



BRIDGE B-608

HAZARDOUS MATERIALS SURVEY

BRIDGE INSPECTION AND SURVEY FOR PRESENCE OF
ASBESTOS AND HEAVY METAL(S),
JANUARY 2022

NDOT Hazardous Materials Section, Environmental Division

1263 South Stewart Drive
Carson City, NV 89712

EXECUTIVE SUMMARY

The inspection (survey) for hazardous materials was conducted on bridge B-608 on January 4th, 2022, by NDOT personnel from the Hazardous Materials section, of the Environmental Division. The bridge was evaluated for both asbestos containing materials (ACM) and heavy metals that may be present in coating materials. One suspect metals sample and thirteen suspect asbestos samples were collected with results and considerations summarized below:

- No ACMs were identified.
- Heavy metals were found in silver paint coating material and considered a Lead-Based Paint.

1.0 INTRODUCTION

NDOT conducted an asbestos survey and screening for metals-based coating materials on the following bridge structure located in Churchill County:

- B-608 (Truckee Canal Near Lahontan Reservoir, US-50)

The survey was conducted on January 4, 2022, by NDOT personnel. Suspect Asbestos Containing Material (ACM) were identified and appropriately sampled. Coating materials, if present, were sampled and analyzed for the Resource Recovery and Conservation Act seven (RCRA 7) metals.

Bulk asbestos samples were analyzed by a National Voluntary Laboratory Accredited laboratory by polarized light microscopy (PLM). Metals analysis was conducted by a Nevada Certified Lab. The results of the laboratory analysis are attached as Appendix C and Appendix D, respectively.

2.0 BRIDGE DESCRIPTION

Bridge B-608 was constructed in 1957 with subsequent rehabilitative work in both 1996 and 2004. The bridge is constructed of steel and concrete to include concrete pier caps, parapet, stem and wing walls, and the bridge deck overlain with asphaltic concrete. Steel girders span the bridge and supported by steel piers.

3.0 FIELD ACTIVITIES

The survey was conducted by NDOT personnel, appropriately licensed Asbestos and Hazardous Emergency Response Act (AHERA) accredited asbestos inspectors. The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763. A summary of the survey activities performed is discussed below. Copies of AHERA certifications and licenses for NDOT personnel conducting the survey are provided as Appendix E.

3.1 Visual and Physical Assessment

Survey activities began with a visual observation of the structures to identify homogeneous areas of suspect ACM and presence of coating materials. A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. The homogeneous areas identified during the visual survey, the presence of coating materials, and sample identifiers are summarized in Table 1.

Table 1 - Bridge Component Descriptions

Homogeneous Area	Description	Sample IDs
A	parapet	Para-1, Para-2, Para-3
B	bridge deck	BD-1, BD-2, BD-3
C	pier caps	Pier-1, Pier-2, Pier-3
D	stem and wing walls	Stem-1, Stem-2, Stem-3
E	brown fibrous expansion joint	Exp-1
F	silver paint on steel components	608-paint

3.2 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM and coating materials were collected in general accordance with AHERA sampling protocols. Representative samples of suspect materials were collected in each homogeneous area. Samples were placed in new sealable containers and labeled with unique sample numbers.

3.3 Sample Analysis

Bulk samples of ACM were submitted under chain of custody to Asbestos TEM Laboratories for analysis by PLM. The percentage of asbestos, where applicable, was determined by microscopic visual estimation. Coating material samples were also submitted to Alpha Analytical and analyzed for heavy metals using EPA 6020 test method.

A discussion of suspect ACM and suspect metals-based coating samples collected during the survey and findings are included in Section 6.0.

4.0 PLAN REVIEW

Original design plans were not available for review.

5.0 REGULATORY OVERVIEW

5.1 Asbestos Regulations

NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable, or Category II non-friable ACM. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which are in poor condition and have become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered Regulated ACM (RACM).

5.2 Coating Material and Lead Based Paint Regulations

Lead-based paint (LBP) is defined as a surface coating or paint containing lead in excess of 0.5% (5000 mg/Kg) by weight (EPA Toxic Substance Control Act, Section 401).

Under EPA regulations heavy metal impacted wastes generated during abatement activities are handled as either a solid waste or a hazardous waste, depending on the concentration of each of the metal(s) and the method of coating material removal.

