turnarc	ound nine. on	Samples Received:	03/04_05/2019
Fax #	015-8	01-210	00			Purchase Order #:	03/04-03/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
		2	Black Mastic	Y	4% Chrysotile		96% qu, bi
18		1	White Drywall with Paper	Ν	None Detected	10% ce	90% qu, gy
19		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
20		1	Green Ceramic Tile	Y	None Detected		100% qu, ma, ca, ot
21		1	Black Surfaced Brown Paneling	Ν	None Detected	90% ce	10% qu, bi
22		1	Gray Plaster	Y	None Detected		100% qu, ma, ca
23		1	Tan Carpet	Y	None Detected	80% sy	20% qu, ma

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

pa - palygorskite (clay) sy - synthetic

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality **CA Labs, L.L.C.** 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

_____L

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Custom	er Project:	CA Labs Project #:		
24215 Jase St. Plaquemine, LA 70764)	00113031001		
					/ Plant	Date:	3/6/2019	
					ound Time: 8 hr	Samples Received:	3/6/2019	
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019	
Fax #						Purchase Order #:		
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type	
	ment	#	Subsample	geneo us (Y/N)	calibrated visual estimate percent	type / percent	/ percent	
		2	Tan and Prown Mastin	Ν	Nono Dotoctod		100% au av bi	
		2	Tan and Brown Mastic	IN	None Delected		100% qu, gy, bi	
24		1	White Surfacing	Y	None Detected		100% qu, bi	
						15% fg		
		2	Tan Ceiling Tile	Y	None Detected	50% ce	35% qu, pe	
25		1	White Cove Base	Y	None Detected		100% qu, ma	
		2	Tan Mastic	Y	None Detected		100% qu, bi	
26		1	Gray Floor Tile	Y	4% Chrysotile		96% qu, ma, ca	
		0		V			040/	
		2	BIACK MASTIC	Ŷ	o% Chrysotile		94% qu, di	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

ve - vermiculite ot -other pe - perlite qu - quartz

Kyle Hoffpauir

mi - mica

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

Layer not analyzed - attached to previous positive layer and contamination is suspected
 Not enough sample to analyze

.

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

Containination suspected from other building materials
 Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Willi

Laboratory Director

Chris Williams

9. < 1% Result point counted positive

9. < 1% Result point counted positive 10. TEM analysis suggested

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Custom	er Project:	CA Labs Project #:	
<i>FED Environmental</i> 24215 Jase St. Plaquemine, LA 70764							
) Plant	Data	3/6/2019
					hund Time: 8 hr	Dale. Samples Received:	3/6/2019
Phone #	615-9	81-218	36	Turnarc		Date Of Sampling	03/04-05/2019
Fax #						Purchase Order #:	
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
27		1	Orange Fibrous Insulation	Y	None Detected	100% fg	
28		1	White Surfaced White Plaster	N	None Detected		100% qu, ma, bi, ca, gy
		2	Yellow Foam	Y	None Detected		100% ot
29		1	Tan Surfaced White Plaster	N	None Detected		100% qu, ma, bi, ca, gy
		2	Tan Plaster	Y	None Detected		100% qu, ma, ca
30		1	White Insulation	Y	14% Amosite 6% Chrysotile		80% qu, ma, ca
31		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Kyle Hoffpauir Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

7. Contamination suspected from other building materials

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Wills

Laboratory Director

Chris Williams

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer FED Env	[.] Info: vironme	Attn: ental	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase St. Plaquemine, LA 70764)		
					Plant	Date:	3/6/2019
					ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	981-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	ment	#	Subsample	geneo us (Y/N)	calibrated visual estimate percent	type / percent	/ percent
32		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca
33		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca
					15% Amosite		
34		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
35		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca
36		1	Tan Insulation	Y	45% Amosite		55% gu. ma. ca
				-			,
					15% Amosite		
37		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					-		• • •
38	4	1	Yellow and Brown Woven Wrap	Ν			

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Kyle Hoffpauir Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Senior Analyst Alicia Stretz

Chris Villes Laboratory Director

Approved Signatories:

Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

10. TEM analysis suggested

Page 21 of 53

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Customer Project:		CA Labs Project #:		
<i>FED Environmental</i> 24215 Jase St. Plaquemine, LA 70764						CBR19031081		
					9		_ /_ /	
					Plant	Date:	3/6/2019	
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019	
Phone #	615-9	981-218	36			Date Of Sampling:	03/04-05/2019	
Fax #						Purchase Order #:		
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
		2	White Insulation	Y	14% Amosite 6% Chrysotile		80% qu, ma, ca	
39		1	White Insulation	Y	15% Amosite 10% Chrysotile		75% qu, ma, ca	
40		1	White Insulation	Y	15% Amosite 10% Chrysotile		75% qu, ma, ca	
			Blue Surfaced Tan Woven	.,			4004	
41		1	Wrap	N	None Detected	60% ce	40% qu, ma, bi	
		2	Brown Fibrous Insulation	Y	None Detected	100% ce		
42		1	White Insulation	Y	14% Amosite 6% Chrysotile		80% qu, ma, ca	
43		1	Tan Floor Tile	Y	2% Chrysotile		98% qu, ma, ca	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Chris Wills

Approved Signatories:

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

pa - palygorskite (clay)

br - brucite ka - kaolin (clay)

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	James Foster	Customer Project:		CA Labs Project #:		
FED Envil	ronme	ental				CBR19031081		
Plaquemine, LA 70764)	Data	2/6/2010	
					lant	Date:	3/0/2019	
Phone #	615-0	81-219	36	Turnarc	ound nine. on	Samples Received:	03/04-05/2019	
Fax #	015-8	01-210				Purchase Order #:	03/04-05/2019	
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
		2	Black Mastic	Y	6% Chrysotile		94% qu, bi	
44		1	White Covering	Y	None Detected		100% qu, ma	
		2	Yellow Fibrous Ceiling Tile	Y	None Detected	100% fg		
45		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca	
46		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca	
47		1	White Insulation	Y	15% Amosite 10% Chrysotile		75% qu, ma, ca	
48		1	Red Surfaced Tan Woven Wrap	N	None Detected	20% ce	80% qu, ma, bi	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

Chris Wills

Approved Signatories:

