Part 1 General

1.1 STATUS OF AVAILABLE PROJECT INFORMATION

.1 Available Project information means information of any type and in any form that is expressly identified as available project information in this Section.

.2 No available Project information forms part of the Contract Documents unless copied or transcribed into Drawings or Specifications, or is expressly listed in the agreement as a Contract Document.

1.2 USE AND RELIANCE UPON AVAILABLE PROJECT INFORMATION

.1 Available Project information is made available to Bidders to fulfill the Department Representative’s duty to disclose all relevant Project information to Bidders.

.2 Bidders shall interpret and draw their own conclusions about available Project information, including consideration of the time when it was created. Available project information may be time sensitive. The Department Representative assume no responsibility for such interpretations and conclusions.

.3 Available Project information, or any part thereof, shall not be construed as contract requirements unless also reflected in Drawings or Specifications, and in case of conflict the Drawings or Specifications shall govern.

.4 Bidders, acting reasonably, may rely on available Project information in preparing their bids, subject to any qualifications stated in such available Project information and unless expressly stated otherwise in this Section.

1.3 AVAILABLE PROJECT INFORMATION

.1 The following information is included in the Bid Documents:

- .1 General:
  - .1 Bidder’s may rely on the available project information contained within these reports within the limitations expressly stated in the reports.
  - .2 Recommendations provided in these reports are not a requirement of this Contract unless also contained in the Contract Documents.
- .2 Geotechnical investigation report entitled Stony Mountain Institution: CSC C12 Powerhouse Structural Repair Geotechnical Recommendations and Considerations, dated August 11th, 2020, prepared by Dyregrov Robinson Inc.
- .3 Environmental assessment report entitled Assessment of Powerhouse Coal Storage Area Stony Mountain Institute, Stony Mountain, Manitoba, dated June 24th, 2020, prepared by Wood Environment & Infrastructure Solutions.

1.4 PRODUCTS

.1 Not Used.

Part 2 Execution

2.1 NOT USED

END OF SECTION

DYREGROV ROBINSON INC.
Consulting Geotechnical Engineers

Unit 1 – 1692 Dublin Ave.
Winnipeg, MB R3H 1A8
TEL (204) 632-7252
FAX (204) 632-1442

August 11, 2020 File No. 204357

Crosier Kilgour & Partners Ltd.
300 – 275 Carlton Street
Winnipeg, Manitoba
R3C 5R6

Attn: Bart Flisak, P.Eng.

**RE: Stony Mountain Institution: CSC C12 Powerhouse Structural Repair
Geotechnical Recommendations and Considerations**

Dyregrov Robinson Inc. (DRI) has undertaken a review of the project information provided and made two site visits in order to provide geotechnical recommendations and considerations for the proposed repairs to the CSC C12 Powerhouse structure located at the Stony Mountain Institution, Stony Mountain, MB.

Existing Powerhouse Coal Bunker

We understand that the CSC C12 Powerhouse building was constructed in the 1950's and includes a large coal storage bunker that was used to store fuel for the boiler system used in the past. The coal bunker is made of reinforced concrete and the base of the bunker is located about 20 feet (6.1 m) below main floor elevation. The original drawings indicate that the powerhouse structure is supported on footings and piers founded on bedrock. In the past, coal was dumped directly into the bunker from rail cars through a steel grate floor system. The structural condition of the bunker has deteriorated and there is concern that the main floor level may not be structurally sound.

The concrete slab at the main floor level over the bunker is currently supporting diesel powered electric generators and other electrical equipment and we understand it is necessary that these units continue to operate during the structural repair program. Based on discussion with Crosier Kilgour and Partners, there are some structural concerns with the concrete floor slab, the steel grate over the coal bunker and the coal bunker below. We understand that the intent of the project is to backfill the existing coal bunker and replace the main level concrete floor slab while maintaining the functional use of the electric generators and other electrical equipment.

Subsurface Conditions

The drawing in Appendix A (cropped from an original Powerhouse drawing and provided by CKP) shows Cross-Section 'A-A' through the coal bunker. The drawing indicates that the bedrock contact is about 10 feet below main floor elevation and the base of the coal bunker is approximately 10 to 11 feet below bedrock contact. The footings are assumed to be at least 12 inches thick and installed below the floor slab. Based on DRI's previous experience at the Stoney Mountain Institute, the subsurface conditions generally consist of fill materials or clay soil and glacial till overlying bedrock, which was encountered between 3 to 10 feet below general site grade. These conditions appear to be similar to those shown on Section A-A.

<u>Site Visit – January 21st, 2020</u>

On January 21st, 2020, DRI participated a site visit of the CSC C12 Powerhouse building arranged for and led by CKP. The first part of the site visit consisted of touring the generator room, electrical room, and work area on the main floor directly above the coal bunker (refer to Ground Floor Plan in Appendix A). The generators and electrical equipment sit on concrete slab floor that also extends into the work area room to the large overhead door. The work area room, as we understand, originally provided railcar access above the coal bunker to replenish the coal reserves. Photograph 1 shows the generators on the concrete slab floor in the generator room.

Photograph 1: Generators on concrete main floor slab in generator room

The second part of the site visit consisted of examining the condition of the coal bunker from the basement level. Various access points were cut through the coal bunker concrete wall in order to provide an inside view. The coal bunker is an open space with reinforced concrete beams and columns and angled concrete side walls. The beams and columns show signs of deterioration with the corroded reinforcing steel visible in many locations. Water, concrete debris, and some coal has accumulated at the bottom of the coal bunker creating an uneven surface at the bottom with debris piling up higher than 2 feet in some areas. Photograph 2 illustrates the general observed conditions at the bottom of the coal bunker.

