



December 22, 2020

Stacy Roberts, PE
Senior Civil Engineer/Project Manager
City of Thornton
Engineering Services Division – Infrastructure Maintenance Center
12450 Washington Street
Thornton, CO 80241

Re: Assessment of Lead in Paint at City of Thornton Water Tanks

Dear Ms. Roberts,

Thank you for giving Chemistry & Industrial Hygiene, Inc. (C&IH) the opportunity to again provide the City of Thornton with industrial hygiene services. On December 20, 2020, C&IH employee Andrew Duane visited two City of Thornton water tanks: one at West 112th Avenue and Cherokee Street (Cherokee) and the other at East 136th Avenue and Garfield Street (Garfield), both in Thornton, Colorado. The visit was made in order to assess the potential content of lead in the exterior and interior coatings of the water tanks in preparation for upcoming recoating activities.

Both water tanks appeared fairly uniform in their exterior and interior coatings, although both tanks had areas where patches of newer paint were over the original exterior coatings. The tanks appeared to have been coated with the same paint. A total of four samples were collected, with one interior and one exterior sample from each tank. The exterior samples were collected from areas where all identified paint layers were present. All samples were collected in accordance with ASTM Method 1729, *Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination*. All samples were submitted to Reservoirs Environmental, Inc. for analysis in accordance with Occupational Safety and Health Administration (OSHA) Method ID-125G, *Metal and Metalloid Particulates in Workplace Atmospheres (ICP Analysis)*. Copies of analytical results can be found in Appendix A. Sample results can be found in Table 1.

Table 1:

Lead Paint Results

Sample ID	Sample Location	Result
COT-121020-01	Garfield tank, northwest side of tank, exterior	0.246%
COT-121020-02	Garfield tank, just east of access hatch, interior	ND
COT-121020-03	Cherokee tank, south side, exterior	0.386
COT-121020-04	Cherokee tank, west of access hatch, interior	ND

ND – Non-detect

All exterior samples contained detectable levels of lead; interior samples did not detect any lead. All construction related work at the tanks, including alteration/repair and painting, that may impact the exterior coatings of these two tanks must be performed in accordance with the OSHA Construction standard for Lead (29 CFR 1926.62). Additionally, testing of the waste stream from any paint removal activities should be performed in order to determine if the paint waste is a hazardous waste for disposal under Resource Conservation and Recovery Act (RCRA) requirements.

Limitations

C&IH has performed our services in a manner consistent with generally-accepted industrial hygiene consulting practices applicable to the services rendered. However, the conditions observed at the time of the inspection may change and may not fully represent conditions at a future date or differing work parameters. All comments provided by C&IH are based on the conditions and data collected at the time of the on-site activity. C&IH is not responsible for misrepresented, unknown, or unknowable conditions within the existing project Site or structures, or conditions outside the scope of work.

If you have any questions regarding this report, please call (303) 420-8242.

Sincerely,

CHEMISTRY & INDUSTRIAL HYGIENE, INC.

Author:



Andrew D. Duane, CIH
Managing Director of Industrial Hygiene Services

APPENDIX A:
Laboratory Analytical Report



December 15, 2020

Subcontractor Number:

Laboratory Report: RES 480393-1

Project #/P.O. #: 23758

Project Description: Thornton

Andy Duane
Chemistry & Industrial Hygiene
10201 W. 43rd. Avenue
Suite 201
Wheat Ridge CO 80033

Dear Andy,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the American Industrial Hygiene Association, Lab ID 101533 - Accreditation Certificate #480. The laboratory is currently proficient in both IHPAT & ELPAT programs respectively.

Reservoirs has analyzed the following sample(s) using Atomic Absorption Spectroscopy (AAS) / Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) per your request. Reported sample results were not blank corrected. The analysis has been completed in general accordance with the appropriate methodology as stated in the analysis table. Results have been sent to your office.

RES 480393-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in blue ink that reads "Robin Klover". Below the signature, the text "by Ryan Ellerby" is printed in a small, black, sans-serif font.

