



phone 231.773.5998
 toll-free 800.733.5998
 fax 231.773.6537

Trace Analytical Laboratories, Inc.
 2241 Black Creek Road
 Muskegon, MI 49444-2673
 info@trace-labs.com
 www.trace-labs.com

State of Michigan Laboratory ID: 8001

February 10, 2017

Mr. Stephen King
 Birmingham Public Schools
 2305 Cole Street
 Birmingham, MI 48009

PROJECT: Derby Resampling

TRACE ID: T17A403-01

Sample Point Description D-65-CF Collected 1/28/17 5:58 Collected By twb/eb Received at Laboratory 1/30/17 8:47

Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.24 mg/L	1.3	1/31/17 11:51	2/3/17 16:23	dtm	EPA 200.8 Rev. 5.4
Lead	0.071 mg/L	0.015	1/31/17 11:51	2/3/17 16:23	dtm	EPA 200.8 Rev. 5.4

TRACE ID: T17A403-02

Sample Point Description D-68-CF Collected 1/28/17 6:00 Collected By twb/eb Received at Laboratory 1/30/17 8:47

Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.32 mg/L	1.3	1/31/17 11:51	2/3/17 16:28	dtm	EPA 200.8 Rev. 5.4
Lead	0.0025 mg/L	0.015	1/31/17 11:51	2/3/17 16:28	dtm	EPA 200.8 Rev. 5.4

TRACE ID: T17A403-03

Sample Point Description D-69-CF Collected 1/28/17 6:00 Collected By twb/eb Received at Laboratory 1/30/17 8:47

Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.41 mg/L	1.3	1/31/17 11:51	2/3/17 16:36	dtm	EPA 200.8 Rev. 5.4
Lead	0.0057 mg/L	0.015	1/31/17 11:51	2/3/17 16:36	dtm	EPA 200.8 Rev. 5.4

* The MCL (Maximum Contamination Limit) is the maximum concentration allowed under the Federal Safe Drinking Water Act. Results that are reported in bold or red have equaled or exceeded the MCL.

Jon Mink
 Senior Project Manager



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February 10, 2017

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 Birmingham Public Schools
 2305 Cole Street
 Birmingham, MI 48009

PROJECT: Derby Resampling

TRACE ID: T17A403-04

Sample Point Description		Collected		Collected By		Received at Laboratory	
D-76-CF		1/28/17	6:02	twb/eb		1/30/17	8:47
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD	
Copper	11 mg/L	1.3	2/7/17 11:04	2/8/17 16:13	dtm	EPA 200.8 Rev. 5.4	
Lead	0.0093 mg/L	0.015	2/7/17 11:04	2/7/17 17:45	dtm	EPA 200.8 Rev. 5.4	

TRACE ID: T17A403-05

Sample Point Description		Collected		Collected By		Received at Laboratory	
D-77-CF		1/28/17	6:02	twb/eb		1/30/17	8:47
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD	
Copper	1.8 mg/L	1.3	2/7/17 11:04	2/8/17 16:19	dtm	EPA 200.8 Rev. 5.4	
Lead	0.018 mg/L	0.015	2/7/17 11:04	2/7/17 17:47	dtm	EPA 200.8 Rev. 5.4	

TRACE ID: T17A403-06

Sample Point Description		Collected		Collected By		Received at Laboratory	
D-82-BF		1/28/17	6:06	twb/eb		1/30/17	8:47
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD	
Copper	0.62 mg/L	1.3	1/31/17 11:51	2/3/17 16:39	dtm	EPA 200.8 Rev. 5.4	
Lead	0.0030 mg/L	0.015	1/31/17 11:51	2/3/17 16:39	dtm	EPA 200.8 Rev. 5.4	

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February 10, 2017

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PROJECT: Derby Resampling

TRACE ID: T17A403-07

Sample Point Description	Collected	Collected By	Received at Laboratory			
D-115-BF	1/28/17 6:09	twb/eb	1/30/17 8:47			
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.56 mg/L	1.3	1/31/17 11:51	2/3/17 16:41	dtm	EPA 200.8 Rev. 5.4
Lead	0.0017 mg/L	0.015	1/31/17 11:51	2/3/17 16:41	dtm	EPA 200.8 Rev. 5.4

TRACE ID: T17A403-08

Sample Point Description	Collected	Collected By	Received at Laboratory			
D-117-BF	1/28/17 6:09	twb/eb	1/30/17 8:47			
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.54 mg/L	1.3	1/31/17 11:51	2/3/17 16:44	dtm	EPA 200.8 Rev. 5.4
Lead	0.0023 mg/L	0.015	1/31/17 11:51	2/3/17 16:44	dtm	EPA 200.8 Rev. 5.4

