Report of Analysis

US EPA/Region 4/SESD (OQA)
980 College Station Road
Athens, GA 30605
Attention: Christopher McHugh

Project Name: New Indy Containerboard

Project Number: 21-0259

Lot Number:**WE27006**

Date Completed:06/08/2021

06/14/2021 4:22 PM
Approved and released by:
Project Manager II: **Cathy S. Dover**

The electronic signature above is the equivalent of a handwritten signature.
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Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
US EPA/Region 4/SESD (OQA)
Lot Number: WE27006

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Sulfide
The following samples were extremely turbid during titration from matter loosening from filters: WE27006-001 (21-0259-052621-03), WE27006-004 (21-0259-052621-09) and WE27006-005 (21-0259-052621-01). Acceptable RPD was achieved and data will be reported.

The MS/MSD for batch 94097 and parent sample WE27006-001 (21-0259-052621-03), recovered outside control limits. The associated LCS passed all acceptance criteria.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Summary
US EPA/Region 4/SESD (OQA)
Lot Number: WE27006
Project Name: New Indy Containerboard
Project Number: 21-0259

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	21-0259-052621-03	Aqueous	05/26/2021 1005	05/26/2021
002	21-0259-052621-06	Aqueous	05/26/2021 1020	05/26/2021
003	21-0259-052621-07	Aqueous	05/26/2021 1130	05/26/2021
004	21-0259-052621-09	Aqueous	05/26/2021 1050	05/26/2021
005	21-0259-052621-01	Aqueous	05/26/2021 1515	05/26/2021

(5 samples)

Detection Summary
US EPA/Region 4/SESD (OQA)
Lot Number: WE27006
Project Name: New Indy Containerboard
Project Number: 21-0259

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	21-0259-052621-03	Aqueous	Sulfide	SM 4500-S2 F-	7.7	S	mg/L	5
002	21-0259-052621-06	Aqueous	Platinum-Cobalt Color	SM 2120B-	5.0	*	color units	6
003	21-0259-052621-07	Aqueous	Platinum-Cobalt Color	SM 2120B-	15	*	color units	7
004	21-0259-052621-09	Aqueous	Sulfide	SM 4500-S2 F-	4.0		mg/L	8
005	21-0259-052621-01	Aqueous	Sulfide	SM 4500-S2 F-	5.5		mg/L	9

(5 detections)

Inorganic non-metals

Client: **US EPA/Region 4/SESD (OQA)**		Laboratory ID: **WE27006-001**	
Description: **21-0259-052621-03**		Matrix: **Aqueous**	
Date Sampled: **05/26/2021 1005**	Project Name: **New Indy Containerboard**		
Date Received: **05/26/2021**	Project Number: **21-0259**		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Sulfide) SM 4500-S2 F-2011	1	06/01/2021 0000	GDC		94097

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Sulfide	**18496-25-8**	**SM 4500-S2 F-2**	**7.7**	**S**	**1.0**	**mg/L**	**1**

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Inorganic non-metals

Client: **US EPA/Region 4/SESD (OQA)**		Laboratory ID: **WE27006-002**	
Description: **21-0259-052621-06**		Matrix: **Aqueous**	
Date Sampled: **05/26/2021 1020**	Project Name: **New Indy Containerboard**		
Date Received: **05/26/2021**	Project Number: **21-0259**		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Platinum-Cob) SM 2120B-2011	1	05/26/2021 1904	GDC		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Platinum-Cobalt Color		**SM 2120B-2011**	**5.0**	*****	**5.0**	**color units**	**1**

Footnote(s): *True Color: pH 6.49;

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Inorganic non-metals

Client: **US EPA/Region 4/SESD (OQA)**		Laboratory ID: **WE27006-003**	
Description: **21-0259-052621-07**		Matrix: **Aqueous**	
Date Sampled: **05/26/2021 1130**	Project Name: **New Indy Containerboard**		
Date Received: **05/26/2021**	Project Number: **21-0259**		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Platinum-Cob) SM 2120B-2011	1	05/26/2021 1904	GDC		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Platinum-Cobalt Color		**SM 2120B-2011**	**15**	*****	**5.0**	**color units**	**1**

Footnote(s): *True Color: pH 7.00;