Robin Klover
Vice President

RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA Certificate of Accreditation #480 LAB ID 101533

TABLE: I ANALYSIS: LEAD IN PAINT

RES Job Number: **RES 480393-1**
 Client: **Chemistry & Industrial Hygiene**
 Client Project/P.O.: **23758**
 Client Project Description: **Thornton**
 Date Samples Received: **December 10, 2020**
 Analysis Type: **REI CHEMISTRY SOP / USEPA SW846 3050B/6020A-M**
 Turnaround: **Standard**
 Date Samples Analyzed: **December 15, 2020**

NA = Not Analyzed NR = Not Received ND = None Detected BAS = Below Analytical Sensitivity BRL = Below Reporting Limit

Client ID Number	Reporting Limit (mg/kg)	LEAD CONCENTRATION (mg/kg)
COT-121020-01	5.2	2460
COT-121020-02	4.2	BRL
COT-121020-03	2.9	3860
COT-121020-04	3.3	BRL

* Unless otherwise noted all quality control samples performed within specifications established by the laboratory



Ryan Ellerby

Analyst/Data QA



RES Job #: 480393

SUBMITTED BY	INVOICE TO	CONTACT INFORMATION	SERIES
Company: Chemistry & Industrial Hygiene	Company: Chemistry & Industrial Hygiene	Contact: Andy Duane	-1 Chem Standard
Address: 10201 W. 43rd. Avenue	Address: 10201 W. 43rd. Avenue	Phone: (303) 420-8242	
Suite 201	Suite 201	Fax:	
Wheat Ridge, CO 80033	Wheat Ridge, CO 80033	Cell:	
Project Number and/or P.O. #: 23758		Final Data Deliverable Email Address:	
Project Description/Location: Thornton		aduane@c-ih.com (+ 1 ADDNL. CONTACTS)	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm	REQUESTED ANALYSIS				VALID MATRIX CODES				LAB NOTES
PLM / PCM / TEM DTL RUSH PRIORITY STANDARD	<small>PLM - Short Report, Long Report, CARB 435 TEM - AHERA, (+/- or Quantified), Microwave (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level II, ISO 10312, ISO 13794, Charfield, Waste Water, Drinking Water, Bulk +/-, CARB Modified Ahera PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s), Pb Lead Only (7082, 7420), Waste Water, Foodware, [OSHA ID-1283], pH (Liquid, Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan ORGANICS - Methamphetamine, TSS Campylobacter, Bacillus, Salmonella (Culturable, 1-2), Listeria, E.coli O157:H7, E.coli(Coliforms - Plated, S. aureus, Yeast & Mold, Aerobic Plate Count, Coliforms/E.coli (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (wo/ID, w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C) MEDICAL - Bioburden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification</small>	Air = A	Bulk = B						
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm		Dust = D	Food = F						
Dust RUSH PRIORITY STANDARD		Paint = P	Soil = S						
Metals RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT		Surface = SU	Swab = SW						
Organics* SAME DAY RUSH PRIORITY STANDARD		Tape = T	Wipe = W						
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm		Drinking Water = DW							
Viable Analysis** PRIORITY STANDARD **TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH		Waste Water = WW							
Medical Device Analysis RUSH STANDARD		**ASTM E1792 approved wipe media only**							
Mold Analysis RUSH PRIORITY STANDARD		Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)		Matrix Code				
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.		# of Containers	Date Collected mm/dd/yy		Time Collected hr:mm				
Special Instructions:	Laboratory Analysis Instructions								
Client Sample ID Number (Sample ID's must be unique)	ASBESTOS	CHEMISTRY	MICROBIOLOGY						
1 COT-121020-01		X		B 12/10/20					
2 COT-121020-02		X		B 12/10/20					
3 COT-121020-03		X		B 12/10/20					
4 COT-121020-04		X		B 12/10/20					

REI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:	Andy Duane	Date/Time: 12/10/2020 11:59:39	Sample Condition: Acceptable
Received By:	River Pehrson-Alley	Date/Time: 12/10/2020 11:59:39	Carrier: Hand