TRACE ID: T17A403-09

Sample Point Description	Collected	Collected By	Received at Laboratory			
D-118-BF	1/28/17 6:10	twb/eb	1/30/17 8:47			
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.49 mg/L	1.3	1/31/17 11:51	2/3/17 16:47	dtm	EPA 200.8 Rev. 5.4
Lead	<0.0010 mg/L	0.015	1/31/17 11:51	2/3/17 16:47	dtm	EPA 200.8 Rev. 5.4

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 Senior Project Manager



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February 10, 2017

Mr. Stephen King
 Birmingham Public Schools
 2305 Cole Street
 Birmingham, MI 48009

PROJECT: Derby Resampling

TRACE ID: T17A403-10

<i>Sample Point Description</i>	<i>Collected</i>		<i>Collected By</i>		<i>Received at Laboratory</i>	
D-119-BF	1/28/17	6:10	twb/eb		1/30/17	8:47
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.33 mg/L	1.3	1/31/17 11:51	2/3/17 16:50	dtm	EPA 200.8 Rev. 5.4
Lead	<0.0010 mg/L	0.015	1/31/17 11:51	2/3/17 16:50	dtm	EPA 200.8 Rev. 5.4

TRACE ID: T17A403-11

<i>Sample Point Description</i>	<i>Collected</i>		<i>Collected By</i>		<i>Received at Laboratory</i>	
D-120-BF	1/28/17	6:10	twb/eb		1/30/17	8:47
Metals, Total	RESULT	* MCL	PREPARED	ANALYZED	BY	METHOD
Copper	0.37 mg/L	1.3	1/31/17 11:51	2/3/17 16:52	dtm	EPA 200.8 Rev. 5.4
Lead	<0.0010 mg/L	0.015	1/31/17 11:51	2/3/17 16:52	dtm	EPA 200.8 Rev. 5.4

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Jon Mink
 Senior Project Manager

Birmingham Schools Fixture Inventory

Building: Derby

Date Collected: 1/28/17
 Sampler's Initials: TWB/EB

Trace ID: T17A403
 Logged by: JS
 Checked by: CP

** Resampling **

Trace No.	Time Taken	Sample Point	Location	Photo(s)	Aerator?	Connecting Plumbing	Notes
40		D-40-CF	Rm 117 Right Wall- Left	3590/91	N	Br, Cu	
41		D-41-CF	Rm 117 Back Wall- Right	3592/93	N	Br, Cu	
42		D-42-CF	Rm 117 Back Wall- Right Middle	3594/95	N	Br, Cu	
43		D-43-CF	Rm 117 Back Wall- Left Middle	3596/97	N	Br, Cu	
44		D-44-CF	Rm 117 Back Wall- Left Middle	3598/99	N	Br, Cu	
45		D-45-CF	Rm 117 Left Wall- Right	3600/01	N	Br, Cu	
46		D-46-CF	Rm 117 Left Wall- Left	3602/03	N	Br, Cu	
47		D-47-CF	Rm 116 Teacher's Sink	3604	N	Unknown	
48		D-48-CF	Rm 116 RT Island- 1	3605	N	Unknown	
49		D-49-CF	Rm 116 RT Island- 2	3605	N	Unknown	
50		D-50-CF	Rm 116 RT Island- 3	3605	N	Unknown	
51		D-51-CF	Rm 116 LT Island- 1	3606	N	Unknown	
52		D-52-CF	Rm 116 LT Island- 2	3606	N	Unknown	
53		D-53-CF	Rm 116 LT Island- 3	3606	N	Unknown	
54		D-54-BF	Rm 108	3607	Y	Br, Cu	
55		D-55-BF	Girl's by 108-Left	3608	Y	Br, Cu	
56		D-56-BF	Girl's by 108-Middle	3608	Y	Br, Cu	
57		D-57-BF	Girl's by 108-Right	3608	Y	Br, Cu	
58		D-58-DS	Custodial by 108	3609	N	Unknown	
59		D-59-BF	Boy's by 108-Left	3610	Y	Br, Cu	
60		D-60-BF	Boy's by 108-Middle	3610	Y	Br, Cu	
61		D-61-BF	Boy's by 108-Right	3610	Y	Br, Cu	
62		D-62-Bottle	Hall by 108	3611	N	Unknown	
63		D-63-DF	Hall by 108	3611	N	Unknown	
64		D-64-CF	Rm 109- Left	3612/13	N	Unknown	
65	5:58	D-65-CF	Rm 109 Back Wall- Left	3614/15	Y	G,Br, Cu	
66		D-66-CF	Rm 109 Back Wall-Middle	3616/17/18	Y	Br, Cu	
67		D-67-CF	Rm 109 Back Wall- Right	3616/17/18	Y	Br, Cu	
68	6:00	D-68-CF	Rm 115 Left	3619/20	Y	P,Br, Cu	
69	6:00	D-69-CF	Rm 115 Left Middle	3619/20	Y	Br, Cu	
70		D-70-CF	Rm 115 Right Middle	3621	Y	Br, Cu	
71		D-71-CF	Rm 115 Right	3621	Y	Br, Cu	
72		No Sample					
73		D-73-CF	Rm 114 Left-1	3622/23	Y	Br, Cu	
74		D-74-CF	Rm 114 Left-2	3622/23	Y	Br, Cu	
75		D-75-CF	Rm 114-Middle- 1	3626/27/28	Y	Br, Cu	
76	6:02	D-76-CF	Rm 114-Middle-2	3626/27/28	Y	Br, Cu	
77	6:02	D-77-CF	Rm 114- Right- 1	3629/30/31	Y	Br, Cu	
78		D-78-CF	Rm 114- Right- 2	3629/30/31	Y	Br, Cu	

