

December 1, 2021

To Whom It May Concern:

Please find attached to this submission a copy of a health and safety study conducted on formaldehyde (CAS No. 50-00-0) that is within the possession of [REDACTED] and subject to the reporting requirements specified in 40 CFR § 716.21(a)(9). This submission is made on behalf of [REDACTED] and satisfies the reporting requirements under 40 CFR § 716.30.

Sincerely,



March 13, 2019

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Re: Industrial Hygiene Air Contaminant Assessment Report**  
**Client:** [REDACTED]

Dear [REDACTED]:

On December 14, 2018 & January 3, 2019, at management's request, I visited the [REDACTED] chemical plant located in [REDACTED] to conduct an industrial hygiene assessment. As a result of the assessment, I am submitting the attached Industrial Hygiene Assessment Report, which contains recommendations to help you improve your plant's safety and health program.

The results of all air sampling and subsequent analysis for formaldehyde showed that the employees' time weighted average (TWA) exposures were below the applicable Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limits (PELs) in all but one (1) sample collected.

One (1) blend operator exposure monitored exceeded the OSHA PEL for formaldehyde of 0.75 ppm in air as an 8-hour TWA. The employee was equipped with full facepiece (elastomeric) air-purifying respirator with an assigned protection factor (APF) of 50. The applicable maximum use concentration (MUC) for formaldehyde when an operator is equipped with a full facepiece air purifying respirator equals 37 ppm. The measured concentration for formaldehyde was well below the applicable MUC.

The [REDACTED] Site has a written Formaldehyde Exposure Control Plan in place to meet the requirements of the OSHA Formaldehyde Standard found in 29CFR§1910.1048.

Thank you for the opportunity of providing industrial hygiene services to your facility. I especially wish to thank the Winder employees who participated in this assessment for the cooperation and assistance provided to me. If you have any questions regarding this report, please do not hesitate to contact me via e-mail at [jordy@frmrisk.com](mailto:jordy@frmrisk.com) or call me at 770-601-1572.

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

Sincerely,

**Jordan M. Ferguson**

Jordan M. Ferguson, CIH  
Senior Consultant – Industrial Hygiene  
Ferguson Risk Management, LLC

Reviewed by:

**Mitchell B. Ferguson**

Mitchell B. Ferguson, CIH, CSP, CHMM, ARM  
Principal Consultant  
Ferguson Risk Management, LLC



#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



# Industrial Hygiene Assessment Report

Prepared For:



Prepared By:

Jordan M Ferguson, CIH  
Senior Consultant – Industrial Hygiene  
Ferguson Risk Management, LLC

Assessment Dates:

December 14, 2018  
January 3, 2019

Assisted By:



## NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

## **PURPOSE:**

On December 14, 2018 & January 3, 2019, at management's request, I visited the [REDACTED] production facility located in [REDACTED] to conduct an industrial hygiene assessment. The purpose of the assessment was to evaluate employee exposures to formaldehyde during blend operations.

## **OVERVIEW OF ASSESSMENT RESULTS:**

Exposure concentrations are presented in parts per million (ppm) in air by employee name and location. Also presented, are the applicable American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) and the Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limits (PELs).

The results of all air sampling and subsequent analysis for formaldehyde showed that the employees' time weighted average (TWA) exposures were below the applicable Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limits (PELs) in all but one (1) sample collected.

One (1) blend operator exposure monitored exceeded the OSHA PEL for formaldehyde of 0.75 ppm in air as an 8-hour TWA. The employee was equipped with full facepiece (elastomeric) air-purifying respirator with an assigned protection factor (APF) of 50. The applicable maximum use concentration (MUC) for formaldehyde when an operator is equipped with a full facepiece air purifying respirator equals 37.5 ppm. The measured concentration for formaldehyde was well below the applicable MUC.

The following pages of the assessment report discuss the individual chemical stressors, the collected exposure data, and a discussion of their significance.

## **Air Contaminants**

### ***Formaldehyde Exposures from Blending Operations:***

#### ***Background and Health Effects:***

Formaldehyde is a potent irritant of the skin, eyes, mucous membranes, and upper respiratory tract and contact with formaldehyde gas or solution can irritate these body parts. Acute inhalation of formaldehyde can cause wheezing, shortness of breath, chest pain, headache and dizziness; exposure to high concentrations can produce lung inflammation that can progress to respiratory failure. Chronic formaldehyde exposure may be associated with the development of chronic airway disease in some individuals.

