



Designated Substance Report

**POOL HOUSE
26 Reuben Street
Kemptville, Ontario**

Reference No.: 127-21-001

Prepared by:

Ottawa Contaminant Solutions
1-125 Pretoria Avenue
Ottawa, ON K1S 1W8

Prepared for:

Municipality of North Grenville
285 County Road #44, PO Box 130
Kemptville, ON K0G 1J0

November 2021

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EXECUTIVE SUMMARY

The Municipality of North Grenville retained Ottawa Contaminant Solutions (OCS) to complete a designated substance survey and report (DSR) of the pool house located at 29 Reuben Street, Kemptville, Ontario (Site).

The survey was requested to satisfy Section 30 of the Occupational Health and Safety Act (OHSA) to identify any designated substances that may be impacted by renovations, alterations, or demolition. Under OHSA, there are 11 agents classified as designated substances to which the exposure to workers is prohibited, restricted, regulated, limited, or controlled. Employers are obligated to take reasonable precautions to protect workers and the environment from designated substances and hazardous materials as appropriate. The most common designated substances encountered during construction or demolition are asbestos, lead, and silica.

OCS completed the designated substances survey (DSR) on October 14, 2021. During the assessment, materials were documented, and potential asbestos containing materials were sampled and sent for accredited 3rd party laboratory analysis.

SUMMARY OF FINDINGS

MATERIAL	FINDINGS
Asbestos	Asbestos containing drywall joint compound was discovered at the Site during the DSR.
Lead	Lead is present in the paint at the Site based on paint chip testing. Lead may also be present in solder (electrical equipment, domestic water lines, bell fittings for cast iron pipes), ceramic tile glaze, brick mortar, electrical wiring and sheathing, and flashing.
Silica	Silica is present in block, parging, mortar, concrete, caulking, stone veneer, ceramic, grout, and ceiling tiles at the Site.

Other Designated Substances and Hazardous Materials

Acrylonitrile, arsenic, benzene, mercury, isocyanates, coke oven emissions, and ethylene oxide were not observed at the Site during the DSR.

1.0 INTRODUCTION

The Municipality of North Grenville retained Ottawa Contaminant Solutions (OCS) to complete a designated substance survey and report (DSR) of the pool house located at 29 Reuben Street, Kemptville, Ontario (Site).

The survey was requested to satisfy Section 30 of the Occupational Health and Safety Act (OHSA) to identify any designated substances that may be impacted by renovations, alterations, or demolition. Under OHSA, there are 11 agents classified as designated substances to which the exposure to workers is prohibited, restricted, regulated, limited, or controlled. Employers are obligated to take reasonable precautions to protect workers and the environment from designated substances and hazardous materials as appropriate. The most common designated substances encountered during construction or demolition are asbestos, lead, and silica.

OCS completed the designated substances survey (DSR) on October 14, 2021. During the assessment, materials were documented, and potential asbestos containing materials were sampled and sent for accredited 3rd party laboratory analysis.

2.0 DESIGNATED SUBSTANCES ASSESSMENT

The following sections include background details on specific designated substances and their potential presence at the Site.

2.1 Acrylonitrile

Acrylonitrile is a chemical compound that is used in the production of other chemicals and products. It is highly toxic/flammable and releases hydrogen sulfide when burned.

Acrylonitrile was not observed at the Site during the DSR.

2.2 Arsenic

Arsenic is a chemical element that has been used in various applications and the production of herbicides and pesticides. Arsenic is poisonous and a known carcinogen.

Arsenic was not observed at the Site during the DSR.

2.3 Asbestos

Asbestos is a group of naturally occurring mineral silicates. It has been used in a wide variety of construction materials due to its heat resistance, high tensile strength, and other properties. Asbestos has been used in the manufacture of thermal insulation, surfacing materials, and other miscellaneous building materials. The inhalation of asbestos has been associated with several respiratory diseases, including cancer, asbestosis, and mesothelioma.

The findings of the asbestos containing materials assessment are presented in section 3.0.

2.4 Benzene

Benzene is found in petroleum-based products, including gasoline. It is used in the production of various chemical products such as plastics and rubber. Benzene is a known carcinogen.

Benzene was not observed at the Site during the DSR.

2.5 Coke Oven Emissions

Coke Oven Emissions are the airborne products resulting from the heating of coal to produce coke, which is used in the production of steel and iron. Exposure to coke oven emissions may cause skin and lung cancers.

Coke oven emissions were not observed at the Site during the DSR.

2.6 Ethylene Oxide

Ethylene Oxide is used in the production of various industrial chemicals. It is a known carcinogen, poison, and mutagen.