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Customer Project:		CA Labs Project #:	
<i>FED Environmental</i> 24215 Jase St. Plaquemine, LA 70764						CBR19031081	
)		
					Plant	Date:	3/6/2019
				Turnaro	und Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	615-981-2186				Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	ment	#	Subsample	geneo	calibrated visual	type / percent	/ percent
				(Y/N)	estimate percent		
		2	White and Tan Insulation	Ν	None Detected	10% fg	90% qu, ma, pe
40			Red Surfaced Tan Woven				
49	4	1	wrap	IN			
							80% au ma na
		2	White and Tan Insulation	Ν	10% Chrysotile	10% fg	ca
			Blue Surfaced Tan Woven				
50		1	Wrap	Ν	None Detected	60% ce	40% qu, ma, bi
		2	Tan Insulation	Y	None Detected	40% fa	60% gu, ma, ca
						5 1 5	
					15% Amosite		
51		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
50			Yellow Surfaced Tan Woven		Nama Datastad	200/	000/
52		7	wiap	IN	None Detected	20% Ce	ou% qu, ma, bl

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

Alicia Stretz 6. Anthophyllite in association with Fibrous Talc

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

9. < 1% Result point counted positive

10. TEM analysis suggested

Chris Wills Laboratory Director

Approved Signatories:

Chris Williams
Dedicated to Quality **CA Labs, L.L.C.** 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environmen		Attn: James Foster			er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019			
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
				Turnaro	und Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	6			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample	#	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	Com	#	Subsample	geneo	calibrated visual	type / percent	/ percent
	ment			us (Y/N)	estimate percent		
		2	White and Tan Insulation	Ν	None Detected	10% fg	90% qu, ma, pe
					15% Amosite		
53		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					15% Amosite		
54		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					15% Amosite		
55		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					15% Amosite		
56		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					15% Amosita		
57		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
					1Eg/ Amonita		
58		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected

Ease for analyzed - attached to previous post
 Not enough sample to analyze

fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic becke line method. ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz Laboratory Director Chris Williams

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	JamesFoster	Custom	er Project:	CA Labs Project #:	
FED Env	ironme	ental				CBR19031081	
24215 Jase	e St.	764		MC2019		D /	2/0/2010
Flaquemin	e, la 70	1704		Steam F	'lant	Date:	3/6/2019
Dhana #		04 040		Turnaro	ound lime: 8 nr	Samples Received:	3/6/2019
Find the mono-		001-210	30			Date Of Sampling:	03/04-05/2019
Sample #	Com	Laver	Analysts Physical Description of	Homo-	Ashestos type /	Non-asbestos fiber	Non-fibrous type
	ment	#	Subsample	geneo us (Y/N)	calibrated visual estimate percent	type / percent	/ percent
59		1	White Insulation	Y	15% Amosite 10% Chrysotile		75% qu, ma, ca
					•		• • •
					15% Amosite		
60		1	White Insulation	Y	10% Chrysotile		75% qu, ma, ca
61		1	White Insulation	Y	15% Amosite 10% Chrysotile		75% qu, ma, ca
62		1	Tan Insulation	Y	45% Amosite		55% qu, ma, ca
63		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca
64		4	White Fibrous Insulation	V	None Detector	1000/ fa	
04		1		Ŷ		100% lg	
65		1	White Insulation	Y	15% Chrvsotile		85% gu, ma, ca
				-			

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Kyle Hoffpauir

mi - mica

ot -other pe - perlite

qu - quartz

ve - vermiculite

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst Alicia Stretz

Approved Signatories:

Chris Wills

Laboratory Director

Chris Williams

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environmer		Attn: <i>ntal</i>	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081		
24215 Jase	St.	704		MC2019)		- /- /	
Plaquemine	, LA 70	0764		Steam F	Plant	Date:	3/6/2019	
Dhana #	C45 C	04 040		Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019	
Filone # Fax #	Fax #		00			Date Of Sampling: Purchase Order #:	03/04-03/2019	
Sample #		Layer #	Analysts Physical Description of Subsample	Homo- geneo us	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
	ment			(Y/N)				
66		1	White Fibrous Insulation	Y	None Detected	100% fg		
67		1	White Insulation	Y	None Detected	10% ce	90% qu, ma, ca	
68		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca	
69		1	Tan Wrap	Y	None Detected	100% ce		
		2	White Insulation	Y	None Detected	10% ce	90% qu, ma, ca	
70		1	White Fibrous Insulation	Y	None Detected	100% fg		
71		1 T.	an Insulation	Y	None Detected	2% fa	98% au ma ca	
		, 10		'		= / · · · 9	0070 qu, mu, ou	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate mi - mica ve - vermiculite gypsum - gypsum bi - binder ot -other

Kyle Hoffpauir

Analyst

pe - perlite

qu - quartz

ta - talc sy - synthetic

fg - fiberglass mw - mineral wool wo - wollastinite

ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

or - organic

ma - matrix

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

10. TEM analysis suggested

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environmen		Attn: Intal	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase Plaguemine	e St. e, LA 70)764		MC2019 Steam F) Plant	Date:	3/6/2019
·				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone # 615- Fax #		81-218	36			Date Of Sampling: Purchase Order #:	03/04-05/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
72		1	White Insulation	Y	20% Amosite		80% qu, ma, ca
73		1	White Insulation	Y	5% Chrysotile	2% ce 5% fg	88% qu, ma, ca
74		1	White Insulation	Y	5% Chrysotile	2% ce 5% fg	88% qu, ma, ca
75		1	White Insulation	Y	20% Chrysotile		80% qu, ma, ca
76		1	White Insulation	Y	20% Chrysotile		80% qu, ma, ca
77		1	White Insulation	Y	None Detected	2% ce	98% qu, ma, ca
78		1	White Insulation	Y	20% Chrysotile		80% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Sidney Pinkerton