Photograph 2: Concrete rubble and coal residue at the base of the coal bunker

Just below the grated floor over the coal bunker and directly below the generator room, there are a few electrical conduit lines hung from the concrete beams (see Photograph 3). We understand that the conduits must remain operational throughout the construction process along with the generators and electrical equipment above.

Photograph 3: Electrical conduit below the original steel grate over the coal bunker

Site Visit - June 22nd,2020

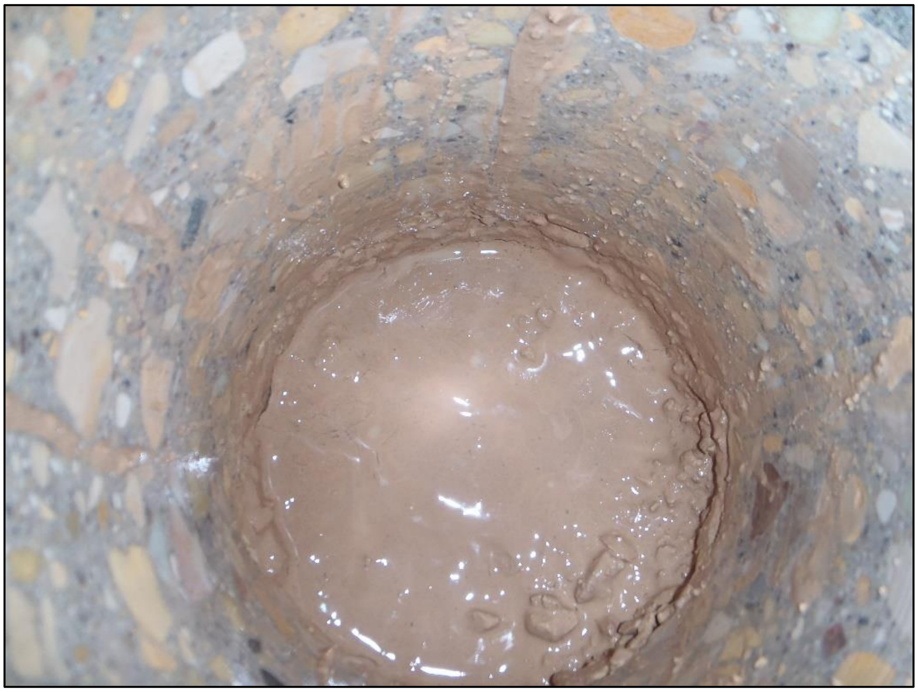
On June 22nd, 2020 DRI participated in a second site visit led by CKP in order to confirm the subsurface conditions directly beneath the basement concrete slab floor beside the coal bunker. This work was done to evaluate if the floors are supported on soil or bedrock. Two small diameter probe holes were drilled approximately 2 feet deep through basement slab in three of the 'coal bunker access bays'. The probe holes were drilled using a concrete hammer drill fitted with a 0.5" diameter drill bit. Three 5 inch diameter holes were also cored through the basement floor slab in the access bays to help confirm the material below floor slab. The Sub-Basement Plan drawing (provided by CKP) in Appendix A identifies the location of the coal access bays, the locations of the three core holes and areas where probe holes were drilled.

The general drilling conditions encountered in the small diameter probe holes consist of a 6 to 7 inch thick basement floor slab. Directly below the floor the drill would penetrate relatively easily for another 10 to 12 inches before the drilling resistance improved and was comparable to drilling through the concrete floor. The easy drilling is assumed to be an indicator of the gravel levelling course observed in the 5" diameter core holes. The harder drilling at depth is assumed to be bedrock.

At the three 5 inch diameter core hole locations, crushed limestone gravel was observed directly below the concrete floor slab. The gravel is assumed to be a leveling course of gravel that would have been placed over the bedrock after bedrock blasting was completed during the original excavation work for the coal bunker. Photograph 4 shows an example of the leveling base structure directly beneath the floor slab in Core #1 completed in Coal Access Bay 'D'. Note that the water in Photograph 4 is from the coring process.

Photograph 4: Gravel leveling base below the concrete slab in Core #1

Core #2 was completed in Coal Access Bay 'H' in order to target an area where clay was observed on the probe hole drill bit during a previous site visit by CKP. The conditions observed below the floor slab at this location appeared to be crushed limestone gravel with some clay intermixed. Photograph 5 shows the natural bedrock conditions encountered directly below the floor slab in Core #2 completed in Coal Access Bay – H. Note that the water in the photograph is from the coring process.



Photograph 5: Clay intermixed in crushed gravel below the concrete slab at Core #2

Coal Bunker Backfilling

Options for the coal bunker backfilling materials include crushed limestone gravel and a flowable cement stabilized fill material. DRI, however, recommends the use of the cement stabilized fill due to certain limitations associated with the granular backfill as discussed below.

The bottom of the coal bunker should be cleaned before backfilling to dispose of the water and other debris that has accumulated at the base.

All backfilling / excavation work should be completed by the Contractor in accordance with the current Manitoba Workplace Health and Safety Regulations to suit the planned and expected construction activities and schedule. The coal bunker will likely be considered as a confined space, which needs to be taken into consideration by the Contractor.

Crushed Limestone Gravel

The main physical limitations associated with using crushed limestone gravel for backfilling include access to bring materials inside the building, personnel access (i.e. confined space), vibrations from the backfill compaction work and physical limitations to achieve proper compaction around columns and under beams etc. It is expected that the gravel will eventually become saturated with groundwater.