6.0 FINDINGS AND RECOMMENDATIONS

6.1 Suspect Asbestos Containing Materials

A total of 13 bulk samples were collected from five homogeneous areas of suspect ACM. No Asbestos Containing Materials were identified.

A bridge Location Map is included in Appendix A. A photographic log showing homogenous areas is presented in Appendix B. Asbestos analytical results are included in Appendix C. A summary of the suspect ACMs identified is provided in Table 2.

Table 2 – Summary of Suspected ACM

Homogeneous Sampling Area	Sample Number	Material Description/Sample Location	Asbestos Results ⁽¹⁾ , %	NESHAP Category ⁽²⁾	Friability ⁽³⁾
A	Para-1	concrete parapet	Not detected	N/A	non-friable
	Para-2				
	Para-3				
B	BD-1	concrete bridge deck	Not detected	N/A	non-friable
	BD-2				
	BD-3				
C	Pier-1	pier caps	Not detected	N/A	non-friable
	Pier-2				
	Pier-3				
D	Stem-1	stem and wing walls	Not detected	N/A	non-friable
	Stem-2				
	Stem-3				

notes: (1) PLM unless otherwise noted.

(2) NESHAP category I, category II, RACM, or (N/A) not applicable.

(3) Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure.

Additional suspect materials, other than those identified during the survey, could exist within the structures in areas not accessible to the inspector at the time of the survey. Should suspect materials other than those identified during this survey be uncovered during the renovation/demolition process, those materials should be assumed to be ACM until sampling and analysis can confirm or refute this assumption.

6.2 Coating Materials

One composite texture sample from the white coating material applied to the concrete parapets identified as "Paint-608" was collected for analysis. The composite sample was analyzed for total arsenic, barium, cadmium, chromium, lead, selenium, and silver. Based on the EPA's definition of LBP, the coating material is a LBP.

Analytical results are included in Appendix D and laboratory results are summarized in Table 3.

Table 3 – Summary of Coating Material

Sample Identification	Material Description/Sample Location	Heavy Metal Results ⁽¹⁾ , mg/Kg						
		As	Ba	Cd	Cr	Pb	Se	Ag
Paint-608	silver paint coating found on steel components	270	53	nd	1,200	19,000	nd	nd

notes: (1) EPA test method 6020.

nd – not detected above method limits.

6.3 Recommendations

No ACMs were identified. Because the paint coating material is a LBP, any disturbed coating material must be managed as a hazardous waste and activities that could result in exposure to workers should be performed in accordance with OSHA regulations as necessary to protect workers.

Appendix A
Bridge Location Map

Bridge B-608
Truckee Canal Near Lahontan Reservoir
US 50
Churchill County, Nevada



Appendix B
Bridge Photo Log

PHOTOGRAPHIC DOCUMENTATION
Bridge B-608
Truckee River Canal Near Lahontan Reservoir
Churchill County, NV

PHOTO 1

DATE:
01/04/2022

DIRECTION:
Southwest

TAKEN BY:
Rob Piekarz

DESCRIPTION:
Bridge B-608



PHOTO 2

DATE:
01/04/2022

DIRECTION:
Southwest

TAKEN BY:
Rob Piekarz

DESCRIPTION:
Parapet



PHOTOGRAPHIC DOCUMENTATION
Bridge B-608
Truckee River Canal Near Lahontan Reservoir
Churchill County, NV

PHOTO 3

DATE:
01/04/2022

DIRECTION:
Southwest

TAKEN BY:
Rob Piekarz

DESCRIPTION:
Bridge Deck



PHOTO 4

DATE:
01/04/2022

DIRECTION:
West

TAKEN BY:
Rob Piekarz

DESCRIPTION:
Parapet and steel support girder



PHOTOGRAPHIC DOCUMENTATION
Bridge B-608
Truckee River Canal Near Lahontan Reservoir
Churchill County, NV

PHOTO 5

DATE:

01/04/2022

DIRECTION:

Northeast

TAKEN BY:

Rob Piekarz

DESCRIPTION:

Stem wall and substructure



PHOTO 6

DATE:

01/04/2022

DIRECTION:

Northeast

TAKEN BY:

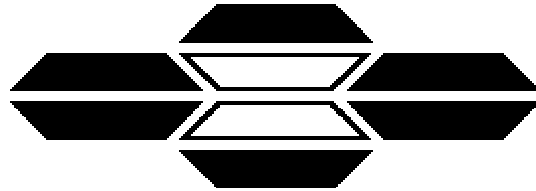
Rob Piekarz

DESCRIPTION:

Parapet, wing wall, and steel girder



Appendix C
Asbestos Sample(s)
Analytical Results



ASBESTOS TEM LABORATORIES, INC.

