



# Meadowbank Gold Mine 2014 Socio-Economic Monitoring Report

## Final Report

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# Executive Summary

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The Meadowbank gold mine is located in the Kivalliq region of Nunavut, approximately 70 km north of the Hamlet of Baker Lake, or 110km by road. Situated on Inuit Owned Land (IOL), the entire property consists of 66,933 ha and is solely owned by Agnico Eagle Mines (AEM). AEM acquired the property from Cumberland in 2007, with construction of the mine taking place between 2007 and 2010. The mine began production in 2011 and processes an average of 11,000 tonnes of ore per day from three deposits. Proven and probable reserves at Meadowbank are 2.3 million ounces of gold from 25 million tonnes of ore. It is expected to continue to produce gold until 2018; exploration activity on the property continues with the intention of extending the mine life beyond 2018 if feasible. Meadowbank is one of two operating mines in Nunavut, and is the only operating mine in the Kivalliq region.

In 2006, an Inuit Impact and Benefits Agreement (IIBA) was signed between Cumberland Resources and the Kivalliq Inuit Association (KIA). This IIBA continues to be in place between AEM and the KIA.

This report provides the results of the project-specific Socio-Economic Monitoring Program (SEMP) developed in consultation with the Kivalliq Socio-Economic Monitoring Committee (SEMC). As outlined in the Meadowbank SEMC Terms of Reference, this report is intended to:

- comply with the relevant sections of the **Nunavut Land Claims Agreement (NLCA)**,
- comply with the terms and conditions of the **Meadowbank Project Certificate** issued by the NIRB, including reporting on the socio-economic impact predictions made in Cumberland Resource's Final Environmental Impact Statement (FEIS);
- identify any **unanticipated effects** associated with the mine;
- identify and recommend **mitigation measures**;
- act as the primary vehicle for reviewing the findings of the SEMP in **collaboration** with members of the Socio-Economic Monitoring Committee (SEMC);
- fulfill best practices in **social responsibility**; and
- act as a **valuable resource** for communities, governments and interested stakeholders.

In summer 2015, Stratos completed a critical review of AEM's socio-economic monitoring program to assess the completeness and comparability of indicators, taking into consideration:

- TMAC Resource's Doris North Project's Socio-Economic Monitoring Report (which was identified as a good template by the Government of Nunavut);
- Cumberland Resource's Final Environmental Impact Statement for the Meadowbank Mine;
- Terms of Reference for the Meadowbank Socio-Economic Monitoring Program (Appendix A of Draft Meadowbank Socio-Economic Monitoring Program); and
- Data availability and reliability.

This review found that the predictions outlined in the Cumberland FEIS do not touch on all areas currently considered relevant to AEM and the SEMC. As such, this first socio-economic monitoring report goes slightly beyond the scope of the Cumberland FEIS to reflect the evolving context of best practices in corporate sustainability, SEMC expectations, and the change in ownership from Cumberland to AEM. The review also enabled the reporting team to build from the framework provided in the TMAC report and refine the scope and organization of indicators to better reflect best practice in measuring socio-economic performance, including the use of both leading and lagging indicators, and other indicators that reflect the chain of actions and outcomes that lead to a specific impact.

The socio-economic indicators and associated metrics in this report are categorized according to the following *valued socio-economic components*, or VSECs.

1. Employment
2. Income
3. Contracting and Business Opportunities
4. Education and Training
5. Culture and Traditional Lifestyle
6. Migration
7. Individual and Community Wellness
8. Health and Safety
9. Community Infrastructure and Services
10. Nunavut Economy

Data for internal indicators, collected by AEM, cover the years 2010 (or 2011) to 2014. Data for external indicators, obtained from the Nunavut Bureau of Statistics or StatsCan, often cover the years 2006 to 2014. Where available, pre-2006 data are also included for a better understanding of baseline conditions prior to mine construction. Where long-form census data is required, only 2006 and/or 2011 data were available.