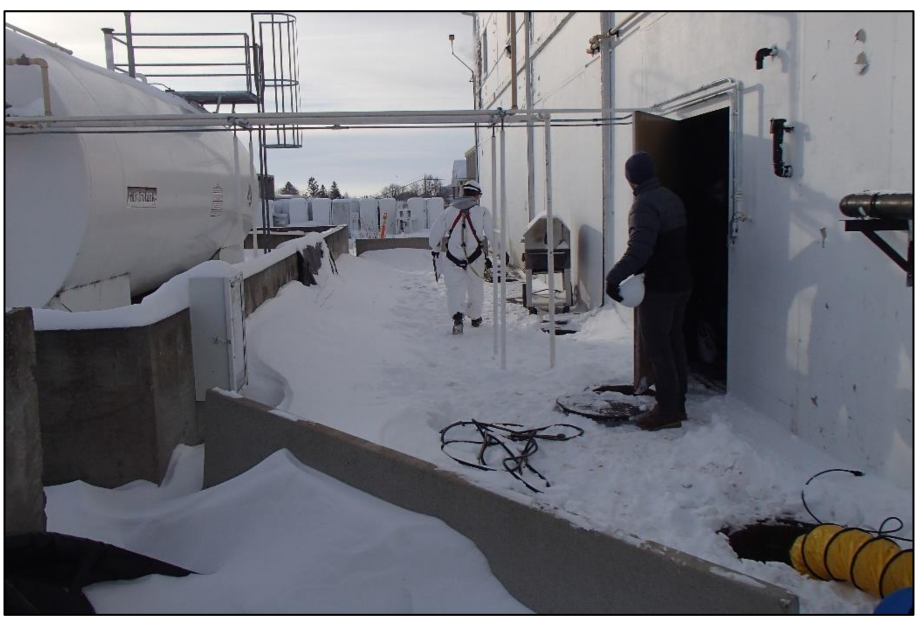
Large openings through the main floor concrete floor slab would have to be opened, and restored after backfilling, in order to provide sufficient access to dump material into the bunker for final placement and compaction in lifts not thicker than approximately 12 inches.

A safe work plan would need to be developed for backfilling with granular material to account for the confined space, air quality (e.g. dusty conditions, fumes from internal combustion engines powering the compactors) and the potential for concrete to loosen and fall down due to vibrations induced from the compaction equipment.

Vibratory compaction of granular backfill material could introduce structural issues given the poor condition of some parts of the bunker. In addition, compacting around columns and beams and other tight spaces will be difficult. There will be additional physical limitations when backfilling the upper 6 to 8 feet below the coal bunker ceiling (i.e. main floor), and around the existing electrical conduits, due to insufficient working space for equipment and personnel. It would likely be necessary to move the generators and electrical equipment and the steel grate ceiling / concrete main floor to allow proper compaction at the top of the bunker.

<u>Flowable Cement Stabilized Fill</u>

Flowable cement stabilized fill eliminates many of the challenges with using compacted granular backfill. The material could be pumped into the coal bunker eliminating the need for personnel and compaction equipment to be working in the bunker, which is considered to be a confined space. The material can be pumped through relatively small openings from the main floor level and the flowable fill should also fill the voids beneath the existing beams compared to the use of granular fill materials. Photograph 6 shows a series of manholes outside of the generator and electrical room that were opened in order to provide air and emergency access to the coal bunker below. These access points may potentially be suitable for placement of flowable cement stabilized fill into some areas of the coal bunker.



Photograph 6: Exterior manholes with access to coal bunker

Considerations with the use of the stabilized fill include maximum lift thickness and lateral fluid pressure on the angled walls of the coal bunker hopper. The structural stability of the bunker walls should be considered when determining the maximum lift thickness. Before the stabilized fill cures it will generate a hydrostatic pressure on the side walls. The unit weight of the stabilized fill could be determined in consultation with a concrete supplier.

Backfill Materials

The flowable cement stabilized fill should meet the requirements in the City of Winnipeg's Standard Construction Specifications, CW 2160 for Concrete Underground Structures and Works. Structural considerations may require modifications to the concrete mix design in CW 2160 to suit the proposed application at the Powerhouse.

If granular base is required for localized backfilling, the granular base should be a 19 mm down crushed limestone material that meets the requirements of the City of Winnipeg's Standard Construction Specifications, CW 3110 for Sub-Grade, Sub-Base and Base Course Construction. The granular base should be compacted to at least 98 percent of the standard Proctor maximum dry density (SPMDD).

Building Apron Slab

For the proposed building apron, the pavement section should consist of 150 to 200 mm of reinforced concrete over 300 mm of granular base course supported on a prepared subgrade consisting of stiff high plastic silty clay soils. A non-woven geotextile should be placed on the prepared subgrade to provide separation between the clay subgrade and granular materials. The steel reinforcing should be designed based on the anticipated loads.

The material selection and construction requirements should meet the City of Winnipeg's Standard Construction Specifications. The granular base should be a 19 mm down crushed limestone material placed over a uniformly prepared subgrade. The granular base should be compacted to at least 98 percent of the standard Proctor maximum dry density. The granular materials should meet the requirements of the City of Winnipeg's Standard Construction Specifications, CW 3110 for Sub-Grade, Sub-Base and Base Course Construction. The geotextile should meet the requirements of the City of Winnipeg's Standard Construction Specifications, CW 3130 for the Supply and Installation of Geotextile Fabrics.