Formaldehyde has been shown to be both mutagenic and carcinogenic in animals. Formaldehyde is considered a suspected human carcinogen, based on these reports and one human epidemiological study showing a higher than expected rate of lung and upper respiratory tract cancers.

## **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

Formaldehyde gas is liberated during blending processes in which paraformaldehyde supersacks are emptied into a hopper to transfer paraformaldehyde into blend tank via vacuum pump. Paraformaldehyde is a white crystalline powder of polymerized formaldehyde that can emit formaldehyde gas.

The operator lifts the supersacks via hoist on top of the hopper. The operator must then open a small door to the hopper to reach in to untie the supersack in order release paraformaldehyde into the hopper. After opening the supersack, the operator returns to the control room to observe the process. In order to start the process, three or four supersacks are added. Additional supersacks are added one by one throughout the shift to maintain the reaction.

### ***Health Standards, Guidelines and Sampling Methods:***

The OSHA Formaldehyde Standard, found in 29CFR§1910.1048, has established a PEL of 0.75 parts per million in air (ppm) as an 8-hour TWA and 2 ppm as a short-term exposure limit (STEL). OSHA has also established an action level (AL) of 0.5 parts per million in air (ppm) as an 8-hour TWA.

Personal and area air sampling was conducted. Personal air sampling was conducted in the employees breathing zone to obtain samples indicative of the actual employee TWA exposures. An Assay Technologies® (#571) passive dosimeter formaldehyde monitor was utilized as the collection media. In addition, an active air sampling method sampling method was conducted to compare results to the passive dosimeter monitoring. The active and passive methods are both monitoring methods used by OSHA. ORBO 555 tubes were utilized as the active sampling collection media. Casella sampling pumps operating at a flow rate of approximately 0.15 liters per minute provided the vacuum source. Sampling pumps were calibrated before and after the sample collection using a Bios® Dry-Cal Defender dry primary standard calibrator traceable to NIST and were checked for proper operation and flow. No significant changes in flow rate were measured, unless noted in the comments column of the employee results section below.

Air samples collected were analyzed by Galson Laboratories, located in East Syracuse, NY. Galson Laboratories is accredited by the American Industrial Hygiene Association (Laboratory # 100324). Liquid Chromatography with a UV detector (OSHA 1007, NIOSH 2016) was performed as the analytical method.

### ***Similar Exposure Groups and Sampling Results:***

Two (2) personal TWA samples for formaldehyde were collected during blending operations. Passive badge sampling was used for the personal TWA sampling. The operators' airborne formaldehyde sample concentrations exceeded the OSHA PEL in one (1) of the samples measured. The employee was equipped with full facepiece (elastomeric) air-purifying respirator with an APF of 50.

Two (2) area TWA samples for formaldehyde were collected during blending operations. Active sampling and passive sampling methods were both utilized. Both (2) area TWA samples collected were below the OSHA PEL. Area sampling was conducted just outside the opening to the hopper where the operator must reach in to untie the supersack.

### **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

**Air Sampling Data for Formaldehyde – Time Weighted Average (TWA)**

Name/ Location/ Sample Number	Contaminant	Sample Concentration	Units for results as listed	OSHA PEL 8HR TWA	Sample Time (minutes)	Comments
[REDACTED] Operator NJ0476 12/14/18	Formaldehyde	0.26	ppm	0.75	08:02- 15:02 (420)	<b>Passive Dosimeter. Assay N71 Badge.</b> Process startup and sampling started at 8:02 AM. Added a total of 8 supersacks during sampling period.
Area Sample NJ0902 12/14/18	Formaldehyde	0.07	ppm	0.75	09:33- 15:13 (340)	<b>Passive Dosimeter. Assay N71 Badge.</b> Sampling device placed just outside of opening to hopper. 5 supersacks added during sampling period.
Area Sample 1 12/14/18	Formaldehyde	0.024	ppm	0.75	09:33- 15:13 (340)	<b>Active Sampling. ORBO 555 tube.</b> Sampling device placed just outside of opening to hopper. 5 supersacks added during sampling period.
[REDACTED] Operator NJ0564 01/03/19	Formaldehyde	<b>1.7</b>	ppm	0.75	03:45- 11:45 (480)	<b>Passive Dosimeter. Assay N71 Badge.</b> Process startup and sampling started at 3:45 AM. Added a total of 8 supersacks during sampling period.