Analyst 1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Willing

Laboratory Director

Chris Williams

10. TEM analysis suggested

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	JamesFoster	Custom	er Project:	CA Labs Project #:		
FED Envi	ronme	ental				CBR19031081		
24215 Jase	e St.	764		MC2019)	D /	3/6/2019	
Flaquemine	e, LA 70	704		Steam F	Plant	Date:		
Dhana #	615.0	04 040	26	Turnard	ouna lime: 8 nr	Samples Received:	3/0/2019	
Find #	010-8	01-210	00			Purchase Order #:	03/04-05/2019	
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
79		1	White Insulation	Y	15% Amosite 5% Chrysotile		80% qu, ma, ca	
80		1	White Fibrous Insulation	Y	None Detected	100% fg		
81		1	Yellow Fibrous Insulation	Y	None Detected	100% fg		
82		1	White Insulation	Y	None Detected	5% sy 5% fg	90% qu, ma, ca	
							<u>, , , , , , , , , , , , , , , , , </u>	
83		1	Black Sealant	Y	None Detected	10% fg	90% qu, ma	
		2	Yellow Fibrous Insulation	Y	None Detected	100% fg		
84		1	Tan Insulation	Y	None Detected	5% fg	95% qu, pe, ma	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Sidney Pinkerton

Analyst

Alicia Stretz 6. Anthophyllite in association with Fibrous Talc

Senior Analyst

Laboratory Director Chris Williams

Chris Wills

Approved Signatories:

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	James Foster	Custom	er Project:	CA Labs Project #:	
FED Envi	ronme	ental				CBR19031081	
Plaquemine	יסו. 1 A 70 מ	0764		MC2019) Nont	Deter	3/6/2019
riaquoriint	, _, , , , , , ,			Steam F	riant	Date:	
Phone #	615-9	81-218	36	Turnare	und nine. om	Date Of Sampling	03/04-05/2019
Fax #	0.00	0				Purchase Order #:	00,0100,2010
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
85		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
86		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
87		1	Yellow and Black Fibrous Insulation	Ν	None Detected	100% fg	
88		1	White Fibrous Insulation	Y	None Detected	100% fg	
89		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
90		1	Tan Insulation	Y	None Detected	2% fg	98% qu, pe, ma
91		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

pe - perlite qu - quartz

mi - mica

ot -other

ve - vermiculite

Sidney Pinkerton

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Willing

Laboratory Director

Chris Williams

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: <i>ntal</i>	JamesFoster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.	man		MC2019)		
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
				Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #		Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
Com		#	Subsample	us estimate percent		type / percent	/ percent
ment				(Y/N)			
92		1	Tan Insulation	Y	None Detected	2% fg	98% qu, pe, ma
93		1	Tan Insulation	Y	None Detected	5% ce	95% qu, ma, ca
94		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
95		1	White Insulation	Y	None Detected		100% qu, ma, ca
96		1	White Insulation	Y	None Detected	10% ce	90% qu, ma, ca
97		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
98		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite

ot -other

pe - perlite

qu - quartz

Sidney Pinkerton

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

ce - cellulose

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

10. TEM analysis suggested

Chris Willi Laboratory Director

Chris Williams

Approved Signatories:

Senior Analyst

Alicia Stretz

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: <i>ntal</i>	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019)		
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample	# Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
99		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
		2	Black Sealant	Y	None Detected	2% ce	98% qu, ma, bi
100		1 T	an Insulation	Y	None Detected	5% fg	95% qu, ma, ca
101		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
102		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
103		1	White Fibrous Insulation	Y	None Detected	100% fg	
		2	Yellow Debris	Y	None Detected		100% qu, ma
		Preparati	Analysis Method: Interim (40CFR Part on Method: HCL acid washing for carbonate base identification of asbestos	763 Appendix ed samples, ch types by dispe	E to Subpart E) / Improved (EP emical reduction for organically rsion attaining / becke line met	A-600 / R-93/116) bound components, oil immersion for hod.	

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica

ot -other

pe - perlite

qu - quartz

ve - vermiculite

Sidney Pinkerton

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

Senior Analyst

Alicia Stretz

10. TEM analysis suggested

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

Chris Wills Laboratory Director

Approved Signatories:

Chris Williams

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster			er Project:	CA Labs Project #:	
FED Envir	onme	ntal				CBR19031081	
24215 Jase		764		MC2019)	D. (2/6/2010
Flaquemine	, LA 70	//04		Steam F	'lant	Date:	3/6/2019
Dhana #	045.0	04 040		Turnaro	ound lime: 8 nr	Samples Received:	3/6/2019
Filone # 010-:		001-218	80			Date Of Sampling:	03/04-05/2019
Fax #	#	Lover	Analysts Physical Description of	Homo	Ashestos type /	Non-asbestos fiber	Non-fibrous type
Sample	π	Layeı #	Subsample	geneo	calibrated visual	type / percent	/ percent
	Com			us	estimate percent		
	ment			(Y/N)			
104		1	White Fibrous Insulation	Y	None Detected	100% fg	
105			Vallau Fibraua Insulation	V	None Detected	100% fa	
105		Ι		T	None Delected	100% Ig	
106		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
107		1	White Fibrous Insulation	Y	None Detected	100% fg	
108		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
109		1	White Sealant	Y	None Detected	5% ce	95% gu ma ca
		,		•		0,000	0070 qu, mu, ou
		_					
		2	white Woven Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for

ca - carbonate mi - mica gypsum - gypsum bi - binder ot -other or - organic

ve - vermiculite pe - perlite qu - quartz

Sidney Pinkerton

Analyst

identification of asbestos types by dispersion attaining / becke line method. fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic

ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

ma - matrix

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	JamesFoster	Custom	er Project:	CA Labs Project #:		
	ronme	ntai				CBR19031081		
Plaquemine	ι Οι. Δ Ι Δ 7(0764		MC2019	lost	Deter	3/6/2010	
riaquomine	, _, , ,			Steam P	riant	Date: Samples Received:	3/6/2019	
Phone #	615-0	81-218	36	Turnaro		Date Of Sampling:	03/04-05/2019	
Fax #	010 0	3-301-2100				Purchase Order #:	00/01/00/2010	
Sample	#	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type	
		#	Subsample	geneo	calibrated visual	type / percent	/ percent	
	Com			US	estimate percent			
	ment			(Y/N)				
110		1 N	/hite Woven Wrap	Y	None Detected	100% fg		
		2	White Fibrous Insulation	Y	None Detected	100% fg		
111		1	Tan Insulation	Y	None Detected	5% sy	95% qu, pe, ma	
112		1	Yellow Fibrous Insulation	Y	None Detected	100% fa		
113		1	Yellow Fibrous Insulation	Y	None Detected	100% fg		
114		1	Yellow Fibrous Insulation	Y	None Detected	100% fg		
115		1	Yellow Fibrous Insulation	Y	None Detected	100% fg		
						0		