Ethylene oxide was not observed at the Site during the DSR.

2.7 Isocyanates

Isocyanates are a group of chemicals used in the production of paints, foams, and furniture. Isocyanates are eye, skin, and respiratory irritants. Exposure can result in isocyanate sensitized asthma and other serious health effects. At least one type of isocyanate is a known carcinogen.

Isocyanates were not observed at the Site during the DSR.

2.8 Lead

Lead is a chemical element that is used in several applications including the production of paint, pipes, and ammunition. Lead is an ingestion and inhalation hazard. It is a neurotoxin that can accumulate in the body and result in nervous system damage.

The findings of the lead containing material assessment are presented in section 4.0.

2.9 Mercury

Mercury is the only metal element that exists in the liquid state at standard pressure and temperature. It has been used in thermostats, switchgear, fluorescent light tubes/bulbs, and thermometers. Exposure to mercury is known to cause a wide variety of serious health affects in individuals.

Mercury-containing equipment was not discovered during the DSR at the Site.

2.10 Silica

Silica is a common material found in rock, sand, and building materials such as asphalt, brick, and mortar. It has been used in a variety of construction material because of its hardness. Inhalation of silica can result in irreversible lung diseases.

Silica is present in block, parging, mortar, concrete, caulking, stone veneer, ceramic, grout, and ceiling tiles at the Site.

2.11 Vinyl Chloride

Vinyl chloride is a chemical intermediate used in the production of PVC. Exposure to vinyl chloride is known to cause cancer.

Vinyl chloride was not observed at the Site during the DSR.

3.0 ASBESTOS CONTAINING MATERIALS ASSESSMENT

Asbestos is a group of naturally occurring mineral silicates. It has been used in a wide variety of construction materials due to its heat resistance, high tensile strength, and other properties. Asbestos has been used in the manufacture of thermal insulation, surfacing materials, and other miscellaneous building materials. The inhalation of asbestos has been associated with several respiratory diseases, including cancer, asbestosis, and mesothelioma.

OCS carried out an assessment for asbestos containing materials (ACM's) according to Ontario Regulation 278/05 – "Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05) as part of the DSR.

OCS observed potential asbestos containing caulking, drywall joint compound, concrete block filler, parging, and ceiling tiles observed at the Site. These materials were collected and submitted for 3rd party accredited laboratory analysis. Pictures of sampled materials are presented in Appendix A. The laboratory report is presented in Appendix B and is summarized in the following table:

Sample Set	Material Description	Observed Location(s)	Asbestos Concentration	Picture #
CK-1	Caulking, White Colour	Site Exterior	None Detected	1
CK-2	Caulking, Grey Colour		None Detected	2
DC-1	Drywall Joint Compound	Throughout Interior	2% Chrysotile	-
CF-1	Concrete Block Filler	Interior Concrete Blocks	None Detected	3
PA-1	Parging	Utility Penetrations	None Detected	4
CT-1	Ceiling Tile, 1x1	Entrance & Offices	None Detected	5

Note: Multiple representative samples were collected according to O. Reg. 278/05 for each sample set.

Non-friable asbestos containing drywall joint compound was discovered at the Site, based on the laboratory analysis. 0.5% asbestos or greater concentration of asbestos was detected in this material. Therefore, it is classified as ACM according to O. Reg. 278/05.

Asbestos was not detected at a concentration of 0.5% in the remaining sampled materials, and therefore, they are not considered asbestos containing.

4.0 LEAD MATERIAL ASSESSMENT

Lead is a chemical element that is used in a number of applications including the production of paint, pipes, and ammunition. Lead is an ingestion and inhalation hazard. It is a neurotoxin that can accumulate in the body and result in nervous system damage.

Industry practice is to treat painted surfaces that contain greater than 0.5% (5,000 ug/g) lead as lead-based paint. This limit is based on the U.S. Housing and Urban Development criteria that identifies paint containing this concentration of lead as a residential hazard. Paints that contain less than 0.5% lead are classified as lead-containing. Painted surfaces that contain 0.1% lead or less do not typically release significant airborne lead during alterations to be an occupational exposure concern unless the paint is aggressively disturbed by burning, high temperature cutting, blasting (sand, dry ice, soda), or other aggressive disturbance. Additionally, lead is an environmental hazard and must be under control during project activities. Materials that contain lead must not be released into the environment.