**EPA Method 600/R-93/116
Polarized Light Microscopy
Analytical Report**

Report No. 146354

1350 Freeport Blvd., Unit 104
Sparks, NV 89431
(775) 359-3377
FAX (775) 359-2798

Main Office Located At:
3431 Ettie Street Oakland, CA 94608
Ph. (510) 704-8930 Fax (510) 704-8929



ASBESTOS TEM LABORATORIES, INC



NVLAP Lab Code 200104-0

Jan-06-22

Mr. Robert Piekarz
Nevada Department of Transportation
1263 South Stewart Street
Carson City, NV 89712

RE: LABORATORY JOB # 9092-00075
Polarized light microscopy analytical results for 13 bulk sample(s).
Job Site: B-608
Job No.:
Report No.: 146354

Enclosed please find the bulk material analytical results for one or more samples submitted for asbestos analysis. The analyses were performed in accordance with EPA Method 600/R-93/116 or 600/M4-82-020 for the determination of asbestos in bulk building materials by polarized light microscopy (PLM). Please note that while PLM analysis is commonly performed on non-friable and fine grained materials such as floor tiles and dust, the EPA method recognizes that PLM is subject to limitations. In these situations, accurate results may only be obtainable through the use of more sophisticated and accurate techniques such as transmission electron microscopy (TEM) or X-ray diffraction (XRD).

Prior to analysis, samples are logged-in and all data pertinent to the sample recorded. The samples are checked for damage or disruption of any chain-of-custody seals. A unique laboratory ID number is assigned to each sample. A hard copy log-in sheet containing all pertinent information concerning the sample is generated. This and all other relevant paper work are kept with the sample throughout the analytical procedures to assure proper analysis.

Each sample is opened in a class 100 HEPA negative air hood. A representative sampling of the material is selected and placed onto a glass microscope slide containing a drop of refractive index oil. The glass slide is placed under a polarizing light microscope where standard mineralogical techniques are used to analyze and quantify the various materials present, including asbestos. The data is then compiled into standard report format and subjected to a thorough quality assurance check before the information is released to the client.

Please note all samples will be held for 3 months from the date of receipt unless otherwise requested by client.

Sincerely Yours,

Laboratory Analyst
ASBESTOS TEM LABORATORIES, INC.

--- These results relate only to the samples tested and must not be reproduced, except in full, with the approval of the laboratory. This report must not be used to claim product endorsement by NVLAP, NIST, or any other agency of the U.S. Government. ---



NVLAP Lab Code 200104-0

POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 1 of 2

Contact: Mr. Robert Piekarz	Samples Indicated: 13	Report No. 146354
Address: Nevada Department of 1263 South Stewart Street Carson City, NV 89712	Reg. Samples Analyzed: 13	Date Submitted: Jan-04-22
	Split Layers Analyzed: 0	Date Reported: Jan-06-22
	Job Site / No. B-608	

SAMPLE ID	ASBESTOS % TYPE	OTHER DATA	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
Stem-1. Lab ID # 9092-00075-001	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Stem/wing wall
		3) _____ 4) Jan-06-22	Concrete-Grey
Stem-2. Lab ID # 9092-00075-002	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Stem/wing wall
		3) _____ 4) Jan-06-22	Concrete-Grey
Stem-3. Lab ID # 9092-00075-003	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Stem/wing wall
		3) _____ 4) Jan-06-22	Concrete-Grey
Para-1. Lab ID # 9092-00075-004	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, parapet
		3) _____ 4) Jan-06-22	Concrete-Grey
Para-2. Lab ID # 9092-00075-005	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, parapet
		3) _____ 4) Jan-06-22	Concrete-Grey
Para-3. Lab ID # 9092-00075-006	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, parapet
		3) _____ 4) Jan-06-22	Concrete-Grey
BD-1. Lab ID # 9092-00075-007	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Bridge Dec.
		3) _____ 4) Jan-06-22	Concrete-Grey
BD-2. Lab ID # 9092-00075-008	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Bridge Dec.
		3) _____ 4) Jan-06-22	Concrete-Grey
BD-3. Lab ID # 9092-00075-009	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Bridge Dec.
		3) _____ 4) Jan-06-22	Concrete-Grey
Pier-1. Lab ID # 9092-00075-010	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Pier Cap
		3) _____ 4) Jan-06-22	Concrete-Grey

Limit of quantitation of method is estimated to be 1% asbestos using a visual area estimation technique. Split samples are inhomogeneous.