Released by: TWB Received by: JS Date: 1/30/17 Time: 8:47



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Birmingham Schools Fixture Inventory

Building: Derby

Date Collected: _____
 Sampler's Initials: _____

Trace ID: TIA403
 Logged by: JS
 Checked by: (F)

Trace No.	Time Taken	Sample Point	Location	Photo(s)	Aerator?	Connecting Plumbing	Notes
79		D-79-DF	Rm 110	3632	N	Unknown	
80		D-80-DF	Rm 112	3633	N	Unknown	
81		D-81-DF	Rm 111	3634	N	Unknown	
5 82	6:06	D-82-BF	Staff by 112	3635	Y	Br, Cu	
83		D-83-BF	Band Room	3636/37	Y	Br, Cu	
84		D-84-KF	Office Copy Rm- Left	3638/39	Y	Br, Cu	
85		D-85-KF	Office Copy Rm- Right	3638/39	Y	Br, Cu	
86		D-86-BF	Office- Left Restroom	3640	Y	Br, Cu	
87		D-87-BF	Office- Right Restroom	3641	Y	Br, Cu	
88		D-88-KF	Office Clinic	3642	Y	Br, Cu	
89		D-89-DF	Main Entrance Hall	3643	Y	Unknown	
90		D-90-BF	Boy's Main Entrance	3644	Y	Br, Cu	
91		D-91-BF	Boy's Main Entrance	3644	Y	Br, Cu	
92		D-92-BF	Boy's Main Entrance-Right	3644	Y	Br, Cu	
93		D-93-BF	Girl's Main Entrance-Left	3645	Y	Br, Cu	
94		D-94-BF	Girl's Main Entrance-Middle	3645	Y	Br, Cu	
95		D-95-BF	Girl's Main Entrance-Right	3645	Y	Br, Cu	
96		D-96-BF	Women's by Athletics- Left	3646	Y	Br, Cu	
97		D-97-BF	Women's by Athletics- Right	3646	Y	Br, Cu	
98		D-98-BF	Men's by Athletics-Left	3647	Y	Br, Cu	
99		D-99-BF	Men's by Athletics-Right	3647	Y	Br, Cu	
AA		D-100-BF	Boy's Locker- Left	3648	Y	Br, Cu	
AB		D-101-BF	Boy's Locker- Right	3648	Y	Br, Cu	
AC		D-102-BF	Girl's Locker- Left	3649	Y	Br, Cu	
AD		D-103-BF	Girl's Locker- Right	3649	Y	Br, Cu	
AE		D-104-DF	Gym - East	3650	N	Unknown	
AF		D-105-BF	Gym Athletic Office- East	3651	Y	Br, Cu	
AG		D-106-DF	Gym- West	3652	N	Unknown	
AH		D-107-BF	Gym Athletic Office-West	3653	Y	Br, Cu	
AI		D-108-DF	Pool- West	3654	N	Unknown	
AJ		D-109-DF	Pool-East	3655	N	Unknown	
AK		D-110-BF	Men's by Main Office	3656	Y	Br, Cu	
AL		D-111-BF	Women's by Main Office	3657	Y	Br, Cu	
AM		D-112-HS	Rm 98	3658	Y	Br, Cu	
AN		D-113-DF	Hall by 200- Left	3659	N	Unknown	
AO		D-114-DF	Hall by 200- Right	3659	N	Unknown	
76 AP	6:09	D-115-BF	Girl's by 200- Left	3660	Y	Br, Cu	
AQ		D-116-BF	Girl's by 200-Middle	3660	Y	Br, Cu	
87 AR	6:09	D-117-BF	Girl's by 200- Right	3660	Y	Br, Cu	

JS 1/31/07

Released by: Tom B Received by: JSO Date: 1/31/07 Time: 8:47



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Birmingham Schools Fixture Inventory