### Summary of Results

**Table 1** on the following page summarizes the results of the 2014 Meadowbank SEMP.

#### Understanding Table 1

The *trends* described in the third column are not inherently ‘good’ or ‘bad’, but simply indicate whether there has been a consistent change in an indicator as observed in the past 3 or more years. These are represented by the following characters:

- |   |   |  |
|---|---|--|
|  Remaining Stable      |  Decreasing        |  Increasing |
|  No Discernable Trends |  Insufficient Data |  |

The *observed impact* (fourth column) qualifies results for each indicator in terms of contributing to the desired goal or impact for VSEC.

**positive** The data and trends indicate positive movement towards the achievement of the desired impact or goal.

**negative** The data and trends indicate movement away from the achievement of the desired impact or goal.

**neutral** The data and trends do not indicate any movement in regard to the achievement of the desired impact or goal.

**inconclusive** No observed impact can be determined given the observed data and trends.

**Table 1: Summary of Monitoring Results**

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
<b>VSEC 1. Employment</b>				
1.1. Total Meadowbank Employment	Meadowbank Employment, 2010-2014 (Permanent and Temporary)	➔	Positive	Total employment levels to date have significantly exceeded the levels predicted in the FEIS.
1.2 Meadowbank Inuit and Nunavummiut Employment	Permanent and Temporary Meadowbank Employment, 2014 (Inuit and Non-Inuit)	➔	Positive	Total Inuit workforce has remained steady over the past 3 years, representing approximately 30% of the total workforce. Inuit employees represent 95% of temporary employees.
	Meadowbank Employment, 2010 - 2014 (Inuit and Non-Inuit)			
	Person Hours Worked, 2010 - 2014 (Nunavut and non-Nunavut Based Employees)			
1.3 Meadowbank Employment by Gender	Meadowbank Employment by Gender, 2010 – 2014	➔	Neutral	At 15% in 2014, female employment at Meadowbank is just below the Canadian mining-sector average of 17% (MiHR, 2015) and has been mainly consistent since 2010.
1.4 Meadowbank Employment by Kivalliq Community	Meadowbank Employment, 2010 – 2014 (Kivalliq and non-Kivalliq residents)	➔	Positive	Approximately 30% of employees are from the Kivalliq region, of which more than half are from Baker Lake.
	Meadowbank employment by Kivalliq community, 2014			
1.5 Meadowbank Turnover	Turnover Rates, 2010 - 2014 (Inuit & Non-Inuit)	↕	Negative	Since 2010, turnover rates for permanent Inuit employees have fluctuated but have been consistently higher than those for permanent non-Inuit employees (26% for Inuit vs. 7% for non-Inuit in 2014).
	Turnover (by reason for leaving) and Average Length of Employment, 2010 - 2014			
<b>VSEC 2. Income</b>				
2.1. Income Paid to Meadowbank Inuit Employees	Income Paid to Meadowbank Inuit Employees, 2010 – 2014	➔	Positive	At approximately \$18M/year since 2011, Inuit employment income significantly exceeds the FEIS prediction of \$4 million in direct project wages annually.
	Income paid to Meadowbank Contractors and Inuit Employment Rate of Meadowbank Contractors, 2010 – 2014	↘	Negative	Contractor payrolls are declining (consistent with total expenditures and reflective of the change from project development to more mature operations). The Inuit employment rate among contractors has also decreased somewhat (from 15% in 2010/2011 to 11-12% in 2013/2014).
2.2 Income by Kivalliq Community	Change in Median Employment Income for Kivalliq Communities, baseline – 2012	↗	Positive	Baker Lake, which has the highest number of Meadowbank employees, has also experienced the largest increase in median income since the beginning of production in 2010
<b>VSEC 3. Contracting and Business Opportunities</b>				
3.1. Contract Expenditures	Contract Expenditures on Baker Lake and Nunavut-Based Businesses, 2011 – 2014	↕	Inconclusive	The annual value of contract expenditures has fallen significantly in