Laboratory Analyst
Greg Hanes



NVLAP Lab Code 200104-0

POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 2 of 2

Contact: Mr. Robert Piekarz	Samples Indicated: 13	Report No. 146354
Address: Nevada Department of 1263 South Stewart Street Carson City, NV 89712	Reg. Samples Analyzed: 13	Date Submitted: Jan-04-22
	Split Layers Analyzed: 0	Date Reported: Jan-06-22
	Job Site / No. B-608	

SAMPLE ID	ASBESTOS % TYPE	OTHER DATA	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
Pier-2. Lab ID # 9092-00075-011	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Pier Cap
		3) _____ 4) Jan-06-22	Concrete-Grey
Pier-3. Lab ID # 9092-00075-012	None Detected	1) <1% Cellulose 2) 100-100% Clay, Calc, Qtz, Other	Concrete, Pier Cap
		3) _____ 4) Jan-06-22	Concrete-Grey
Exp-1. Lab ID # 9092-00075-013	None Detected	1) 70-80% Cellulose 2) 20-30% Tar, Other m.p.	Brown Fiber, Expansion Joint
		3) _____ 4) Jan-06-22	Fiberboard-Brown
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	
Lab ID #		1) _____ 2) _____	
		3) _____ 4) _____	

Limit of quantitation of method is estimated to be 1% asbestos using a visual area estimation technique. Split samples are inhomogeneous.

Laboratory Analyst
Greg Hanes

RP VEKARZEDOT.NV.GOV Survey Data

Inspectors: Robert Piekarz	Project Name: Ch...	Project Number: 1000	Date Sampled: 1/11/22
Phone: 775-888-7892	Fax: 775-888-7104	Analysis Type: Asbestos	Air
Turn-A-Round Time: Rush 24-Hour 2 Day	Project Location: ...	Test to First Positive: ...	Yes <input type="radio"/> No <input checked="" type="radio"/>
Requests: ...	Verbals: ...	Quantity	Condition
Sample Location	Location of Materials	Friable	Asbestos %
1 P1EN-2	Concrete	P1EN CAP	
2 P1EN-3	"	↓	
3 EXP-1	Brown Fiber	Expansion Joint	
4			
5			
6			
7			
8			
9			
10			

Comments/Additional Information

MATERIAL	CONDITION	UNITS	ASBESTOS %
PF1 - Pipe Fitted Insulation	G - Good	LF - Linear Feet	A - Asbestos
PR1 - Pipe Run Insulation	D - Damaged	SF - Square Feet	C - Chrysotile Asbestos
DI - Duct Insulation	SD - Significant Damage	CF - Cubic Feet	NDA - No Asbestos Detected
TI - Tank Insulation			Assumed ACM - No Samples Taken
EJ - Expansion Joint			
BI - Boiler Insulation			

Relinquished By:  Relinquished By: _____
 Date/Time: 13:00 1/4/22 Date/Time: _____
 Received By: Natasha Noto-Corman Received By: _____
 1:00pm 1/4/22

Appendix D
Material Coating Sample(s)
Analytical Results



Alpha Analytical, Inc.
255 Glendale Ave, #21
Sparks, Nevada 89431
TEL: (775) 355-1044 FAX: (775) 355-0406
Website: www.alpha-analytical.com

January 26, 2022

Robert Piekarz
Nevada DOT Environmental (NDOT)
1263 S. Stewart St.
Carson City, NV 89712
TEL: (775) 888-7692
FAX: (775) 888-7104

RE:

Order No.: NDO2201179

Dear Robert Piekarz:

The result of this report apply to the sample(s) as received.

There were no problems with the analytical events associated with this report unless noted.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Randy Gardner".