Topsoil, fill, silt and deleterious materials should be stripped from the sub-grade surface prior to preparation. The clay sub-grade should be graded smooth and scarified to a depth of approximately 150 mm and then uniformly re-compacted to 95 percent of the standard Proctor maximum dry density (SPMDD) before the granular sub-base material is placed. Areas identified as being weak or soft during subgrade preparation should be stabilized by additional re-working and compaction or removal and replacement with suitable material (i.e. granular base). If encountered, silt can be over excavated and replaced with suitable material (i.e. granular base).

Closure

This report was prepared based on our understanding of the proposed structural repairs to be made at the CSC C12 Powerhouse building at Stony Mountain Institute in Stony Mountain, MB and the anticipated subsurface conditions below the Powerhouse. Subsurface conditions are inherently variable and should be expected to vary from those encountered in the surrounding area.

This report was prepared for the sole and exclusive use of Crosier Kilgour and Partners Ltd. for the proposed structural repairs to be made at the CSC C12 Powerhouse building at the Stony Mountain Institute in Stony Mountain, MB. The information and recommendations contained in this report are for the benefit of Crosier Kilgour and Partners Ltd. only and no other party or entity shall have any claim against Dyregrov Robinson Inc., or the author, nor may this report be used for any other projects, including but not limited to changes in the proposed structural repairs without the consent of Dyregrov Robinson Inc. No other warranty, expressed or implied, is provided.

Sincerely,

DYREGROV ROBINSON INC.

Report Prepared By:

Alessandro Augellone, EIT
Geotechnical Engineering Intern

Report Reviewed By:

Gil Robinson, M.Sc., P.Eng.
President / Senior Geotechnical Engineer

APEGM
Certificate of Authorization
Dyregrov Robinson Inc.
No. 86 Date: 11 August 2020

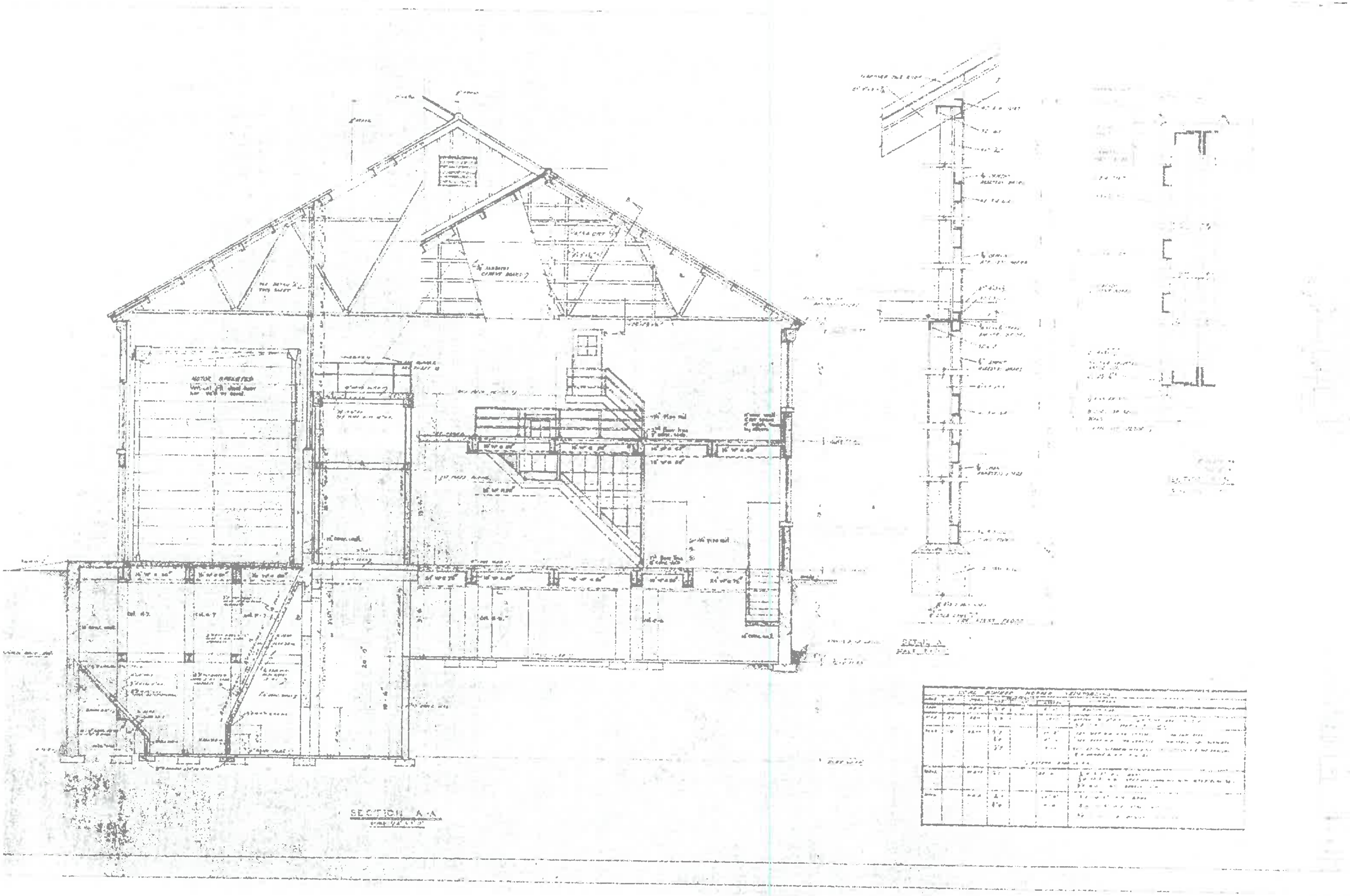
PROVINCE OF MANITOBA
GR
G.G.B.
ROBINSON
11 Aug 2020
REGISTERED PROFESSIONAL ENGINEER