- Action level for formaldehyde = 0.5 ppm
- ppm = parts per million in air
- **BOLDED** results indicate that a relative PEL or TLV has possibly been exceeded.

Three (3) personal 15 minute-STEL samples for formaldehyde were collected during start-up blending operations. Active sampling and passive sampling methods were both utilized. The operators' airborne formaldehyde sample concentrations did not exceed the OSHA STEL of 2 ppm in any of the three (3) samples measured. The employee was equipped with full facepiece (elastomeric) air-purifying respirator with an APF of 50.

**NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



### **Air Sampling Data for Formaldehyde – Short-Term Exposure Limit (STEL)**

Name/ Location/ Sample Number	Contaminant	Sample Concentration	Units for results as listed	OSHA 15- MIN STEL	Sample Time (minutes)	Comments
Operator NJ0383 12/14/18	Formaldehyde	0.52	ppm	2	08:02- 08:19 (17)	Passive Dosimeter. Assay N71 Badge. Process startup and sampling started at 8:02 AM. Added a total of 2 supersacks during sampling period.
Operator 2 12/14/18	Formaldehyde	0.04	ppm	2	08:02- 08:19 (17)	Active Sampling. ORBO 555 tube. Process startup and sampling started at 8:02 AM. Added a total of 2 supersacks during sampling period.
Operator NJ0392 01/03/19	Formaldehyde	0.3	ppm	2	03:45- 04:03 (18)	Passive Dosimeter. Assay N71 Badge. Process startup and sampling started at 3:45 AM. Added a total of 2 supersacks during sampling period.

- ppm = parts per million in air
- **BOLDED** results indicate that a relative PEL or TLV has possibly been exceeded.

### **CONCLUSIONS:**

There was one (1) overexposure recorded as a result of the air sampling conducted during this industrial hygiene assessment. One (1) blend operator personal TWA result exceeded the OSHA PEL for formaldehyde of 0.75 ppm in air as an 8-hour TWA. The employee was equipped with full facepiece (elastomeric) air-purifying respirator with an assigned protection factor (APF) of 50. The applicable maximum use concentration (MUC) for formaldehyde when an operator is equipped with a full facepiece air purifying respirator equals 37 ppm. The measured concentration for formaldehyde was well below the applicable MUC.

Two (2) recommendations are submitted as a result of this assessment and are included in the appendices of this report.

Appendices:

Appendix I    Industrial Hygiene Assessment Recommendations  
 Appendix II    Laboratory Reports  
 Appendix III    Calibration Data

### **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



## **APPENDIX I**

# **Industrial Hygiene Improvement Recommendations**

### **IH-19-1 Employee Notification of Air Assessment Results**

OSHA substance specific regulations (formaldehyde and other such standards) require employee notification of sampling results within 15 working days of receipt of these monitoring results. Measured exposures should be communicated for their job class or category or for all jobs in the area that they work. Notification of employees is a good practice, and communications of assessment actions and results, and any corrective actions undertaken often helps to resolve employee anxieties and concerns over perceived exposures. Communication of such information is also an integral part of a good Hazard Communication Program.

### **IH-19-2 Formaldehyde Repeat Sampling, Medical Surveillance, and Training**

The blend operator's formaldehyde exposure exceeded the OSHA AL of 0.5 ppm and OSHA PEL of 0.75 ppm as an 8-hour TWA. The OSHA Formaldehyde standard 29CFR§1910.1048 requires that employee information and training be provided to all affected employees at their initial assignment to an affected area and repeated annually. In addition, the measured exposure for the operator exceeded the OSHA action level for formaldehyde of 0.5 ppm as an 8-hour TWA. The formaldehyde standard calls for repeat sampling to be conducted at least every 6 months. The employer is required to institute a medical surveillance program for any employee with exposure concentrations exceeding the action level. The [REDACTED] Site has a written Formaldehyde Exposure Control Plan that outlines these items for the facility.