Randy Gardner
Laboratory Director
255 Glendale Ave, #21
Sparks, Nevada 89431



Alpha Analytical, Inc.
255 Glendale Ave, #21
Sparks, Nevada 89431
TEL: (775) 355-1044 FAX: (775) 355-0406
Website: www.alpha-analytical.com

Analytical Report

WO#: NDO2201179

Report Date: 1/26/2022

CLIENT: Nevada DOT Environmental (NDOT)

Collection Date: 1/18/2022 10:00:00 AM

Project:

Lab ID: 2201179-01

Matrix: OTHER

Client Sample ID: B-608

Analyses	Result	RL	Qual	Units	Date Analyzed	Method
Chromium (Cr)	1,200	20		mg/Kg	1/25/2022	Metals by EPA 6020
Arsenic (As)	270	20		mg/Kg	1/25/2022	Metals by EPA 6020
Selenium (Se)	ND	40		mg/Kg	1/25/2022	Metals by EPA 6020
Silver (Ag)	ND	20		mg/Kg	1/25/2022	Metals by EPA 6020
Cadmium (Cd)	ND	20		mg/Kg	1/25/2022	Metals by EPA 6020
Barium (Ba)	53	20		mg/Kg	1/25/2022	Metals by EPA 6020
Lead (Pb)	19,000	20		mg/Kg	1/25/2022	Metals by EPA 6020



Alpha Analytical, Inc.
 255 Glendale Ave, #21
 Sparks, Nevada 89431
 TEL: (775) 355-1044 FAX: (775) 355-0406
 Website: www.alpha-analytical.com

QC SUMMARY REPORT

WO#: 2201179

26-Jan-22

Client: Nevada DOT Environmental (NDOT)

Project:

TestCode: METALS_SO

Sample ID: MB-15069	SampType: MBLK	TestCode: METALS_SO	Units: mg/Kg
Client ID: PBS	Batch ID: 15069	TestNo: E200.8	
Prep Date: 1/25/2022	RunNo: 14031	SeqNo: 394057	
Analysis Date: 1/25/2022			

Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium (Cr)	ND	1									
Arsenic (As)	ND	1									
Selenium (Se)	ND	2									
Silver (Ag)	ND	1									
Cadmium (Cd)	ND	1									
Barium (Ba)	ND	1									
Lead (Pb)	ND	1									

Sample ID: LCS-15069	SampType: LCS	TestCode: METALS_SO	Units: mg/Kg
Client ID: LCSS	Batch ID: 15069	TestNo: E200.8	
Prep Date: 1/25/2022	RunNo: 14031	SeqNo: 394058	
Analysis Date: 1/25/2022			

Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium (Cr)	53.1	1	50	0	106	79.51	120.49				
Arsenic (As)	52.4	1	50	0	105	79.51	120.49				
Selenium (Se)	56.5	2	50	0	113	79.51	120.49				
Silver (Ag)	54.4	1	50	0	109	79.51	120.49				
Cadmium (Cd)	49.1	1	50	0	98.2	79.51	120.49				
Barium (Ba)	51.1	1	50	0	102	79.51	120.49				
Lead (Pb)	51.8	1	50	0	104	79.51	120.49				

Sample ID: 2201094-01AMSD	SampType: MSD	TestCode: METALS_SO	Units: mg/Kg
Client ID: BatchQC	Batch ID: 15069	TestNo: E200.8	
Prep Date: 1/25/2022	RunNo: 14031	SeqNo: 394061	
Analysis Date: 1/25/2022			

Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium (Cr)	1360	1	50	1350	24.5	69.51	130.49	1350	1.1	20	S
Arsenic (As)	58.3	1	50	5.92	105	69.51	130.49	57.6	1.1	20	
Selenium (Se)	54.6	2	50	0	109	69.51	130.49	52.6	3.8	20	
Silver (Ag)	55.1	1	50	0	110	69.51	130.49	53.4	3	20	
Cadmium (Cd)	49.8	1	50	0	99.6	69.51	130.49	50	0.32	20	
Barium (Ba)	150	1	50	131	37.5	69.51	130.49	166	10	20	S
Lead (Pb)	52.7	1	50	0.978	103	69.51	130.49	51.8	1.8	20	

Qualifiers:
 B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits



Alpha Analytical, Inc.
 255 Glendale Ave, #21
 Sparks, Nevada 89431
 TEL: (775) 355-1044 FAX: (775) 355-0406
 Website: www.alpha-analytical.com

QC SUMMARY REPORT

WO#: 2201179

26-Jan-22

Client: Nevada DOT Environmental (NDOT)

Project:

TestCode: METALS_SO

Sample ID: 2201094-01AMS	SampType: MS	TestCode: METALS_SO	Units: mg/Kg
Client ID: BatchQC	Batch ID: 15069	TestNo: E200.8	
Prep Date: 1/25/2022	RunNo: 14031	SeqNo: 394060	
Analysis Date: 1/25/2022			

Analyte	Result	PQL	SPK Value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium (Cr)	1350	1	50	1350	-6.27	69.51	130.49				S
Arsenic (As)	57.6	1	50	5.92	103	69.51	130.49				
Selenium (Se)	52.6	2	50	0	105	69.51	130.49				
Silver (Ag)	53.4	1	50	0	107	69.51	130.49				
Cadmium (Cd)	50	1	50	0	99.9	69.51	130.49				
Barium (Ba)	166	1	50	131	69.5	69.51	130.49				S
Lead (Pb)	51.8	1	50	0.978	102	69.51	130.49				

Qualifiers:
 B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits



Alpha Analytical, Inc.
255 Glendale Ave, #21
Sparks, Nevada 89431
TEL: (775) 355-1044 FAX: (775) 355-0406
Website: www.alpha-analytical.com

Definition Only

WO#: 2201179
Date: 1/26/2022

Definitions:

ND = Not Detected

C = Reported concentration includes additional compounds uncharacteristic of common fuels and lubricants.

D = Reporting Limits were increased due to high concentrations of non-target analytes.

H = Reporting Limits were increased due to the hydrocarbons present in the sample.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = DRO concentration may include contributions from lighter-end hydrocarbons (e.g. gasoline) that elute in the DRO range.

L = DRO concentration may include contributions from heavier-end hydrocarbons (e.g. motor oil) that elute in the DRO range.

O = Reporting Limits were increased due to sample foaming.

V = Reporting Limits were increased due to high concentrations of target analytes.

X = Reporting Limits were increased due to sample matrix interferences.

Z = DRO concentration may include contributions from lighter-end (e.g. gasoline) and heavier-end (e.g. motor oil) hydrocarbons that elute in the DRO range.

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

S51 = Surrogate recovery could not be determined due to the presence of co-eluting hydrocarbons.

S52 = Surrogate recovery was above laboratory acceptance limits. Probable matrix effect.

S53 = Surrogate recovery was below laboratory acceptance limits. Probable matrix effect.

S54 = Surrogate recovery was below laboratory acceptance limits.

S55 = Surrogate recovery was above laboratory acceptance limits.

Report CC's Robert Piekarz

WORKORDER SUMMARY

NV

Alpha Analytical, Inc.

255 Glendale Ave, #21 Sparks, Nevada 89431
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder: NDO2201179
Report Due By: 27-Jan-22
EDD Required: NO

Report Attention: Robert Piekarz

Client:


Nevada DOT Environmental (NDOT)
1263 S. Stewart St.
Carson City, NV 89712

TEL: 7758887692
FAX: 7758887104
ProjectNo:

Date Received: 18-Jan-22

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles			Requested Tests						Sample Remarks		
				Alpha	Sub	TAT	METALS_SO								
NDO2201179-01	B-608	OTHER	1/18/2022 10:00:00 AM	1	0	7	A - As, Ba, Cd, Cr, Pb, Ag, Se								

Comments:

Logged in by:	Signature	Print Name	Company	Date/Time
		Alicia Gilbert	Alpha Analytical, Inc.	01/18/2022 1112

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Appendix E
Inspector Certifications
and
Licenses

M & C Environmental Training

Asbestos Inspector
Refresher Training Course

Robert Piekarz

Has successfully completed the Asbestos Inspector Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., P. O. Box 6419, Concord, California. Tel. # (510) 499 - 5646

Course Approval Number: CA-003-06

Location: Reno, Nevada

Expiration: November 10, 2022

Dates: November 10, 2021

Director of Training: John McGinnis



Certificate Number 49971 IR

M & C Environmental Training

Asbestos Management Planner Refresher Training Course

Robert Piekarz

Has successfully completed the Asbestos Management Planner Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., P.O. Box 6419, Concord, California. Tel. # (510) 499 - 5646

Course Approval Number: CA-003-08

Location: Reno, Nevada

Expiration: November 10, 2022

Dates: November 10, 2021

Director of Training: John McGinnis



Certificate Number **49981 PR**