Building: Derby

Date Collected: _____
 Sampler's Initials: _____

Trace ID: TTA403
 Logged by: JS
 Checked by: EH

1/31/17

Trace No.	Time Taken	Sample Point	Location	Photo(s)	Aerator?	Connecting Plumbing	Notes
AS	6:10	D-118-BF	Boy's by 200- Left	3661	Y	Br, Cu	
AT	6:10	D-119-BF	Boy's by 200- Middle	3661	Y	Br, Cu	
AU	6:10	D-120-BF	Boy's by 200- Right	3661	Y	Br, Cu	
AV		D-121-BF	HC Restroom by 200- Left	3662	Y	Br, Cu	
AW		D-122-BF	HC Restroom by 200- Right	3663	Y	Br, Cu	
AX		D-123-KF	2nd Fl Teacher's Lounge- Left	3664/65	Y	Br, Cu	
AY		D-124-KF	2nd Fl Teacher's Lounge-Right	3664/65	Y	Br, Cu	
AZ		D-125-DF	Hall by 204	3666	N	N	
BA		D-126-EW	Mech. Rm by 204	3667	Y	Br, Cu	
BB		D-127-DS	Mech. Rm by 204	3667	N	N	
BC		D-128-KF	Rm 208/209	3668/69	Y	Br, Cu	
BD		D129-KF	Media Center Kitchen	3670/71	Y	Br, Cu	
BE		D-130-DF	2nd Fl Hall by Media Ctr-Right	3672	N	Unknown	
BF		D-131-DF	2nd Fl Hall by Media Ctr- Left	3672	N	Unknown	
BG		D-132-DF	2nd Fl Hall by 217-Left	3673	N	Unknown	
BH		D-133-DF	2nd Fl Hall by 217- Right	3673	N	Unknown	
BI		D-134-DS	2nd Custodial by 217	3674	N	Unknown	
BJ		D-135-BF	Girls by 217-Left	3675	Y	Br, Cu	
BK		D-136-BF	Girls by 217- Middle	3675	Y	Br, Cu	
BL		D-137-BF	Girls by 217-Right	3676	Y	Br, Cu	
BM		D-138-BF	Boys by 217-Left	3676	Y	Br, Cu	
BN		D-139-BF	Boys by 217-Middle		Y	Br, Cu	
BO		D-140-BF	Boys by 217- Right		Y	Br, Cu	

Abbreviations:

- B= Classroom Bubbler
- BF= Bathroom Faucet
- Bottle= Bottle Filler
- CF= Classroom Faucet
- DF= Drinking Fountain
- DS= Deep Sink
- EW= Eye Wash
- HS= Hand Sink
- KF= Kitchen Faucet

Connecting Plumbing:

- Br= Brass
- Cu= Copper
- G= Galvanized
- P= Plastic
- SS= Stainless Steel

Released by: [Signature]

Received by: [Signature]

Date: 1/31/17 Time: 8:47

SAMPLE LOG IN CHECKLIST

Trace ID #: TR14163 Date: 1/30/17 Package Description: Cooler Temperature: 14.0
 Client Name: Doray - Birmingham Sheds Time: 8:47 Logged In by: TS

Cooler Receipt

Cooler/samples delivered by: Trace courier
 Hand delivered Name of delivery person: Tim Brown
 Commercial courier UPS FED EX US Mail
 Tracking Number: Not Applicable
 Tracking #: _____
 COC Seals present and intact on cooler? No Yes Not Applicable
 Custody seals signed by Client? No Yes Client custody seal # (if applicable): _____

Coolant and Temperature

Type of Coolant Used
 Slurry w/ crushed, cubed, or chip ice?
 Multiple bags of ice around samples?
 Ice Packs/ Blue Ice:
 No Coolant Present:
 Ice still present upon receipt (circle one):
 Yes No N/A

Cooler Temperature
 Correction Factors: • Digital Stick Thermometer CF = -1.0°C
 • Thermocouple CF = -1.0°C
 Temperature Blank: None °C (Digital Stick Thermometer)
 Range of 3 samples: 13.2-13.4 °C (Thermocouple)
 Melt Water: None °C (Use Digital Stick Thermometer)

General

	Yes	No	NA	Comments
All bottles arrived unbroken with labels in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Each sample point is in a sealed plastic bag?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Labels filled out completely?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All bottle labels agree with Chain of Custody (COC)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample to run tests requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
pH checked and samples at correct pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below*
Correct preservative added to samples?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Air bubbles absent from VOAs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COC filled out properly and signed by client?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC signed in by TRACE sample custodian?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was project manager called and samples discussed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Notes: _____

*EMD pH Test Strips Used:
 pH 0-2.5 Lot: HC563733 pH 11.0-13.0 Lot: HC647328
 Other: _____
 Lot: HC563733 verified 8/21/16 AY
 Lot: HC647328 verified 8/30/16 AY