#### **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

## **APPENDIX II**

# **Laboratory Reports**

### **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



Mr. Mitchell Ferguson  
FRM Risk, LLC  
3539 Stevens Way  
Martinez, GA 30907

January 02, 2019

Account# 25675

Login# L466908

Dear Mr. Ferguson:

Enclosed are the analytical results for the samples received by our laboratory on December 21, 2018. All samples on the chain of custody were received in good condition unless otherwise noted. When possible, non-IOM samples will be retained for 14 days following the date of this report (unless an extension is specifically requested). IOM samples are retained for 7 days.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson

A handwritten signature in black ink that reads "Lisa Swab". The signature is written in a cursive, flowing style.

Lisa Swab  
Laboratory Director

Enclosure(s)

---

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



Account : 25675  
Login No. : L466908

#### Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
- Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

#### Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at [www.sgs.com](http://www.sgs.com).
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

**Accreditations** SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgs.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

#### Legend

< - Less than	mg - milligrams	MDL - Method detection limit	ppb - parts per billion
> - Greater than	ug - micrograms	NA - Not Applicable	ppm - parts per million
l - liters	m3 - Cubic Meters	NS - Not Specified	
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not detected	

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



**GALSON**

LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-3227  
FAX: (315) 437-0571  
www.sgsgalson.com

Client : FPM Risk, LLC  
Site : [REDACTED]  
Project No. : C6100  
Date Sampled : 14-DEC-18  
Date Received : 21-DEC-18

Account No.: 25675  
Login No. : 1466908  
Date Analyzed : 28-DEC-18  
Report ID : 1111279

**Formaldehyde**

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc ug/m <sup>3</sup>	ppm
ATWA-1	L466908-4	61.2	1.9	<0.1	1.8	0.030	0.024
FTSEL-2	L466908-5	3.06	0.1	<0.1	0.1	0.04	0.04

**COMMENTS:** Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.1 ug			Submitted by: AMH			Approved by: MWJ		
Analytical Method : mod. NIOSH 2016; HPLC/UV			Date : 02-JAN-19			NYS DOH # : 11626		
Collection Media : ORBO555			Supervisor : MWJ			QC By : BKF		
<	-Less Than	ug -Micrograms	m3 -Cubic Meters	kg -Kilograms	NA -Not Applicable	ND -Not Detected		
>	-Greater Than	ug -Micrograms	l -Liters	NS -Not Specified	ppm -Parts per Million			

**NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



GALSON

LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-5227  
FAX: (315) 437-0571  
www.sgsgalson.com

Client : FEM Risk, LLC  
Site : [REDACTED]  
Project No. : CM200  
Date Sampled : 14-DEC-18  
Date Received : 21-DEC-18

Account No.: 25675  
Login No. : L466908  
Date Analyzed : 26-DEC-18  
Report ID : 1110559

Formaldehyde

Sample ID	Lab ID	Time minutes	Total ug	Conc ug/m3	ppm
ATWA-NJ0902	1466908-2	340	0.4	0.08	0.07
PTWA-NJ0476	1466908-3	420	2.1	0.32	0.26

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.1 ug	Submitted By: CHW	Approved by: HWJ
Analytical Method : mod. OSHA 1007; HPLC/UV	Date : 01-JAN-19	NYS DOH # : 11626
Collection Media : Assay 571	Supervisor : HWJ	QC by : MKP

---

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms	NA -Not Applicable	ND -Not Detected
> -Greater Than	ug -Micrograms	L -Liters	NS -Not Specified	ppm -Parts per Million	

NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



GALSON

LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-5227  
FAX: (315) 437-0571  
www.sgsgalson.com

Client : FEM Risk, LLC  
Site : [REDACTED]  
Project No. : ON200  
Date Sampled : 14-DEC-18  
Date Received : 21-DEC-18

Account No.: 25675  
Login No. : L466908  
Date Analyzed : 26-DEC-18  
Report ID : 1110560

Formaldehyde

Sample ID	Lab ID	Time minutes	Total ug	Conc ug/m3	ppm
PSTEL-NJ0183	L466908-1	17	0.18	0.64	0.52

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.04 ug  
Analytical Method : mod. OSHA 1007; HPLC/UV  
Collection Media : Assay 571

Submitted By: CHW  
Date : 01-JAN-19  
Supervisor : JMW

Approved by: JMW  
NYS DOH # : 11626  
QC by : MKP

< -Less Than    ug -Micrograms    m3 -Cubic Meters    kg -Kilograms    NA -Not Applicable    ND -Not Detected  
> -Greater Than    ug -Micrograms    l -Liters    NS -Not Specified    ppm -Parts per Million

NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.