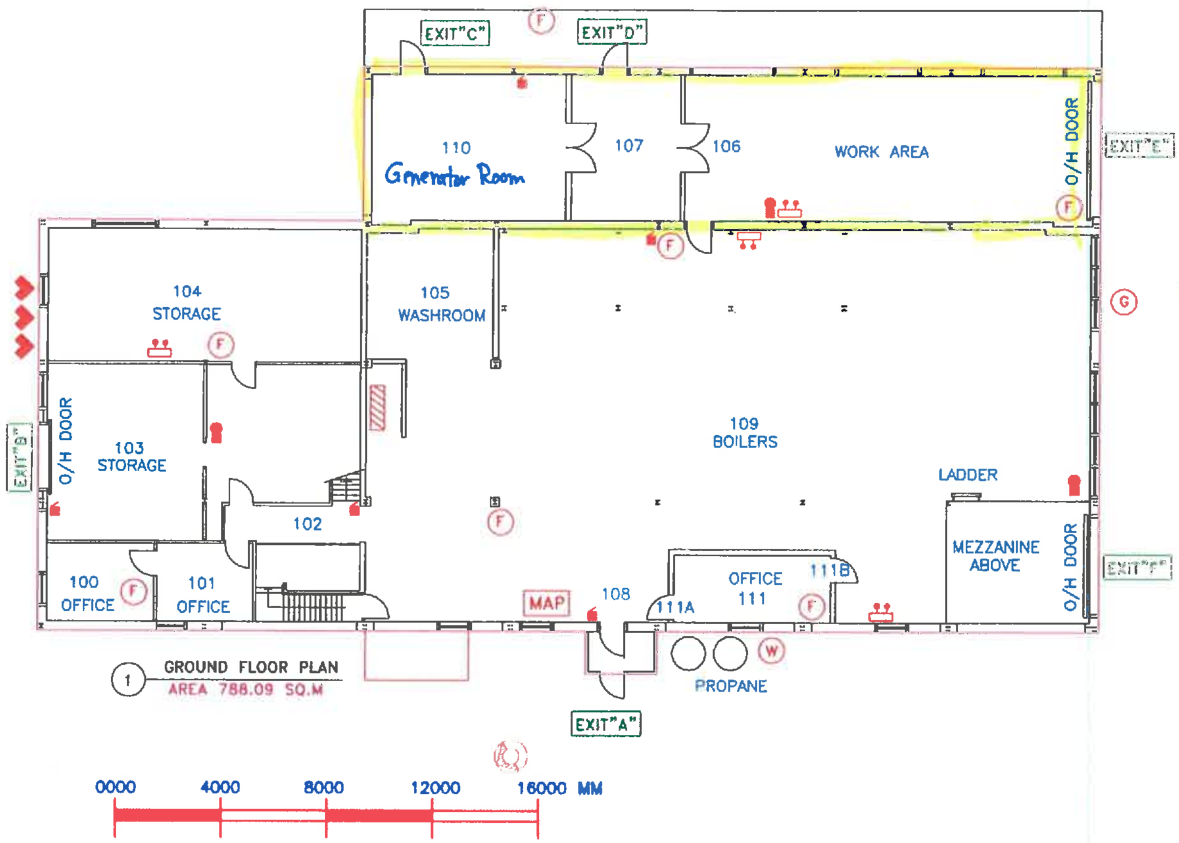
APPENDIX A

Coal Bunker Cross-Section 'A-A',

Ground Floor Plan,

Sub-Basement Plan


SECTION A-A



ROOM LEGEND

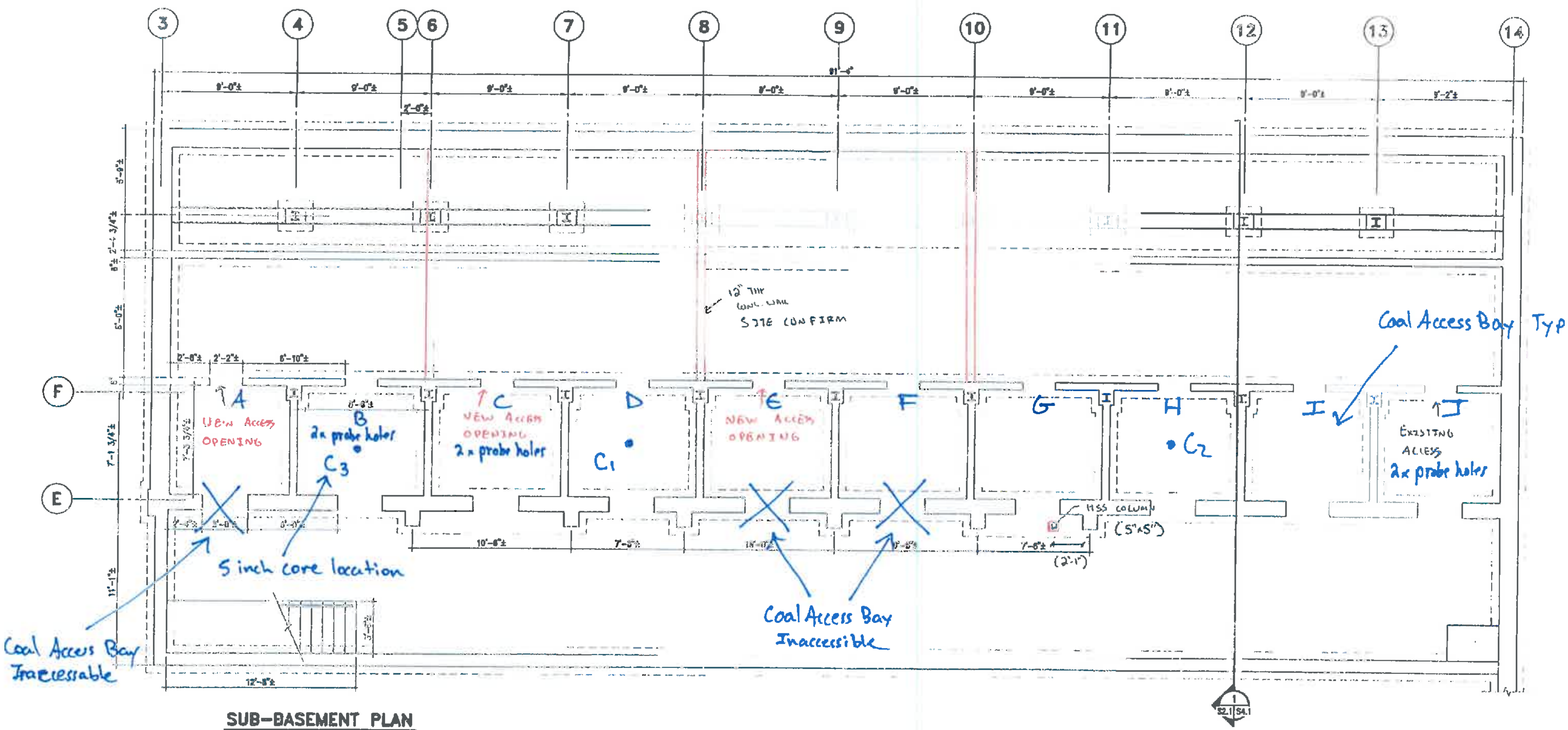
100	OFFICE
101	OFFICE
102	HALLWAY
103	STORAGE
104	STORAGE
105	WASHROOM
106	WORK AREA
107	ELECTRICAL ROOM
108	ENTRY
109	BOILERS
110	DIESEL
111A	OFFICE
111B	OFFICE

Correctional Service Canada / Service correctionnel Canada

FIRE
EVACUATION PLAN

LEGEND

- EMERGENCY LIGHTING UNITS BATTERY POWER
- EMERGENCY LIGHTING REMOTE HEAD
- FIRE ALARM BELL
- FIRE ALARM PULL STATION
- ILLUMINATED EXIT SIGN
- FIRE EXTINGUISHER (MIN. 5LB. ABC)
- NATURAL GAS
- FIRE ALARM HORN
- FIRE HOSE CABINET
- EXTERIOR FIRE HOSE CONNECTION
- EMERGENCY INSTRUCTIONS
- ELECTRICAL PANEL
- FIRE ALARM PANEL
- MAP - EMERGENCY INSTRUCTIONS
- EXIT"A" - EXIT TO EXTERIOR



SUB-BASEMENT PLAN
1/4" = 1'-0"

C12 POWERHOUSE

STONY MOUNTAIN INSTITUTION

CKP
2020-0010
2020-01-13

Wood Environment & Infrastructure Solutions,
a Division of Wood Canada Limited
440 Dovercourt Drive
Winnipeg, Manitoba, R3Y 1N4
Canada
T: 204-488-2997

24 June 2020
Wood Project No. WX19013

Mr. Blair Holmes
Crosier Kilgour & Partners Ltd.
300-275
Winnipeg, MB R3T 1N5

RE: Assessment of Powerhouse Coal Storage Area
Stony Mountain Institute, Stony Mountain, Manitoba

At the request of Mr. Blair Holmes of Crosier Kilgour & Partners Ltd. (Client), Wood Environment and Infrastructure (Wood), conducted an assessment of the coal storage area located within the powerhouse at the Stony Mountain Institute (SMI) located in Stony Mountain, Manitoba (henceforth referred to as 'the Site').

Wood understood that the assessment was requested ahead of renovations to backfill the coal storage area with stabilized fill.

1.0 Scope of Work