Two samples of exterior paints were collected and submitted for 3rd party accredited laboratory analysis. Pictures of sampled paint are presented in Appendix A. The laboratory report is presented in Appendix B and is summarized in the following table:

Sample ID	Sampled Material	Observed Location(s)	Lead Concentration (%)	Comment	Picture #
LP-1	Paint, Aqua Blue	Throughout Site	0.0009	Lead-Containing	6
LP-2	Paint, White	Walls, Ceiling, Framing	0.04	Lead-Containing	7
LP-3	Paint, Orange	Doors, Framing	0.0012	Lead-Containing	8
LP-4	Paint, Dark Blue	Doors, Framing	0.0007	Lead-Containing	9

Lead-containing paints are present at the Site, based on the laboratory analysis.

OCS recommends that the disturbance of any lead containing material be conducted in accordance with the Ministry of Labour guideline, "Lead on Construction Projects."

5.0 RECOMMENDATIONS

General

1. Provide a copy of this report to all contractors who will conduct project work at the Site.
2. Conduct all project work according to Federal, Provincial, and Municipal requirements that are in affect at the time the work is completed.
3. Instruct all project participants to report the discovery of additional designated substances and/or hazardous materials not discussed in this report to the Project Manager before conducting works that may disturb such materials.
4. Additional assessment of designated substances and/or hazardous materials may be required at the time of specific repairs, alterations, renovations, or demolition.
5. Generated waste containing designated substances or hazardous materials must be disposed of according to Ontario Regulation 347, as amended.

Asbestos

1. Handle all asbestos containing materials at the Site according to Ontario Regulation 278/05 – “Asbestos on Construction Projects and in Buildings and Repair Operations” including and not limited to:
 - a. Follow the roles prescribed for “the owner” in section 8 of the regulation. This section includes roles for notifications, inspection, and training.
 - b. Institute and maintain an asbestos awareness/worker training program for employees who may:
 - i. Work in close proximity to asbestos containing materials and may disturb such materials.
 - ii. Perform operations that disturb asbestos containing materials.
 - c. Asbestos abatement must be conducted by a competent asbestos abatement contractor. The contractor should be able to show proof of employee training, workers compensation documentation, and asbestos liability insurance.
 - d. Remove all asbestos containing materials to the highest extent possible prior to demolition.
2. Type 1 Operations may be used to disturb 1 m² or less of drywall with asbestos containing drywall joint compound (DADC) on a room-by-room basis utilizing non-powered hand tools. Type 2 Operations may be used to disturb greater than 1 m² of DADC, where hand tools or power tools equipped with effective HEPA dust control devices are utilized. Type 3 Operations must be used if DADC is disturbed with power tools not equipped with effective HEPA dust collection devices.

Lead

Disturbance of lead-containing materials should be conducted according to the Ministry of Labour guideline, Lead on Construction Projects, 2011.

Silica

Disturbance of silica-containing materials should be conducted according to the Ministry of Labour guideline, Silica on Construction Projects, 2011.

Other Designated Substances and Hazardous Materials

Plastics, sealants, foams, polyurethane, adhesives, synthetic materials, rubber, and PVC, should not be excessively heated as there is a remote chance they could emit designated substances or hazardous materials. If heating these materials must be carried out, conduct a review of the possible emissions that may occur, and take appropriate protective measures to prevent exposure and contamination.

The Regulations & Guidelines referenced in this report are available for review on our website at <https://contaminantsolutions.com/linksresources/>

Please contact OCS if you have any questions regarding the findings in this report before commencing project activities.

Sincerely,

Ottawa Contaminant Solutions



Geoff Leclair, A.Sc.T.
Environmental Consultant
geoff@contaminantsolutions.com

LIMITATIONS

This report does not account for areas that were inaccessible at the time of the assessment including and not limited to areas beneath flooring, debris, or ceiling cavities. This DSR was conducted according to industry practice and was based on information available at the time of the assessment. This survey was limited to the client prescribed scope of work. A representative number of balconies were reviewed as part of this survey. OCS cannot rule out the presence of additional designated substances present at all impacted locations at the Site. The discovery of additional materials or the passage of time may require re-evaluation of the findings presented in this report.

This report is designed for the independent use of Municipality of North Grenville and their authorized representatives. Third party use of this report is prohibited without authorization by Municipality of North Grenville and Ottawa Contaminant Solutions. Any unauthorized use or dependence of any elements presented in this report will be conducted at any third party's risk. No assurances or representations are made to any third party.