1488908 (Report ID: 11105801)  
Total ug corrected for a detection efficiency of 90%.  
FORWELDED results have been corrected for the average background found at the media:  
0.010 ug for the 0.010 ug sample (1-1).  
DATA: 12-08-18

1488908 (Report ID: 11105801)  
Recovery and mean recovery data presented below is based on a 95% confidence interval (n=2). The estimated accuracy applies to the media, technology, and not referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on media recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated sample.

Parameter	Accuracy	Mean Recovery
Formaldehyde	~10.0%	100%

1488908 (Report ID: 11105801)  
Total ug corrected for a detection efficiency of 90%.  
FORWELDED results have been corrected for the average background found at the media:  
0.010 ug for the 0.010 ug sample (1).  
DATA: 12-08-18

1488908 (Report ID: 11105801)  
Recovery and mean recovery data presented below is based on a 95% confidence interval (n=2). The estimated accuracy applies to the media, technology, and not referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on media recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated sample.

Parameter	Accuracy	Mean Recovery
Formaldehyde	~10.0%	100%

1488908 (Report ID: 11112771)  
Total ug corrected for a detection efficiency of 100%.

1488908-09 (Report ID: 11112771)  
FORWELDED results have been corrected for the average background found at the media:  
0.010 ug for the 0.010 ug sample (1-1).  
DATA: 12-08-18

1488908 (Report ID: 11112771)  
DATA: 12-08-18

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

	LABORATORY PROTOCOL REPORT	
6001 Wrentham Road East Greenwich, RI 02817 (401) 430-0327 FAX: (401) 430-0371 www.sgs-galson.com	Client Name : FVM Risk, LLC Site : Windsor Project No. : 180208 Data Sampled : 12-08-2018 Data Received: 11-08-2018 Data Analyzed: 01-03-2019 - 01-10-2019	Account No. : 00779 Login No. : 1488909
[000000] (Report ID: 0111270)		
Accuracy and mean recovery data presented below is based on a 95% confidence interval (N=2). The estimated accuracy applies to the media, technology, and MSF referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from historical quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.		
Parameter	Accuracy	Mean Recovery
Endrin/Endrinol	±1-10.0%	99.1%

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

Page 17 of 27

774833261283  
Date: 12/21/18  
Shipper: FEDEX  
Initials: BCF  
  
Prep: UNKNOWN

**GALSON**

## CHAIN OF CUSTODY

Turn Around Time (TAT):		Surcharge:	
<input checked="" type="checkbox"/> Standard	0%		
<input type="checkbox"/> 4 Business Days	35%		
<input type="checkbox"/> 3 Business Days	55%		
<input type="checkbox"/> 2 Business Days	75%		
<input type="checkbox"/> Next Day by Noon	100%		
<input type="checkbox"/> Next Day by Noon	150%		
<input type="checkbox"/> Same Day	200%		
<input type="checkbox"/> Samples submitted using the FreePumpLoan™ Program <input type="checkbox"/> Samples submitted using the FreeSamplingBaggies™ Program			

Client Acct No.: 25675	Report To: Mr. Mitchell Ferguson	Invoice To: Mr. Mitchell Ferguson	
Company Name: PMR Risk, LLC	Company Name: PMR Risk, LLC	Company Name: PMR Risk, LLC	
Address 1: 3533 Stevens Way	Address 1: 3533 Stevens Way	Address 1: 3533 Stevens Way	
Address 2:	Address 2:	Address 2:	
City, State Zip: Marietta, GA 30067	City, State Zip: Marietta, GA 30067	City, State Zip: Marietta, GA 30067	
Phone No: 678 - 587 - 7569	Phone No:	Phone No:	
Cell No:	Email Address: jordan@frerick.com, mitch@frerick.com	Email Address: jordan@frerick.com, mitch@frerick.com	
Online CDE No.: 370657	Comments: jordan@frerick.com, mitch@frerick.com	Comments:	
		\$ O. No.:	
		Payment Info:	<input type="checkbox"/> I will call SGS Dallas to provide credit card info <input checked="" type="checkbox"/> Card on file (enter the last five digits on the line below)