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Inorganic non-metals

Client: **US EPA/Region 4/SESD (OQA)**		Laboratory ID: **WE27006-004**	
Description: **21-0259-052621-09**		Matrix: **Aqueous**	
Date Sampled: **05/26/2021 1050**	Project Name: **New Indy Containerboard**		
Date Received: **05/26/2021**	Project Number: **21-0259**		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Sulfide) SM 4500-S2 F-2011	1	06/01/2021 0000	GDC		94097

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Sulfide	**18496-25-8**	**SM 4500-S2 F-2**	**4.0**		**1.0**	**mg/L**	**1**

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Inorganic non-metals

Client: **US EPA/Region 4/SESD (OQA)**		Laboratory ID: **WE27006-005**	
Description: **21-0259-052621-01**		Matrix: **Aqueous**	
Date Sampled: **05/26/2021 1515**	Project Name: **New Indy Containerboard**		
Date Received: **05/26/2021**	Project Number: **21-0259**		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Sulfide) SM 4500-S2 F-2011	1	06/01/2021 0000	GDC		94097

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Sulfide	**18496-25-8**	**SM 4500-S2 F-2**	**5.5**		**1.0**	**mg/L**	**1**

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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QC Summary

Inorganic non-metals - MB

Sample ID: WQ94097-001
Batch: 94097
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Sulfide	ND		1	1.0	mg/L	06/01/2021 2019

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: WQ94097-002
Batch: 94097
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
Sulfide	10	10		1	100	80-120	06/01/2021 2019

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCSD

Sample ID: WQ94097-003 **Matrix:** Aqueous
Batch: 94097
Analytical Method: SM 4500-S2 F-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	10		1	100	0.00	80-120	20	06/01/2021 2019

LOQ = Limit of Quantitation
ND = Not detected at or above the LOQ
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
* = RSD is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: WE27006-001MS
Batch: 94097
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
Sulfide	7.7	10	13	N	1	49	70-130	06/01/2021 2019

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: WE27006-001MD
Batch: 94097
Analytical Method: SM 4500-S2 F-2011

Matrix: Aqueous

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date
Sulfide	7.7	10	12	N	1	42	5.3	70-130	20	06/01/2021 2019

LOQ = Limit of Quantitation
ND = Not detected at or above the LOQ
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
* = RSD is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

WE27006

Page 1 of 1

USEPA Region 4 COC (REGION COPY)

DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD

New Indy Containerboard
Project Number: 21-0259
Cooler #:

WE27006

csp

No: 05/26/21-01

Lab: Region 4 Lab
Lab Contact: Mike Beall
Lab Phone: 706-355-8856

Sample Identifier	CLP Sample No.	Media/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
21-0259-052621-03		/ McHugh, Christopher	Grab	Sulfide(15)	C (Ice + Zn Ac + NaOH pH >9) (3)	ASB Inlet	05/26/2021 10:05	Field Sample
21-0259-052621-06		/ Litte, Derek	Grab	Color(15)	F (Ice) (1)	Upstream Catawba	05/26/2021 10:20	Field Sample
21-0259-052621-07		/ Litte, Derek	Grab	Color(15)	F (Ice) (1)	Downstream Catawba	05/26/2021 11:30	Field Sample
21-0259-052621-09		/ McHugh, Christopher	Grab	Sulfide(15)	C (Ice + Zn Ac + NaOH pH >9) (3)	ASB	05/26/2021 10:50	Field Sample

Sample(s) to be used for Lab QC: 21-0259-052621-03 Tag C

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	CL MN	5/26 6.56 pm	[signature]	5/26/2021 0658	
					*Received 3-250ml ZnAcetate/NaOH sulfide containers for 21-025-052621-01 not on COC / Collected 5/26/2021 @ 1515

T= 5.8°C

[signature] 5/26/2021

PaceAnalytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: USEPA Cooler Inspected by/date: JSH / 05/27/2021 Lot #: WE27006

Means of receipt: ☐ Pace ☑ Client ☐ UPS ☐ FedEx ☐ Other:

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 2-2712 Chlorine Strip ID: NA Tested by: JSH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt: %Solid Snap-Cup ID: NA

5.8 / 5.8 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☐ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☑ Yes	☐ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☑ Yes	☐ No	☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA. Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JSH Date: 05/27/2021

Comments: EXCESS: 21-0259-052621-01