

Appendix B5

Quarry 22 Report



MEADOWBANK GOLD PROJECT

2015 Quarry 22 Report

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EXECUTIVE SUMMARY

Following the AANDC inspection report in 2012, this report has been prepared to provide information regarding the clean-up of quarry 22:

- Explanation of presence of contaminated soil in quarry 22;
- Transfer of material to Meadowbank Landfarm;
- Next steps for the finalization of the decontamination.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	II
SECTION 1 • INTRODUCTION	4
1.1 Background.....	4
1.2 Objectives	4
SECTION 2 • QUARRY 22	5
2.1 2015 actions	5
SECTION 3 • CONCLUSION	6

APPENDICES

Appendix A: Photos

SECTION 1 • INTRODUCTION

1.1 BACKGROUND

The AWAR (All Weather Access Road) is used to transport material, goods and petroleum products from the Baker Lake Marshalling Facility to the Meadowbank Mine Site. Quarries along the road were used as a source of road building aggregate during the construction phase of the AWAR. Quarry 22 (Q22) is one of these quarries and at this time it is anticipated that no additional materials will be taken from this quarry. Quarry 22 was also historically used as a temporary storage area for contaminated materials generated as a result of petroleum hydrocarbon spill clean-up activities prior to the establishment of the landfarm at the Meadowbank site. The site ceased to be used for this temporary storage when the Meadowbank Landfarm was completed in 2012. All contaminated material was removed from Quarry 22 and taken to the landfarm, located at the west end of the South Tailings Cell, in 2013. The remedial activity currently underway in Quarry 22 and described in this report consists of removal of contaminated materials, the commencement of pit wall sloping and confirmatory sampling of areas where material contaminated with petroleum hydrocarbons (PHC) was stored. The final reclamation of the quarries along AWAR will be done during the closure phase of the Meadowbank mine site as described in the Meadowbank Interim Reclamation and Closure Plan (Golder, 2014)..

It should be noted that this quarry site is on Inuit Owned Land and is subject to the conditions of a KIA Land use lease.

1.2 OBJECTIVES

This report summarizes the following aspects concerning quarry 22:

- Presence of contaminated soil;
- Movement of contaminated soil;
- Next steps in remediation.

SECTION 2 • QUARRY 22

Quarry 22 was used in the past for temporary storage of contaminated soil generated from petroleum hydrocarbon spills (diesel fuel, hydraulic oil, motor oil, etc.) that occurred during operations of the Meadowbank site and spills that occurred during construction of the last portions of the AWAR. An approved landfarm was completed at the Meadowbank site in 2012, located at the west end of the South Tailings Cell.

As a result of findings stated in an AANDC Water License inspection dated March 23 – 24, 2012 AEM prepared and submitted an action plan (dated June 2, 2012) to the Inspector. The Plan consisted of a two phased approach. The first phase included an assessment and delineation of any residual contamination as a result of the storage and the second phase consisted of removing identified contaminated soils and coarse rock to the Landfarm at Meadowbank.

In 2013 a total of 4,413 m³ of soil and coarse material was removed from Q22. Approximately half of this (1,930 m³) was placed in the landfarm in windrows for soil decontamination. The remaining coarse material, which was not contaminated with PHC's, was placed in the Meadowbank Waste Rock Storage Area, located north of Portage Pit. Residual, uncontaminated coarse rocks were used as pit wall sloping in Q22 for progressive reclamation.

2.1 2015 ACTIONS

Results from the September 2014 fall confirmatory sampling indicated some remnants of contamination when compared to the CCME remediation Criteria for Industrial Use of Coarse Material. Most of the contamination remaining was associated with Fraction 3 hydrocarbons. Therefore AEM proposed to scarify the remaining contaminated areas in Q22 during the summer of 2015 and resample (see Q22 2014 report final – 2014 Annual report).

Taking into consideration the results from 2014, the 2015 workplan included scarifying the surface of quarry 22 with the back-end of a grader, thus allowing ground surface to be aerated which would increase degradation of PHC. The scarification work started on July 4th and extended throughout warmer months. On average it was done every second week from July to September (see photos, appendix A).

A sampling campaign was planned for the end of September / beginning of October to assess the effectiveness of the remediation. Unfortunately with colder temperatures earlier than expected the ground froze and the sampling could not be completed.

Regular inspections of the quarry were also performed during the year to ensure that runoff, if any, would be free of any visible sheen and would not impact the environment. No issues with runoff water inside the quarry were noted in 2015.

SECTION 3 • CONCLUSION/RECOMMENDATIONS

AEM remains confident that the natural degradation of Petroleum Hydro Carbon (PHC) related products continues to be an effective remediation method.

Since no sampling was done in 2015 in Quarry 22, AEM will ensure that a sampling campaign is completed earlier in 2016. Using the same methodology as in 2014 for soil sampling in Q22, results will then be compared to CCME criteria. AEM will then assess any future actions based on the soil sampling campaign.

In addition AEM will continue to ensure that runoff (if any) will stay within the site of the quarry during freshet and thus not impact any watercourses and/or the environment.

Appendix A

Photos after scarification