Comments:		State Sampled: Georgia	Please indicate which CDE(s) this data will be used for: <input checked="" type="checkbox"/> OSHA PEL <input type="checkbox"/> ACGIH TLV <input type="checkbox"/> MSHA <input type="checkbox"/> Cal OSHA <input type="checkbox"/> IAC: <input type="checkbox"/> Other:
		Specify Limit	Specify Other

Site Name: W-Lader	Project: ON206	Sampled By: Jordan Ferguson	List Description of industry or Process/Influences present in sampling area:
--------------------	----------------	-----------------------------	------------------------------------------------------------------------------

Sample ID (Maximum of 30 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area	Liters Minutes In, out, by	Analysis Requested	Method Reference *	Maximal Chemical Process (e.g., welding, plating, painting, etc.)
PTMEL-W03383	12/16/2018	Aerway N711 Aldehyde Baggie	17	min	Formaldehyde	mod. OSHA 1007; NIOSH/NIJ	
ATMA-W030902	12/16/2018	Aerway N711 Aldehyde Baggie	340	min	Formaldehyde	mod. OSHA 1007; NIOSH/NIJ	
PTMA-W030975	12/16/2018	Aerway N711 Aldehyde Baggie	420	min	Formaldehyde	mod. OSHA 1007; NIOSH/NIJ	

☐ \* If the method(s) indicated on the CDC are not our method/preferred method(s), we will substitute our method/preferred method(s). If this is not acceptable, check here to have us contact you.

Chain of Custody		Print Name / Signature		Date		Time	
Relinquished By:	Jordan Ferguson	STANDARD ELECTRONICALLY	12/20/2018	12:14	Received By:	Bill Fischer	12/20/2018 12:14 PM
Relinquished By:					Received By:		

Samples received after 5pm will be considered as next day's business.

Online CDE No.: 370657  
 Print No.: 35675  
 Finalized: 12/20/2018 12:15:44 PM

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

\_\_\_\_\_

Location of Assessment: [REDACTED]

Date of Asses  
Page 18 of 27

[illegible]

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

Page 19 of 27

## CHAIN OF CUSTODY

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



Mr. Mitchell Ferguson  
FRM Risk, LLC  
3539 Stevens Way  
Martinez, GA 30907

January 28, 2019

Account# 25675

Login# L469151

Dear Mr. Ferguson:

Enclosed are the analytical results for the samples received by our laboratory on January 08, 2019. All samples on the chain of custody were received in good condition unless otherwise noted. When possible, non-IOM samples will be retained for 14 days following the date of this report (unless an extension is specifically requested). IOM samples are retained for 7 days.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson

A handwritten signature in black ink, appearing to read "Lisa Swab".

Lisa Swab  
Laboratory Director

Enclosure(s)

---

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



Account : 25675  
Login No. : L469151

#### Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
- Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

#### Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at [www.sgs-galson.com](http://www.sgs-galson.com).
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

**Accreditations** SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgs-galson.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

#### Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms

#### NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.





**GALSON**

LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-3227  
FAX: (315) 437-0571  
www.sgsgalson.com

Client : FPM Risk, LLC  
Site : [REDACTED]  
Project No. : FARA  
Date Sampled : 03-JAN-19  
Date Received : 08-JAN-19

Account No.: 25679  
Login No. : 1469151  
Date Analyzed : 28-JAN-19  
Report ID : 1114991

**Formaldehyde**

Sample ID	Lab ID	Time Minutes	Total ug	Conc mg/m3	PPM
ESTEL-M30392	L469151-1	18	0.1	0.4	0.3
ETWA-NJ0564	L469151-2	480	16	2.1	1.7

**COMMENTS:** Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 0.1 ug  
Analytical Method : mod. OSHA 1007; HPLC/UV  
Collection Media : Assay 571

Submitted by: JPM  
Date : 28-JAN-19  
Supervisor : MBL

Approved by: MLN  
QC by : MLN

**NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

	LABORATORY PROTOCOL REPORT	
6001 Franklin Road East Brunswick, NJ 08817 (732) 430-9327 FAX: (732) 437-0571 www.sgsusa.com	Client Name : FTM Risk, LLC Site : Midwest Project No. : 1808 Data Sampled : 12-14-18 Data Received: 01-04-19 Data Analysis: 01-10-19	Account No. : 0077 Login No. : 148721

140011 (Report ID: 11340811)  
Total kg collected for a detection efficiency of 90%.  
COMPLETION results have been corrected for the average background found in the media.  
Dilution of the test media (sample 1-10).  
DATA: 12-14-18

140011 (Report ID: 11340811)  
Recovery and mean recovery data presented below is based on a 95% confidence interval (n=1). The estimated accuracy applies to the media, background, and test reagents in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on media recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analysis.