Wood complete work in accordance with the terms and conditions of Wood proposal WPG2018.600R2 dated 11 December 2019. The scope of work consisted of the following:

- Attended the Site to observe the site conditions and have a brief meeting with the project team. If required, Wood will complete initial confined space enter air sampling (i.e. CO, LEL, H_2S and O_2) to assist in understanding site conditions.
- Prepared a brief technical document outlining the site conditions, potential hazards and recommendations. The technical report was to be referenced in project tender documents / specifications prepared by others.

Mr. Paul Houle of Wood attended the Site on 21 January 2020 completed the field portion of the scope of work.

2.0 Site Description

At the time of the Site visit, the targeted portion of the Site building consisted of a coal storage area within the powerhouse of the facility. The area was split into different concrete vaults which were sloped at the bottom. The top of the vaults was a common open space.

3.0 Observations

Prior to attending the Site, selective demolition had been conducted at the bottom of select vaults to allow access. The penetrations were small and required entrants to crawl to gain access. Manhole covers were also present at the top of the vault. The space by its construction met the definition of a confined space per the Manitoba Workplace Safety and Health Regulation (217/2006) and Part XI of the Canada Occupational Health and Safety Regulation.

At the time of the assessment, a contractor provided confined space entry standby services with two individuals. The contractor had established temporary positive pressure ventilation by placing a portable fan outside the top of the space, introducing air through a manhole via flexible tubing.