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

qu - quartz

mi - mica ve - vermiculite

ot -other

pe - perlite

Sidney Pinkerton

Analyst

Alicia Stretz Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Senior Analyst

Laboratory Director Chris Williams

Chris Willi

Approved Signatories:

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: <i>ntal</i>	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019	1		
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
Phone # Fax #	615-9	81-218	36	Turnaro	ound Time: 8 hr	Samples Received: Date Of Sampling: Purchase Order #:	3/6/2019 03/04-05/2019
Sample	# Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
116		1 N	/hite Sealant	Y	None Detected		100% qu, ma, ca
		2	Tan Insulation	Y	None Detected	2% fg	98% qu, pe, ma
117		1	White Insulation	Y	None Detected	2% fg	98% qu, ma, ca
118		1	White Fibrous Insulation	Y	None Detected	100% fg	
119		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
120		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
121		1	Black Felt	Y	None Detected	40% ce	60% qu, bi

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate mi - mica ve - vermiculite gypsum - gypsum bi - binder ot -other or - organic pe - perlite ma - matrix qu - quartz

Sidney Pinkerton

Analyst

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

10. TEM analysis suggested

Chris Willi

Approved Signatories:

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: Attn: James Foster FED Environmental				Custom	ner Project:	CA CBI	Labs Project #: R19031081		
24215 Jase Plaquemine	St. , LA 70	0764		MC2019 Steam F Turnarc) Plant pund Time: 8 I	hr Sar	Date: Samples Received:	3/6/2019 : 3/6/2019 03/04-05/2019	
Phone # Fax #	615-9	81-218	36			Dat Pur	e Of Sampling: chase Order #:		
Sample	# Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos typ calibrated vis estimate per	e / No sual ty cent	on-asbestos fiber pe / percent	Non-fibrous type / percent	
		2	Yellow Fibrous Insulation	Y	None Detect	ed 100	% fg		
122		1 N	/hite Sealant on Mesh	N	5% Chrysoti	le 5%	sy	90% qu, ma, ca	
		2	White Insulation Y	None	e Detected	5%	се	95% qu, ma, ca	
		3	Yellow Fibrous Insulation	Y	None Detect	ed 100	% fg		
123		1	No Sample Submitted						
124		1	No Sample Submitted						
125		1	No Sample Submitted						
		Preparati	Analysis Method: Interim (40CFR Part on Method: HCL acid washing for carbonate base identification of asbestos ca - carbonate mi - mica gypsum - gypsum ve - vermiculite bi - binder ot - other or - organic pe - perlite ma - matrix qu - quartz	763 Appendix ed samples, ch types by dispe fg - fiberglas mw - minera wo - wollasti ta - talc sy - synthetic	E to Subpart E) / Imp emical reduction for o ersion attaining / beck is ce il wool br inite ka pa c	roved (EPA-600 / R- organically bound cor e line method. - cellulose - brucite - kaolin (clay) - palygorskite (clay)	93/116) nponents, oil immersion for Appro	oved Signatories:	
1. Fire Damage signifi 2. Fire Damage no sir	icant fiber da	amage - repo r damages e	Sidney Pinkerton Analyst orted percentages reflect unaltered fibers iffecting fibrous percentages		 Anthophyllite in associ Contamination suspect 	iation with Fibrous Talc ted from other building n	Senior Analyst Alicia Stretz	Laboratory Director Chris Williams	

 A Actional in association with Verniculite
 A Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

- Second scenario concernation of the building interesting
 Favorable scenario for water separation on vermiculite for possible analysis by another method
 < 1% Result point counted positive
 TEM analysis suggested

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: <i>ntal</i>	James Foster	Custom	ner Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019	9		
Plaquemine	, LA 70)764		Steam F	Plant	Date:	3/6/2019
				Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	15-981-2186				Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample	#	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
		#	Subsample	geneo	calibrated visual	type / percent	/ percent
	Com			us	estimate percent		
	ment			(Y/N)			
126		1	No Sample Submitted				
127		1	No Sample Submitted				
128		1	White Insulation	v	10% Chrysotile		90% au ma ca
120		1		1			5070 qu, ma, ca
129		1	White Fibrous Insulation	Y	None Detected	100% fg	
130		1	White Insulation	v	15% Chrysotile		85% au ma ca
150		I	White institution	1	15% On ysome		00 % qu, ma, ca
131		1	White Insulation	Y	None Detected	10% ce	90% qu, ma, ca
132		1	Black and Tan Debris	N	6% Chrysotile		94% gu ma
102			Black and Part Boone				o 170 qu, mu
		Preparati	Analysis Method: Interim (40CFR Part on Method: HCL acid washing for carbonate base	763 Appendix ed samples, ch	E to Subpart E) / Improved (EP emical reduction for organically	A-600 / R-93/116) bound components, oil immersion for	r
			identification of asbestos	types by dispe	ersion attaining / becke line met	hod.	
			ca - carbonale IIII - IIICa	ig - iibeiglas	s ce - cellulose		

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

ve - vermiculite

ot -other

pe - perlite

qu - quartz

Sidney Pinkerton

Analyst

Alicia Stretz Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Senior Analyst

Laboratory Director Chris Williams

Chris Wills

Approved Signatories:

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

br - brucite

ka - kaolin (clay)

pa - palygorskite (clay)