Parameter	Accuracy	Mean Recovery
Formaldehyde	11-15.0%	100%

## NOTICE

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.



**GALSON**

**CHAIN OF CUSTODY**

<b>Turn Around Time (TAT):</b> (see range)		<b>Client Acct No.:</b> 25875	<b>Report To:</b> Mr. Mitchell Ferguson	<b>Invoice To:</b> Mr. Mitchell Ferguson			
<input checked="" type="checkbox"/> Standard 0%		<b>Company Name:</b> FRM Risk, LLC	<b>Address 1:</b> 3535 Stevens Way	<b>Company Name:</b> FRM Risk, LLC			
<input type="checkbox"/> 4 Business Days 35%		<b>Address 2:</b>	<b>City, State Zip:</b> Marietta, GA 30067	<b>Address 2:</b>			
<input type="checkbox"/> 3 Business Days 50%		<b>City, State Zip:</b> Marietta, GA 30067	<b>Phone No.:</b> 478 - 547 - 7563	<b>City, State Zip:</b> Marietta, GA 30067			
<input type="checkbox"/> 2 Business Days 75%		<b>Phone No.:</b>	<b>Cell No.:</b>	<b>Phone No.:</b>			
<input type="checkbox"/> Next Day by Epm 100%		<b>Email reports to:</b> jordan@frmrisk.com, mitch@frmrisk.com	<b>Comments:</b>	<b>Freek Address:</b> jordan@frmrisk.com, mitch@frmrisk.com			
<input type="checkbox"/> Next Day by Noon 150%				<b>P.O. No.:</b>			
<input type="checkbox"/> Same Day 200%				<b>Payment Info:</b> <input type="checkbox"/> I will call SGS Galson to provide credit card info <input checked="" type="checkbox"/> Card on File (enter the last five digits on the line below)			
<input type="checkbox"/> Samples submitted using the FreePumpLoan™ Program							
<input type="checkbox"/> Samples submitted using the FreeSamplingBadges™ Program							
<b>Comments:</b>							
<b>State Sampled:</b> Georgia			<b>Please indicate which OSHA this data will be used for:</b> <input checked="" type="checkbox"/> OSHA PEL <input type="checkbox"/> ACGIH TLV <input type="checkbox"/> MSHA <input type="checkbox"/> Cal OSHA <input type="checkbox"/> IAD <input type="checkbox"/> Spacing Limited <input type="checkbox"/> Other: Specify Other				
<b>Site Name:</b> Winder	<b>Project:</b> PARA	<b>Sampled By:</b> Jordan Ferguson	<b>List description of industry or Process/Reference present in sampling area:</b>				
<b>Sample ID</b> (Maximum of 20 Characters)	<b>Date Sampled</b>	<b>Collection Medium</b>	<b>Sample Volume</b> Sample Time Sample Area	<b>Utem</b> Minutes or, conf. #	<b>Analysis Requested</b>	<b>Method Reference *</b>	<b>Hazardous Chromium</b> Process (e.g., welding, plating, painting, etc.)
PSTG-WD3392	1/3/2019	Assay N571 Aldehyde Badge	10	min	Formaldehyde	mod. OSHA 1907; EPLC/TV	
PTWA-WD0564	1/3/2019	Assay N571 Aldehyde Badge	400	min	Formaldehyde	mod. OSHA 1907; EPLC/TV	
<input type="checkbox"/> * If the method(s) indicated on the CDC are not our routine/preferred method(s), we will substitute our routine/preferred methods. If this is not acceptable, check here to have us contact you.							
<b>Chain of Custody</b>	<b>Print Name / Signature</b>	<b>Date</b>	<b>Time</b>	<b>Print Name / Signature</b>	<b>Date</b>	<b>Time</b>	
Relinquished By:	Jordan Ferguson	SIGNED ELECTRONICALLY	1/7/2019	18:53	Received By: Zachary King	1/8/19	9:30
Relinquished By:					Received By:		
Samples received after 3pm will be considered as next day's business.							
Online CDC No.: 171418 Proj No.: Account No.: 25875 Finalized: 1/9/2019 4:03:53 PM							
All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: <a href="http://www.sgs.com/NA/Forms-and-Conditions.aspx">http://www.sgs.com/NA/Forms-and-Conditions.aspx</a>							

**NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.


## **APPENDIX III**

### **Calibration Data**

#### **NOTICE**

Ferguson Risk Management, LLC's consulting activities and recommendations are not intended as a substitute for advice from legal counsel, nor are they intended to supplant any duty to provide a safe workplace, operation, product or premises. Any duty to implement recommendations identified in this limited assessment report rests with the client not with Ferguson Risk Management, LLC.