Wood proceeded to enter the space to conduct observations. The space was constructed of concrete with what appeared to be steel reinforced concrete columns and beams. Some evidence of coal dust was observed, but generally the space appeared to have been emptied of coal and residual dust. Debris was present in the space in the form of concrete, wood, cast iron pipe elbow, linear pipe insulation and sand. A mouse poison/bait station was also observed in the space.

4.0 Sampling and Analytical Results

4.1 Air Monitoring

Wood conducted pre-entry and continuous air monitoring during entry using an MSA Altair 4XR four gas monitor. The unit was equipped with sensors for oxygen (O_2), carbon monoxide (CO), hydrogen sulfide (H_2S) and lower explosive limit (LEL). The pre-entry monitoring identified an oxygen concentration of 20.8% and with no CO, H_2S or LEL detected (0 ppm values). Upon exiting the space, the datalog for the instrument was reviewed by Wood and a peak concentration of 0.9 parts per million (ppm) was recorded for H_2S. The positive pressure ventilation system ran continuously during Wood's entry into the space. The H_2S measurement inferred that the potential for atmospheric hazards exists. As such, in addition to meeting the definition of a confined space, the measurement reinforces that the space meets the definition of a hazardous confined space per the MR217/2006. Further testing would be required to confirm the atmospheric conditions without operation of the ventilation system.

4.2 Asbestos Sampling

Wood collected two sample of linear pipe insulation debris. Sample ACM-01 was collected off the floor within the space (Photo 4). Sample ACM-02 was collected from the top of a chute outside the space (Photo 6).

The samples were submitted to EMC Laboratory Inc. in Phoenix, Arizona for confirmatory laboratory analysis. EMC Laboratory is a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory. The samples were analyzed using Polarized Light Microscopy (PLM) methods (EPA 600/R-93/116). The laboratory certificates of analysis are appended to this report.

Both samples were determined to be none-detected for asbestos fibres. It should be noted that while the two samples collected appeared to be representative of the suspect debris observed in the space, not all debris was sampled.

5.0 Recommendations

Based on the laboratory results, the linear pipe insulation debris sampled did not contain asbestos fibres. Consider that Wood did not sample all linear pipe insulation debris in the space. Asbestos containing parging cement fitting insulation is commonly associated to installations that include the type of lineal pipe insulation observed. While parging cement was not observed, there is a potential to find it comingled with linear pipe insulation. Wood was not provided with information on past abatement in the space to determine if parging cement may have been previously abated. If the debris in the space requires removal, Wood recommends that this be conducted by a qualified contractor in accordance with an appropriate safe work plan. If debris suspect of containing asbestos fibres is observed, work should be suspended until a further assessment can be conducted. Alternately, all debris could be removed by workers in keeping with typical moderate risk asbestos abatement procedures, in additional to following confined space entry procedures.

The space should be considered a hazardous confined space per MR217/2006. Wood recommends that entry to the space be avoided if possible to complete the project. The peak measurement for H_2S during Wood's entry was 0.9 ppm. This concentration is below the threshold limit value (TLV) for H_2S of 1 ppm and the short term exposure limit (STEL) of 5 ppm published by the American Conference of Governmental Industrial Hygienists (ACGIH). The measurement of 0.9 ppm does infer that higher concentrations could be present in the absence of forced air ventilation. In the event that the space requires entry for cleaning or other purposes, Wood recommends the following which may not be inclusive of all requirements:

- Consideration be given to increasing the size of the openings to the space.
- All workers involved in confined space entry shall be trained in confined space entry and rescue.
- A task specific entry procedure should be developed and documented on a confined space entry permit.
- The space should be ventilated mechanically prior to entry.
- Pre-entry and continuous air monitoring should be conducted during entry for H_2S, CO, O_2 and LEL.
- Workers entering the space should wear at minimum a negative pressure half mask respirator equipped with P100 respirator cartridges and disposable coveralls. Additional respiratory protection may be required depending on the results of air monitoring.
- Adequate provisions for rescue from the confined space should be in place.

In the absence of an engineered solution for the rescue of a worker from the space such as larger openings and/or a worker retrieval system, a standby rescue team may be required. If a rescue team is the rescue provision selected, a suitable number of rescue personnel are required to affect a timely rescue. In Wood's experience, even a suitable staffed team would be challenged to rescue a worker for the space without increasing the size of the openings or having provisions in place for a top rescue through a manhole at the top of the space.

While coal dust was observed to be present in the space as a contaminant, it was present in relatively small quantities. Wood does not expect that this material will cause extraneous hazards for workers, provided that it remains reasonably undisturbed and not posing an airborne hazard. If the material is to be removed, it should be removed in a manner using excellent dust control measures. The level of respiratory protection and disposable coveralls cited above would be anticipated to provide an adequate level of protection for workers. While the amount of coal dust present would not be reasonably expected to pose a fire/explosion risk, dust control measures would mitigate this hazard.

6.0 Project Limitations

Within the limitations of the agreed-upon scope of work, the field observations, measurements and analysis are considered sufficient to provide an overview of existing potential concerns with respect to asbestos containing materials and confined space issues at the locations where the assessment was conducted. It should be noted that the data presented herein were collected at specific sampling locations, and depending on the homogeneity of the samples, the data may vary between these locations. Some inherent limitations exist as to the thoroughness of this assessment due to the nature of building construction. For example, it may not practical to sample all pipe insulation debris due to the quantity of material. Some reasonable extrapolation (e.g., sampling of similar materials) was required from the findings of the assessment.