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
	Contract Expenditures on NTI Registered Businesses, 2011 - 2014			the last 2 years. However, the share of these declining expenditures going to local and Inuit businesses has been maintained or increased (~50% to Nunavut-based businesses each year since 2011, of which 36-52% to Baker Lake business; increasing share to NTI-registered (Inuit) businesses from 13% in 2011 to 37% in 2014). Therefore, the FEIS prediction that local business participation in the project is expected to grow with time is being realized in relative terms (i.e. % of total contract expenditures), but the total value of contracts available to local business has been shrinking.
3.2 Registered Inuit Owned Businesses in the Kivalliq Region	Inuit-Owned Businesses in the Kivalliq Region, 2006 – 2014	↗	Inconclusive (inadequate data)	There has been a net increase in the number of Inuit-owned businesses in Kivalliq since 2010, but still fewer than in 2007. However, given the many factors affecting business expansion and creation, it is difficult to attribute the observed impacts.
<b>VSEC 4. Education and Training</b>				
4.1. Investments in School-Based Initiatives	AEM Investments in School-Based Initiatives, 2010 – 2014	→	Inconclusive (insufficient data)	There has been a consistent level of investment by AEM (~\$284,000/year) in a variety of school-based initiatives aimed at motivating students and increasing educational opportunities and outcomes.
4.2 Public School Truancy and Secondary School Graduation Rates by Region	Truancy Rates by Region and Community, 2002/03 – 2010/11	↗	Inconclusive (post-2011 data not available)	Graduation rates have risen, but so have truancy rates. These metrics are affected by a range of factors, which may or may not include those associated with Meadowbank.
	Secondary School Graduation Rate by Region, 1999 – 2014	↗	Inconclusive	
4.3 Mine Training and Education	AEM Investments in Mine Training and Education Programs, 2010 – 2014	→	Positive	There has also been a consistent level of investment by AEM (~\$4M/year) in external mine training programs over the past three years (e.g. Kivalliq Mine Training Society). Support for, and participation in, in-house training and apprenticeship programs has been steady throughout the mine's operation.
	Training Hours Provided to Nunavut and Non-Nunavut Based Employees, 2010 – 2014			
	Specific Training Hours Provided to Inuit and non-Inuit Employees, 2012 – 2014			
	Number of Haul Truck Driver Program Graduates, 2010 – 2014			
	Apprenticeships for Inuit Employees, 2010 – 2014			

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
4.4 Percentage of Total Population with Trade Certificates	Percentage of Total Population with Trade Certificates & Registered Apprenticeship Certificates in Nunavut and Canada, 2011	?	Inconclusive (insufficient data)	As data on this metric is currently limited to the 2011 census, it is impossible to glean more than a baseline at this time.
4.5 Inuit Employees by Skill Level	Inuit Employment by Skill Level, 2011 – 2014	↕	Inconclusive (insufficient data)	The data do not indicate an overall career path progression of Inuit employees to higher skill level jobs (e.g. Inuit moving from semi-skilled to skilled positions) that one might expect as a result of AEM's investment in education and training programs. The less tangible benefits of training and education, such as increased self-confidence and sharing of skills and knowledge within families, were not assessed.
<b>VSEC 5. Culture and Traditional Lifestyle</b>				
5.1. Country Food at Meadowbank	Country food served at Meadowbank, 2010 - 2014	→	Neutral	Approximately 4,500 meals featuring caribou or moose have been served at the mine annually since 2011. No data are available on country food consumption levels in communities.
5.2. Use of Traditional Language	Proportion of total population identifying Inuktitut as the mother tongue, by Kivalliq community, 2006 and 2011	?	Inconclusive (insufficient data)	In 2014, ~ 30% of Inuit employees at Meadowbank identified Inuktitut as their first language. Between 2006 and 2011, the proportion of the population identifying Inuktitut as their mother tongue has remained relatively stable in Kivalliq communities (except for Rankin Inlet, which has seen a 7% decline).
	Meadowbank Inuit employees identifying Inuktitut as the mother tongue, 2014			
5.3. Traditional Lifestyle	Percentage of Nunavut Inuit Population 15 years of age and older partaking in traditional activities, 2006 and 2012	?	Inconclusive (insufficient data)	In 2012, approximately 81% of Nunavut's Inuit Population reported partaking in traditional activity (hunting, fishing, trapping, or gathering). Regional and community-level data on traditional activities in Nunavut, which might give an indication of trends since the mine opened, are not available.
<b>VSEC 6. Migration</b>				
6.1. Inuit Employees That Have Moved to Southern Provinces	Number and rate of Inuit workforce who have moved to southern provinces, 2010 – 2014	↗	Inconclusive (limited data)	There has been a gradual increase in the number of Inuit workers moving to southern provinces, from 7 in 2011 to 12 in 2014 (or <5% of Inuit workforce). Future data will indicate whether this trend is significant.