NISTLab/SAI We are Calibrating Everything We Touch		Certificate of Calibration ISO 9001 Certified	
Certificate Number: 20181480 - 83559		Page 1	
Issued For:	FERGUSON RISK MANAGEMENT, LLC 2141 BREEDLOVE SPRINGS CT MONROE, LA 70658	Date Received:	3/13/2018
		Date Issued:	3/23/2018
		Valid Until:	Mar 2019
Equipment:	Manufacturer: BIOS	Test Conditions:	
	Model Number: DEFENDER 510	Temperature:	22.2 C
	Serial Number: 120195	Humidity:	19.9 %
	Control #:	Barometric Pressure:	991.3 mBar
As Found:	FAULTY BATTERY		
As Returned:	FULLY FUNCTIONAL AND WITHIN TOLERANCE		
Special Conditions:	NONE		
Work Performed:	REPLACED FAULTY BATTERY AND CALIBRATED PER CALIBRATION PROCEDURE FC002		
CALIBRATED TO: $\pm 3.0\%$ AS REFERENCED TO PRIMARY BUBBLE FLOW CELL @ 0.3% UNCERTAINTY AT AMBIENT C			
Measurement Uncertainty: AIR FLOW RATE $\pm 0.3\%$			
Device, Description, Report Number, Date Due			
Reference Standards:			
1011, AF-P/M100, PRECISION MICROMANOMETER, 10643-001, 7/31/2018			
1013, SKC 311-100/500/2000, 100/500/2000 ML LAB BURETTE KIT, cal0690875, 3/13/2018			
1030, GILMAN IHCP 300HL MAGNETIC GAUGE, 20152437-76835, 10/30/2018			
1037, 4-45, MASS FLOW METER, 900484086, 12/30/2018			
Reviewed by:			
	3/23/2018		
Authorized Signature: Brian Stanhope			
This report certifies that all calibration equipment used in the test is traceable to the National Institute of Standards (NIST) and applies only to the unit identified under "Equipment" above. This report must not be reproduced except in its entirety without express written approval.			
111 Smith Hines Road, Suite K Greenville, SC 29607		www.nistlab.com 800-238-7550	



**NISTLab/SAI**  
National Center for Environmental Health and Safety

## Certificate of Calibration

### ISO 9001 Certified

### Calibration Report

Certificate # 20181493-93689 Page 2

**Model:** Defender 510  
**Serial #** 120166

**Date:** 3/23/2018

Test Results As Received / Returned			
Reference Cell	Cell Under test	Relative Difference	Percent Difference
cc/min	cc/min	cc/min	
1057.4	1050.4	-7.0	-0.66%
1056.9	1049.5	-7.4	-0.70%
1059.5	1049.0	-10.5	-1.00%
<b>MEAN</b>	<b>MEAN</b>	<b>PERCENT DIFF. OF AVERAGE</b>	
1057.9	1049.6	-0.78%	
2429.0	2423.8	-5.2	-0.21%
2435.6	2433.4	-2.2	-0.09%
2437.1	2434.3	-2.7	-0.11%
<b>MEAN</b>	<b>MEAN</b>	<b>PERCENT DIFF. OF AVERAGE</b>	
2433.9	2430.5	-0.14%	
4863.1	4858.3	-4.8	-0.10%
4864.2	4852.3	8.1	0.17%
4858.1	4857.2	-0.9	-0.02%
<b>MEAN</b>	<b>MEAN</b>	<b>PERCENT DIFF. OF AVERAGE</b>	
4861.5	4859.3	0.02%	

This report is valid only as an attachment to the Calibration Certificate number indicated above.

111 Smith Hines Road, Suite K  
Greenville, SC 29607

[www.nistlab.com](http://www.nistlab.com)  
800-238-7550