Within the agreed upon scope of work, reasonable efforts were made to identify all targeted asbestos-containing materials in this report; however, Wood may not have been able to identify and assess all suspect designated substances, as certain building materials may exist that were not visible or accessible at the time of the survey. Inaccessible locations include those that require demolition to gain entry, which present an unacceptable health or safety risk to the surveyors, and where entry is prohibited by security or other institutional restrictions. Areas above a suspended tile ceiling, crawl spaces, pipe chases and service tunnels, and areas behind an access hatch were considered accessible. Materials hidden by walls, finishes and equipment at the time of the survey were considered inaccessible.

7.0 Closure

This report was prepared for the exclusive use of the Client and is intended to provide an overview of existing potential concerns within the specified work area at the time of the Site visit. The specific limitations of this report are specified in Appendix C. This Report is also subject to the contractual project agreement.

We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact Wood.

Yours truly,

Wood Environment & Infrastructure Solutions,
a Division of Wood Canada Ltd.

Paul Houle, CRSP, EP, P.Mgr., MBA
Senior Specialist – Occupational Health & Safety

Reviewed by:

Patrick Campbell, B.Sc, EP, CRSP, EP
Senior Associate Environmental Scientiest
OHS & Decommissioning Technical Lead

Attached: Appendix A – Photographs
Appendix B – Laboratory Analytical Reports
Appendix C – Limitations

Appendix A Photographs

wood.

Photo 1: View of access point in powerhouse to coal vault chute.

Photo 2: Coal chute location within access point shown in photo 1. Metal chute was removed to allow access.

Photo 3: View of largest area of coal dust in coal storage vault.

Photo 4: Pipe insulation debris (Sample ACM-01) located within coal storage vault.

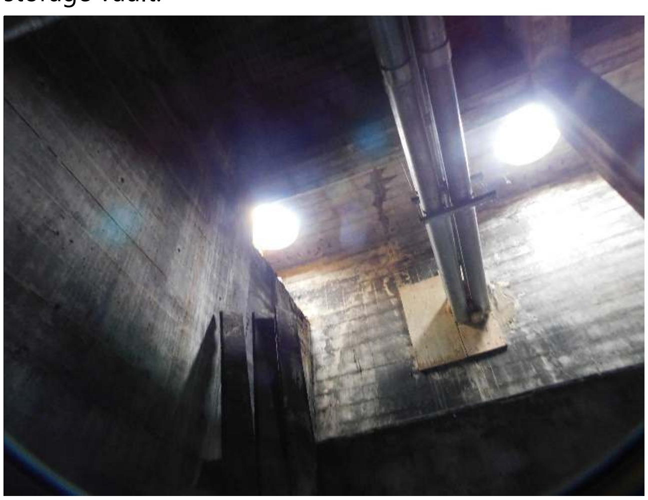


Photo 5: View of manholes at top of coal storage vault.

Photo 6: Pipe insulation debris (Sample ACM-02) located on coal chute in powerhouse outside vault.

Stony Mountain Institution **Stony Mountain, Manitoba**	Photo Date: 21 January 2020	Project No.: WX19013	Figure 1

Appendix B Laboratory Reports

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0232546

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	WOOD ENV & INFRASTRUCTURE	Job# / P.O. #:	WX19013 WX19013
Address:	440 DOVERCOURT DR.	Date Received:	01/24/2020
	WINNIPEG, MANITOBA CA R3Y 1N4	Date Analyzed:	01/29/2020
Collected:	01/21/2020	Date Reported:	01/29/2020
Project Name:	CSC C12	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	PAUL HOULE
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0232546-001 ACM-01	SECTION 3 FLOOR	Pipe Insulation, White/ Off White	No	None Detected	Synthetic Fiber Carbonates Quartz Gypsum Binder/Filler	3% 97%
0232546-002 ACM-02	SECTION 3 CHUTE	Pipe Insulation, White/ Off White	No	None Detected	Synthetic Fiber Carbonates Quartz Gypsum Binder/Filler	3% 97%

Analyst - Kenneth Scheske

Signatory - Lab Director - Kurt Kettler

Appendix C Limitations

LIMITATIONS

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
   (a) The Standard Terms and Conditions which form a part of our Professional Services Contract;
   (b) The Scope of Services;
   (c) Time and Budgetary limitations as described in our Contract; and
   (d) The Limitations stated herein.
2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
3. The conclusions presented in this report were based, in part, on visual observations of the Site and attendant structures. Our conclusions cannot and are not extended to include those portions of the Site or structures, which are not reasonably available, in Wood's opinion, for direct observation.
4. The environmental conditions at the Site were assessed, within the limitations set out above, having due regard for applicable environmental regulations as of the date of the inspection. A review of compliance by past owners or occupants of the Site with any applicable local, provincial or federal by-laws, orders-in-council, legislative enactments and regulations was not performed.
5. The Site history research included obtaining information from third parties and employees or agents of the owner. No attempt has been made to verify the accuracy of any information provided, unless specifically noted in our report.
6. Where testing was performed, it was carried out in accordance with the terms of our contract providing for testing. Other substances, or different quantities of substances testing for, may be present on Site and may be revealed by different or other testing not provided for in our contract.
7. Because of the limitations referred to above, different environmental conditions from those stated in our report may exist. Should such different conditions be encountered, Wood must be notified in order that it may determine if modifications to the conclusions in the report are necessary.
8. The utilization of Wood's services during the implementation of any remedial measures will allow Wood to observe compliance with the conclusions and recommendations contained in the report. Wood's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
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