**Appendix A
Picture Record**

Designated Substance Report
29 Reuben Street, Ottawa ON
Reference No.: 127-21-001



Picture 1: Caulking, White Colour, Site Exterior, Sample Set: CK-1



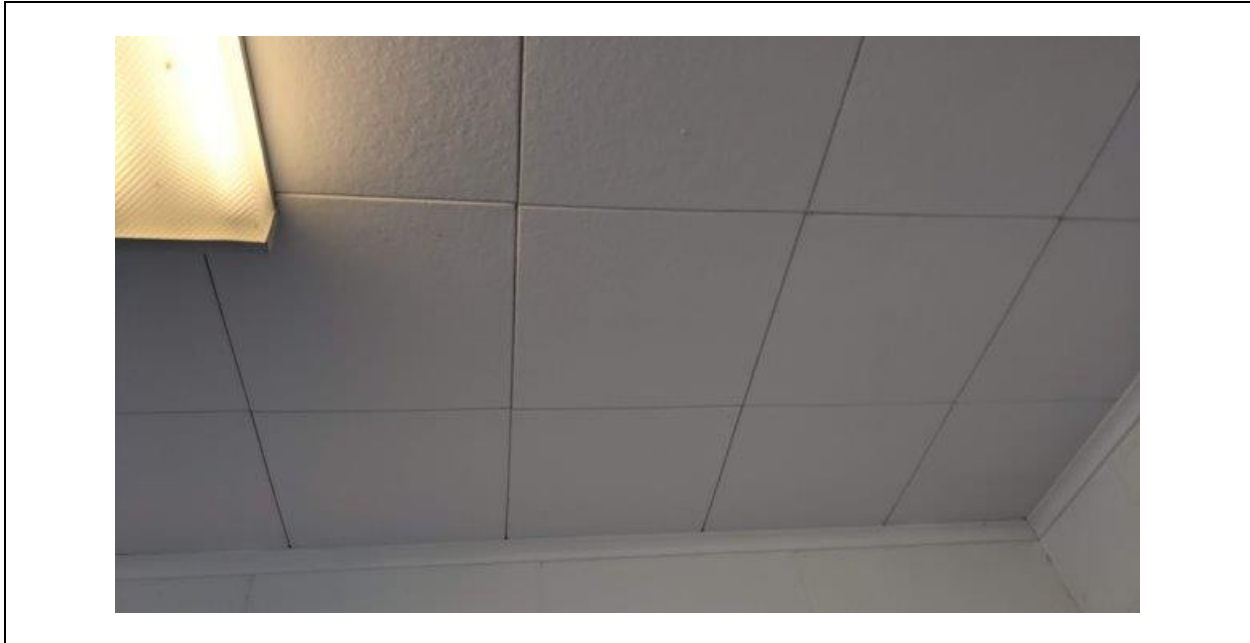
Picture 2: Caulking, Grey Colour, Site Exterior, Sample Set: CK-2



Picture 3: Concrete Block Filler, Interior Concrete Blocks, Sample Set: CF-1



Picture 4: Parging, Utility Penetrations, Sample Set: PA-1



Picture 5: Ceiling Tile, 1x1, Entrance & Offices, Sample Set: CT-1



Picture 6: Paint, Aqua Blue, Throughout Site, Sample: LP-1



Picture 7: Paint, White, Walls, Ceiling, Framing, Sample: LP-2



Picture 8: Paint, Orange, Doors, Framing, Sample Set: LP-3



Picture 9: Paint, Dark Blue, Doors, Framing, Sample: LP-4

Appendix B
Laboratory Reports

Designated Substance Report
29 Reuben Street, Ottawa ON
Reference No.: 127-21-001

Certificate of Analysis

Ottawa Contaminant Solutions

1-125 Pretoria Avenue
Ottawa, ON K1S 1W8
Attn: Geoff Leclair

Client PO:
Project: 026R
Custody: 55321

Report Date: 20-Oct-2021
Order Date: 14-Oct-2021

Order #: 2142411

This Certificate of Analysis contains analytical data applicable to the following samples as submitted :

Parcel ID	Client ID
2142411-01	CK-1-A
2142411-02	CK-1-B
2142411-03	CK-1-C
2142411-04	CK-2-A
2142411-05	CK-2-B
2142411-06	CK-2-C
2142411-07	DC-1-A
2142411-08	DC-1-B
2142411-09	DC-1-C
2142411-10	CF-1-A
2142411-11	CF-1-B
2142411-12	CF-1-C
2142411-13	PA-1-A
2142411-14	PA-1-B
2142411-15	PA-1-C
2142411-16	CT-1-A
2142411-17	CT-1-B
2142411-18	CT-1-C

Approved By:



Emma Diaz
Senior Analyst

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis
 Client: **Ottawa Contaminant Solutions**
 Client PO:

Report Date: 20-Oct-2021
 Order Date: 14-Oct-2021
 Project Description: **026R**

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2142411-01	14-Oct-21	White	Caulking	No	Client ID: CK-1-A Non-Fibers	100
2142411-02	14-Oct-21	White	Caulking	No	Client ID: CK-1-B Non-Fibers	100
2142411-03	14-Oct-21	White	Caulking	No	Client ID: CK-1-C Non-Fibers	100
2142411-04	14-Oct-21	Grey	Caulking	No	Client ID: CK-2-A Non-Fibers	100
2142411-05	14-Oct-21	Grey	Caulking	No	Client ID: CK-2-B Non-Fibers	100
2142411-06	14-Oct-21	Grey	Caulking	No	Client ID: CK-2-C Non-Fibers	100
2142411-07	14-Oct-21	Off-white	Drywall Joint Compound	Yes	Client ID: DC-1-A Chrysotile Non-Fibers	2 98
2142411-08	14-Oct-21	Off-white	Drywall Joint Compound		Client ID: DC-1-B not analyzed, positive stop	
2142411-09	14-Oct-21	Off-white	Drywall Joint Compound		Client ID: DC-1-C not analyzed, positive stop	
2142411-10	14-Oct-21	Grey	Parging Cement	No	Client ID: CF-1-A Non-Fibers	100
2142411-11	14-Oct-21	Grey	Parging Cement	No	Client ID: CF-1-B Non-Fibers	100
2142411-12	14-Oct-21	Grey	Parging Cement	No	Client ID: CF-1-C Non-Fibers	100

Certificate of Analysis
 Client: **Ottawa Contaminant Solutions**
 Client PO:

Report Date: 20-Oct-2021
 Order Date: 14-Oct-2021
 Project Description: **026R**

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2142411-13	14-Oct-21	Grey	Parging Cement	No	Client ID: PA-1-A	
					Non-Fibers	100
2142411-14	14-Oct-21	Grey	Parging Cement	No	Client ID: PA-1-B	
					Non-Fibers	100
2142411-15	14-Oct-21	Grey	Parging Cement	No	Client ID: PA-1-C	
					Non-Fibers	100
2142411-16	14-Oct-21	Brown	Ceiling Tile	No	Client ID: CT-1-A	
					[AS-PRE]	
					Cellulose	95
					Non-Fibers	5
2142411-17	14-Oct-21	Brown	Ceiling Tile	No	Client ID: CT-1-B	
					[AS-PRE]	
					Cellulose	95
					Non-Fibers	5
2142411-18	14-Oct-21	Brown	Ceiling Tile	No	Client ID: CT-1-C	
					[AS-PRE]	
					Cellulose	95
					Non-Fibers	5

**** Analytes in bold indicate asbestos mineral content.**

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	AppE to SubE of 40CFR Part753 and EPA/600/R-93/116	2 - Ottawa West	CALA 1262		20-Oct-21

* Reference to the NVLAP term does not permit the user of this report to claim product certification , approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Certificate of Analysis

Client: **Ottawa Contaminant Solutions**

Client PO:

Report Date: 20-Oct-2021

Order Date: 14-Oct-2021

Project Description: **026R**

Qualifier Notes

Sample Qualifiers :

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

Work Order Revisions | Comments

None

Certificate of Analysis

Ottawa Contaminant Solutions

1-125 Pretoria Avenue
Ottawa, ON K1S 1W8
Attn: Geoff Leclair

Client PO:
Project: 026R
Custody: 63200

Report Date: 15-Oct-2021
Order Date: 14-Oct-2021

Order #: 2142339

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2142339-01	LP-1
2142339-02	LP-2
2142339-03	LP-3
2142339-04	LP-4

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 15-Oct-2021

Client: **Ottawa Contaminant Solutions**

Order Date: 14-Oct-2021

Client PO:

Project Description: **026R**

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 6020 - Digestion - ICP-MS	15-Oct-21	15-Oct-21

Qualifier Notes:

QC Qualifiers :

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

Certificate of Analysis
 Client: Ottawa Contaminant Solutions
 Client PO:

Report Date: 15-Oct-2021
 Order Date: 14-Oct-2021
 Project Description: 026R

Sample Results

Lead					Matrix: Paint
Parcel ID	Client ID	Sample Date	Units	MDL	Result
2142339-01	LP-1	14-Oct-21	ug/g	5	9
2142339-02	LP-2	14-Oct-21	ug/g	5	384
2142339-03	LP-3	14-Oct-21	ug/g	5	12
2142339-04	LP-4	14-Oct-21	ug/g	5	7

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	5	ug/g						
Matrix Duplicate									
Lead	1860	5	ug/g	4090			75.00	50	QR-04
Matrix Spike									
Lead	49.5	5.00	ug/g	ND	99.1	70-130			