10. TEM analysis suggested

Page 37 of 53

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

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______ Lat

NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: James Foster nental			er Project:	CA Labs Project #: CBR19031081		
24215 Jase	St.			MC2019)			
Plaquemine,	, LA 70)764		Steam F	Plant	Date:	3/6/2019	
Phone # Fax #	615-9	5-981-2186			ound Time: 8 hr	Samples Received: Date Of Sampling: Purchase Order #:	3/6/2019 03/04-05/2019	
Sample a	# Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
133		1	Black and White Debris	Ν	5% Chrysotile		95% qu, bi	
134		1	Tan Insulation	Y	None Detected	10% ce	90% qu, ma, ca	
135		1	Tan Surfaced White Insulation	N	40% Amosite		60% qu, ma, bi	
	4	2	Black Surfaced Brown Felt	N				
136		1	Tan Concrete	Y	None Detected		100% qu, ma, ca	
		2	White Concrete	Y	None Detected		100% qu, ma, ca	
137		1	White Insulation	Y	20% Amosite		80% qu, ma, ca	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

qu - quartz Sidney Pintorto

mi - mica

ot -other

pe - perlite

ve - vermiculite

Sidney Pinkerton

Analyst

6. Anthophyllite in association with Fibrous Talc

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

Layer not analyzed - attached to previous positive layer and contamination is suspected
 Not enough sample to analyze

ination is suspected

becke line method. ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Wills

Senior Analyst Alicia Stretz Laboratory Director Chris Williams

Contamination suspected from other building materials
 Favorable scenario for water separation on vermiculite

Favorable scenario for water separation on vermiculite for possible analysis by another method
 < 1% Result point counted positive

9. < 1% Result point counted positive
 10. TEM analysis suggested

Page 38 of 53

Dedicated to Quality

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer FED Envi	Info: ironme	Attn: Attn:	James Foster	Customer Project:		CA CBF	Labs Project #: R19031081		
24215 Jase	e St.	0704		MC2019	9				
Plaquemine	e, la 70	J764		Steam F	Plant	Date:	Date:	3/6/2019	
Phone # Fax #	615-9	981-218	36	Turnaround Time: 8 hr		Samples Received: Date Of Sampling:		3/6/2019 03/04-05/2019	
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	No ty	pe / percent	Non-fibrous type / percent	
	4	2	Black Debris	N					
138	4	1	Black Surfaced Brown Wrap	Ν					
		2	White Insulation	Y	15% Amosite 5% Chrysotile			80% qu, ma, ca	
139		1	Blue Sealant on White Wrap	Ν	None Detected	80%	۵ fg	20% qu, ma, ca	
		2	White Insulation	Y	None Detected	5%	fg	95% qu, ma, ca	
140	4	1	Blue Sealant	N					
		2	Gray Insulation	Y	20% Chrysotile			80% qu, ma, ca	
		Preparati	Analysis Method: Interim (40CFR Part on Method: HCL acid washing for carbonate base identification of asbestos ca - carbonate mi - mica gypsum ve - vermiculite bi - binder ot - other or - organic pe - perlite ma - matrix qu - quartz Sidney Pinkerton	763 Appendix ed samples, ch types by dispe fg - fiberglas mw - minera wo - wollasti ta - talc sy - syntheti	E to Subpart E) / Improved (EP/ emical reduction for organically prsion attaining / becke line meth is ce - cellulose i wool br - brucite nite ka - kaolin (ck pa - palygors) c	A-600 / R- bound cor lod. ay) ay) -	93/116) nponents, oil immersion for Appro	oved Signatories:	
1 Eiro Domono dia	if a not file and		Analyst		6 Anthonhullito in accession in the		Alicia Stretz	Chris Williams	
 rire Damage sign 	ilicant tider d	amage - repo	pried percentages reflect unaltered fibers		 Antriophyllite in association with Fil 	JIUUS I AIC			

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

7. Contamination suspected from other building materials

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	James Foster	Custom	er Project:	CA Labs Project #:	
24215 Jase	St.	inai		MC2010		ODICISOSICOT	
Plaquemine	e, LA 70	0764		Steam F	lant	Date:	3/6/2019
				Turnaro	und Time: 8 hr	Samples Received:	3/6/2019
Phone # 615-		81-218	6			Date Of Sampling:	03/04-05/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
141	4	1	Gray Insulation	N			
		2	White Insulation	Y	10% Amosite 10% Chrysotile		80% qu, ma, ca
142	4	1	Gray Insulation	N			
		2	White Insulation	Y	10% Amosite 10% Chrysotile		80% qu, ma, ca
143	4	1	Gray Insulation	N			
		2	White Insulation	Y	10% Amosite 10% Chrysotile		80% qu, ma, ca
144		1	Gray Insulation	Y	20% Chrysotile		80% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Sidney Pinterto

Sidney Pinkerton

Analyst

fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic

ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willis

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

7. Contamination suspected from other building materials

9. < 1% Result point counted positive

Dedicated to Quality

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer	Customer Info:		James Foster	Custom	er Project:	CA Labs Project #:	
FED Envi	ironme	ental				CBR19031081	
24215 Jase	e St.			MC2019)		
Plaquemin	e, LA 70	0764		Steam F	Plant	Date:	3/6/2019
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	Phone # 615-981-2186		36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	ment	#	Subsample	geneo	calibrated visual	type / percent	/ percent
				(Y/N)	estimate percent		
			Yellow Surfaced Gray				80% qu, ma, bi,
145		1	Insulation	Y	20% Chrysotile		са
146	4	1	Gray Insulation	N			
					10% Amosite		
		2	White Insulation	Y	10% Chrysotile		80% qu, ma, ca
147		1	Grav Insulation	v	20% Amosito		80% au ma ca
		1		I	2070 Amosne		00 % qu, ma, ca
148		1	Gray Insulation	Y	20% Amosite		80% qu, ma, ca
149		1	Tan Plaster	Y	None Detected		100% gu ma ca
		•					
150			Velley, Fibrere Inculation	V	Nama Data ata d	1000/ 6-	
150		1	Yellow FIDrous Insulation	Ŷ	None Detected	100% Ig	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

fg - fiberglass

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

ca - carbonate mi - mica gypsum - gypsum ve - vermiculite bi - binder ot -other or - organic pe - perlite ma - matrix qu - quartz

Sidney Pinterto

Sidney Pinkerton

Analyst

Senior Analyst Alicia Stretz 6. Anthophyllite in association with Fibrous Talc

Laboratory Director Chris Williams

Chris Willi

Approved Signatories:

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

9. < 1% Result point counted positive

Dedicated to Quality

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn:	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase	e St.	mai		MC2010		OBINIOCOTOCI	
Plaquemine	e, LA 70	764		Steam F	, Plant	Date:	3/6/2019
•				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample	#	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	0	#	Subsample	geneo	calibrated visual	type / percent	/ percent
	Com			us (Y/N)	estimate percent		
	mont			(1/14)			
454			White Surfaced Ten Diastor		Nama Datastad		100% qu, ma, bi,
131		I	White Sunaced Tan Flaster	IN	None Delected		Ca
152		1	Red Floor Tile	Y	2% Chrysotile		98% qu, ma, ca
		2	Brown Mastic	Y	None Detected		100% qu, bi
153		1	Pink Insulation	Y	None Detected	2% ce	98% qu, ma, ca
							• • •
154		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
155		1	White Insulation	Y	None Detected	5% ce	95% gu. ma. ca
					-		
156		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ta - talc

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Sidney Pintosto

Sidney Pinkerton

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

fg - fiberglass mw - mineral wool wo - wollastinite sy - synthetic

Approved Signatories:

Chris Wills

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

ce - cellulose

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	James Foster	Custom	er Project:	CA Labs Project #:	
FED Envil	ronme	ental				CBR19031081	
24215 Jase	οι. ΔΙΔ7(0764		MC2019) Na at	Deter	2/6/2010
riaquemine	, LA 70	704		Steam F	riant	Date:	3/6/2019
Phone #	615-0	81-219	36	Turnaro	ound nine. on	Samples Received:	03/04_05/2019
Fax #	015-8	01-210				Purchase Order #:	: 03/04-03/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
157		1	White Fibrous Insulation	Y	None Detected	100% fg	
158		1	Gray Insulation	Y	10% Amosite 5% Chrysotile		85% qu, ma, ca
159		1	Tan Insulation	Y	None Detected	2% fg	98% qu, pe, ma
160		1	Tan Fibrous Insulation	Y	None Detected	85% fg	15% qu, ma, ca
161		1	White Insulation	Y	20% Amosite 10% Chrysotile		70% qu, ma, ca
162		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
163		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate mi - mica gypsum - gypsum ve - vermiculite bi - binder ot -other or - organic ma - matrix

pe - perlite qu - quartz

Sidney Pinterto

Sidney Pinkerton

Analyst

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

Chris Willi

Approved Signatories:

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn:	James Foster	Custom	er Project:	CA Labs Project #:	
FED Envi	ronme	ental				CBR19031081	
24215 Jase	St.	764		MC2019)	D (2/0/2040
Flaquemine	, LA 70	704		Steam F	lant	Date:	3/6/2019
Dhono #	615 0	01 010	26	Turnard	ouna lime: o ni	Samples Received:	3/0/2019
Frone #	010-8	01-210	00			Date Of Sampling:	03/04-05/2019
Sample #	Com	Laver	Analysts Physical Description of	Homo-	Ashestos type /	Non-ashestos fiber	Non-fibrous type
	ment	#	Subsample	geneo us (Y/N)	calibrated visual estimate percent	type / percent	/ percent
164		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
165		1	White Insulation	Y	10% Chrysotile		90% qu, ma, ca
166		1	White Covering	Y	2% Chrysotile	30% fg	68% qu, ma, bi
		2	White Insulation	Y	None Detected	5% ce 5% fg	90% qu, ma, ca
							•
167		1	Gray Fibrous Insulation	Y	None Detected	100% fg	
168		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
169		1	Silver Surfaced Black Covering	Ν	3% Chrysotile	30% fg	67% qu, ma, bi

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

au - quartz Jalaun

mi - mica

ot -other pe - perlite

ve - vermiculite

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

sy - synthetic

Approved Signatories:

Chris Willing

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FFD Environme		Attn:	James Foster	Custom	er Project:	CA Labs Project #:	
24215 Jase	e St.	iilai		MC2010)	00113031001	
Plaquemine	ə, LA 70	0764		Steam F	, Plant	Date:	3/6/2019
				Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
		2	White Fibrous Insulation	Y	None Detected	100% fg	
		3	Tan Insulation	Y	None Detected	15% fg	85% qu, ma, ca
170		1	White Insulation	Y	None Detected	5% fg	95% qu, ma, ca
171		1	White Insulation	Y	None Detected	15% fg	85% qu, ma, ca
172		1	Gray Covering	Y	2% Chrysotile	30% fg	68% qu, ma, bi
		2	White Insulation	Y	None Detected	5% fg 15% ce	80% qu, ma, ca
173		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

au - quartz Saloun

mi - mica

ot -other

pe - perlite

ve - vermiculite

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages

3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

6. Anthophyllite in association with Fibrous Talc

7. Contamination suspected from other building materials 8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

10. TEM analysis suggested

Laboratory Director Senior Analyst Alicia Stretz

Chris Williams

Chris Wills

Approved Signatories:

Page 45 of 53

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: James Foster nental			er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019)		
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
				Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	-981-2186				Date Of Sampling:	03/04-05/2019
Fax #		1	Lover Analysta Physical Description of			Purchase Order #:	No. Characteria
Sample #		Layer #	Analysts Physical Description of Subsample	deneo	Aspestos type / calibrated visual	type / percent	Non-fibrous type
	Com		Cubbampio	us	estimate percent	type / percent	, porcont
	ment			(Y/N)	-		
174		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
175		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
176		1	Silver Surfacing	Y	None Detected		100% qu, ma
177	4	1	Black Covering	Y	None Detected		
		2	White Insulation	Y	70% Chrysotile		30% qu, ma
178		1 B	rown Fibrous Insulation	Y	None Detected	90% fg	10% qu, ma
179		1	Tan Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

pe - perlite qu - quartz Jalour

Daniel LaCour

mi - mica ve - vermiculite

ot -other

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

br - brucite ka - kaolin (clay) pa - palygorskite (clay)

ce - cellulose

Approved Signatories:

Chris Wills

Senior Analyst Alicia Stretz

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

Laboratory Director Chris Williams

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environmen		James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
St.			MC2019	1		
, LA 70	764		Steam F	Plant	Date:	3/6/2019
			Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
615-9	81-218	36			Date Of Sampling:	03/04-05/2019
					Purchase Order #:	New Characteria
#	Layer #	Analysts Physical Description of Subsample	Homo-	Asbestos type /	Non-aspestos fiber	Non-fibrous type
Com	π	Oubsample	us	estimate percent	type / percent	/ percent
ment			(Y/N)	•		
	1	White Fibrous Insulation	Y	None Detected	100% fg	
		Multite Fibraria Inculation	V	Name Data at a d	1000/ 6-	
	1	while Fibrous Insulation	Ŷ	None Detected	100% Ig	
	1	Foil Wrap	Y	None Detected	70% ce	30% qu, ma, ot
	2	Yellow Fibrous Insulation	Y	None Detected	100% fg	
	1	White Insulation	Y	None Detected		100% qu, pe
	1	Tan Insulation	Y	None Detected		100% qu, pe
	1	Tan Insulation	Y	None Detected	20% sy	80% qu, pe
	nfo: ronme St. 615-9 # Com ment	nfo: Attn: ronmental St. 6, LA 70764 615-981-218 # Layer # Com ment 1 1 1 2 1 1 1 1 1 1 1	nfo: Attn: James Foster ronmental St. , LA 70764 615-981-2186 # Layer Analysts Physical Description of # Subsample Com ment 1 White Fibrous Insulation 1 White Fibrous Insulation 1 Foil Wrap 2 Yellow Fibrous Insulation 1 White Insulation 1 Tan Insulation 1 Tan Insulation	nfo: Attn: James Foster Custom ronmental St. MC2019 St. MC2019 Steam F a, LA 70764 Steam F Turnaro 615-981-2186 Turnaro 615-981-2186 # Layer Analysts Physical Description of geneo Homogeneo Com us (Y/N) 1 White Fibrous Insulation Y 1 White Fibrous Insulation Y 1 Foil Wrap Y 2 Yellow Fibrous Insulation Y 1 White Insulation Y 1 Tan Insulation Y 1 Tan Insulation Y	nfo: Attn: James Foster Customer Project: conmental St. MC2019 st. MC2019 , LA 70764 Steam Plant Turnaround Time: 8 hr 615-981-2186 # Layer Analysts Physical Description of # Homo- geneo Asbestos type / geneo Com # Subsample Homo- geneo Asbestos type / calibrated visual us 1 White Fibrous Insulation Y None Detected 1 White Fibrous Insulation Y None Detected 1 White Fibrous Insulation Y None Detected 1 Foil Wrap Y None Detected 2 Yellow Fibrous Insulation Y None Detected 1 White Insulation Y None Detected 1 White Insulation Y None Detected 1 Tan Insulation Y None Detected	Info: Attn: James Foster Customer Project: CA Labs Project #: CBR19031081 St. MC2019 Steam Plant Date: Samples Received: Date of Sampling: 615-981-2186 Turnaround Time: 8 hr Samples Received: Date of Sampling: Purchase Order #: # Layer Analysts Physical Description of # Homo- Asbestos type / Non-asbestos fiber Com # Subsample Homo- Asbestos type / Non-asbestos fiber Com # Subsample Y None Detected 100% fg 1 White Fibrous Insulation Y None Detected 100% fg 1 Foil Wrap Y None Detected 100% fg 1 White Insulation Y None Detected 100% fg 1 White Insulation Y None Detected 100% fg 1 White Insulation Y None Detected 100% fg 1 Tan Insulation Y None Detected 100% fg

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

qu - quartz Saloun Чамн

mi - mica ve - vermiculite

ot -other

pe - perlite

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic

ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

 Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: <i>ntal</i>	JamesFoster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase	St.			MC2019)		
Plaquemine	, LA 70	764		Steam F	Plant	Date:	3/6/2019
				Turnaro	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	81-218	36			Date Of Sampling:	03/04-05/2019
Fax #						Purchase Order #:	
Sample #		Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type
	Com	#	Subsample	geneo	calibrated visual	type / percent	/ percent
	ment			(Y/N)	connate percent		
186		1	Tan Insulation	Y	15% Chrysotile		85% qu, ma, ca
187		1	White Fibrous Insulation	Y	None Detected	100% fg	
188		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca
189		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca
190		1	White Fibrous Insulation	Y	None Detected	100% fg	
191		1	Yellow Fibrous Insulation	Y	None Detected	100% fg	
192		1	White Fibrous Insulation	Y	None Detected	100% fg	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Salpen

Daniel LaCour

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

 Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

10. TEM analysis suggested

Chris Wills Senior Analyst

Alicia Stretz

Approved Signatories:

Laboratory Director Chris Williams

Page 48 of 53

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Customer Project:		CA Labs Project #:		
FED Envi	ironme	ental				CBR19031081		
24215 Jase St. Plaquemine, LA 70764)			
					Plant	Date:	3/6/2019	
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019	
Phone #	615-9	615-981-2186				Date Of Sampling:	03/04-05/2019	
Fax #						Purchase Order #:		
Sample #	Com	Layer	Analysts Physical Description of	Homo-	Asbestos type /	Non-asbestos fiber	Non-fibrous type	
	ment	#	Subsample	geneo	calibrated visual	type / percent	/ percent	
				(Y/N)	estimate percent			
193		1	White Insulation	Y	10% Chrysotile	5% fg	85% qu, ma, ca	
194		1	Tan Fibrous Insulation	Y	None Detected	100% fg		
						5		
195		1	Tan Insulation	Y	None Detected	15% fa	85% gu, ma, ca	
196		1	Brown Insulation	Y	10% Amosite		90% gu, ma, ca	
197		1	White Insulation	Y	15% Chrysotile		85% gu, ma, ca	
					-		• • •	
198		1	Gray Insulation	Y	40% Amosite		60% qu, ma	
							•	
					20% Amosite		700/	
199		1	White Insulation	Y	10% Chrysotile		70% qu, ma, ca	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Salow

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

sy - synthetic

ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willis

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: JamesFoster		Customer Project:		CA Labs Project #:	
<i>FED Environmental</i> 24215 Jase St. Plaquemine, LA 70764						CBR19031081	2/0/2040
) Nont	Deter	
					riant	Date: Samples Received:	3/6/2019
Phone #	615-981-2186			Turnarc		Samples Received:	03/04-05/2019
Fax #	013-301-2100					Purchase Order #:	00/01/00/2010
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
200		1	Gray Fibrous Insulation	Y	None Detected	100% fg	
201		1	Gray Fibrous Insulation	Y	None Detected	100% fg	
202		1	Tan Insulation	Y	None Detected	10% fg	90% qu, pe
203		1	White Insulation	Y	15% Amosite		85% qu, ma, ca
204		1	Tan Insulation	Y	10% Amosite	10% fg	80% qu, ma, ca
205		1	Gray Fibrous Insulation	Y	None Detected	100% fg	
206		1	White Insulation	Y	20% Amosite 10% Chrysotile		70% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite au - quartz

civil Saloen

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

Chris Ville

Approved Signatories:

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer FED Envi	Info: <i>ronme</i>	Attn: Intal	James Foster	Custom	er Project:	CA Labs Project #: CBR19031081	
24215 Jase St. Plaquemine, LA 70764)		
					Plant	Date:	3/6/2019
D "				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone # Fax #	615-981-2186					Date Of Sampling: Purchase Order #:	03/04-05/2019
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
207		1	Black Tar	Y	None Detected	5% ce	95% qu, bi
208		1	White Insulation with Black Debris	N	None Detected		100% qu, ma, ca
209		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
210		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
211		1	White Fibrous Insulation	Y	None Detected	100% fg	
212		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca
213		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

wo - wollastinite

sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

mi - mica ve - vermiculite ot -other pe - perlite qu - quartz

Janual Saloen

Daniel LaCour

Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers

2. Fire Damage no significant fiber damages effecting fibrous percentages 3. Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willi

Senior Analyst Alicia Stretz

Laboratory Director Chris Williams

6. Anthophyllite in association with Fibrous Talc 7. Contamination suspected from other building materials

8. Favorable scenario for water separation on vermiculite for possible analysis by another method

9. < 1% Result point counted positive

Dedicated to Quality

CA Labs, L.L.C. 12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225-751-5632 Fax 225-751-5634

NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info: FED Environme		Attn: James Foster mental			er Project:	CA Labs Project #: CBR19031081	
24215 Jase St. Plaquemine, LA 70764				MC2019)		
				Steam F	Plant	Date:	3/6/2019
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019
Phone #	615-9	615-981-2186				Date Of Sampling:	03/04-05/2019
			Analysts Physical Description of			Purchase Order #:	
Sample	#	Layer #		Homo-	Asbestos type /	Non-aspestos fiber	Non-fibrous type
	Com	"	Oubsample	us	estimate percent	type / percent	/ percent
	ment			(Y/N)			
214		1	White Insulation	Y	15% Chrysotile		85% qu, ma, ca
215		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
216		1	White Insulation	Y	None Detected	5% fg	95% qu, ma, ca
217		1	Tan Fibrous Insulation	V	None Detected	100% fa	
217		1		I	None Delected	100 /0 1g	
218		1	Tan Fibrous Insulation	Y	None Detected	100% fg	
219		1	Black Tar	Y	None Detected	5% ce	95% qu, bi
		0	White From	V	Nama Datasta d		1000/ -+
		2		Ŷ	None Detected		100% 00

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

mw - mineral wool

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sy - synthetic

ta - talc

fg - fiberglass

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

Saloun

mi - mica ve - vermiculite

ot -other

pe - perlite

qu - quartz

Daniel LaCour Analyst

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers 2. Fire Damage no significant fiber damages effecting fibrous percentages

Actinolite in association with Vermiculite
 Layer not analyzed - attached to previous positive layer and contamination is suspected

5. Not enough sample to analyze

Anthophyllite in association with Fibrous Talc
 Contamination suspected from other building materials

Senior Analyst

Alicia Stretz

Approved Signatories:

Chris Wills

Laboratory Director

Chris Williams

Favorable scenario for water separation on vermiculite for possible analysis by another method
 <1% Result point counted positive

10. TEM analysis suggested

ce - cellulose

ka - kaolin (clay)

pa - palygorskite (clay)

br - brucite

Page 52 of 53

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

Polarized Light Asbestiform Materials Characterization

Customer Info:		Attn: James Foster		Customer Project:		CA Labs Project #:		
FED Envi	ronme	ntal				CBR19031081		
24215 Jase	e St.			MC2019)			
Plaquemine	e, LA 70	0764		Steam F	Plant	Date:	3/6/2019	
				Turnarc	ound Time: 8 hr	Samples Received:	3/6/2019	
Phone #	615-981-2186					Date Of Sampling:	03/04-05/2019	
Fax #						Purchase Order #:		
Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent	
220		1	White Covering	Y	None Detected		100% qu, ma	
		2	White Foam	Y	None Detected		100% ot	
221		1	White Insulation	Y	20% Amosite 10% Chrysotile		70% qu, ma, ca	
222		1	White Insulation	Y	20% Amosite 10% Chrysotile		70% qu, ma, ca	
223		1	White Insulation	Y	20% Amosite 10% Chrysotile		70% qu, ma, ca	
224		1	Silver Surfaced Black Covering	N	4% Chrysotile	30% fg	66% qu, ma, bi	

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116) Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate gypsum - gypsum bi - binder or - organic ma - matrix

te mi - mica ssum ve - vermiculite ot -other pe - perlite qu - quartz

CANEN

Daniel LaCour

Analyst

Saloun

fg - fiberglass mw - mineral wool wo - wollastinite ta - talc sy - synthetic

ining / becke line method. ce - cellulose br - brucite ka - kaolin (clay) pa - palygorskite (clay)

Approved Signatories:

Chris Willing

Senior Analyst Alicia Stretz Laboratory Director Chris Williams

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

CALabs

CA Labs, L.L.C.

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NVLAP #200772-0 TDSHS #300370 **CDPHE #AL-18111** LELAP #03069

Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
 Fire Damage no significant fiber damages effecting fibrous percentages
 Actinolite in association with Vermiculite

4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069

6. Anthophyllite in association with Fibrous Talc

7. Contamination suspected from other building materials
 8. Favorable scenario for water separation on vermiculite for possible analysis by another method



4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

Quality

CA Labs, L.L.C.

12232 Industriplex, Suite 32 Baton Rouge, LA 70809 Phone 225 751 5622





4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

CA Labs CA Labs, L.L.C.

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NVLAP #200772-0 TDSHS #300370



4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

CA Labs, L.L.C.

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4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze



4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze



4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze


CA Labs

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NVLAP #200772-0 TDSHS #300370 CDPHE #AL-18111 LELAP #03069





4. Layer not analyzed - attached to previous positive layer and contamination is suspected 5. Not enough sample to analyze

9. < 1% Result point counted positive 10. TEM analysis suggested