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
6.2. Population Estimates in Kivalliq Communities	Population Estimates of Kivalliq Communities, 15 years of age and older, 2006 – 2014	↗	Neutral	Yearly population estimates do not indicate an increase in the population growth rate of Baker Lake or other communities with significant Meadowbank employment (Arviat, Rankin Inlet) since the mine opened, or relative to other communities in the region. If other factors (births and deaths) are assumed constant, the population data does not suggest significant migration induced by Meadowbank.
	Annual Percentage Change in Population Estimates of Kivalliq Communities 15 years of age and older, 2007 - 2014			
<b>VSEC 7. Individual and Community Wellness</b>				
7.1. Counselling Programs and Usage at Meadowbank	Family counselling programs offered, 2010 – 2014	→	Inconclusive	Meadowbank has six programs offering counselling and support to employees and their families. There is currently insufficient data to assess program usage and trends.
	Number of employees/families accessing family counselling programs, 2011 - 2014	?		
7.2. Criminal Violations	Criminal violations per hundred people, by Kivalliq community, 2006 - 2013	↗	Negative	Among Kivalliq communities, Baker Lake has seen the highest increases in the rate of criminal violations (total violations per hundred people) since Meadowbank began production. Rates of mischief, disturbing the peace, harassment and threats, impaired driving, and drug violations more than doubled or tripled. A decrease in Baker Lake total criminal violations was observed in 2013, but levels remain significantly above the 2006-2009 baseline.
	Baker Lake criminal violations per hundred people by type, 2006 – 2013			
	Change in Baker Lake Criminal Violations against 2006-2009 average baseline, 2010 - 2013			
7.3. Housing	Persons aged 15 years and over who are on a waiting list for public housing, 2010	?	Inconclusive (insufficient data)	In 2010, 15% to 27% of the population of Kivalliq communities were on waiting lists for public housing. However, there is insufficient data to assess changes over time and the potential impact of the mine on the housing situation.
7.4 Suicide	Inuit Suicide Rates by Community 2006 – 2014	↕	Inconclusive	Due to the persistent and territory-wide nature of this crisis, it is difficult to assess impacts of Meadowbank on suicide rates. Community suicide rates (e.g. for Baker Lake) are highly variable from year to year. Trends are more apparent in long-term and/or regional data.

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
<b>VSEC 8. Worker Health and Safety</b>				
8.1. Health and Safety Training	Health and safety training hours for AEM Meadowbank employees, 2014	?	Inconclusive (insufficient data)	Insufficient data to assess scope and quantity of health and safety training over time.
8.2. Health and Safety On-site	Combined Lost-time and Light Duty Accident Frequency (200,000 person hours), 2010 – 2014	↓	Positive	Lost-time and light duty accident frequency has decreased significantly and consistently since 2011, as have visits to the AEM clinic for work-related injuries. Since the vast majority of visits to the AEM clinic (ranging from 2600 to 3900 per year) are for non-work-related conditions, it appears the clinic serves an important function in addressing the health/medical needs of workers. However, none of the data collected permits an assessment of the impacts of the mine and its programs on the general health status of workers and their families.
	Number of visits by employees to AEM clinics, 2010 – 2014			
<b>VSEC 9. Community Infrastructure and Services</b>				
9.1. Use of Public Physical Infrastructure	Estimates of use of public physical infrastructure directly related to Meadowbank, 2014	→	Neutral	Meadowbank's direct use of public physical infrastructure includes use of public airports for employee travel and the use of the Baker Lake Community Centre (5-10 times/year) for public engagement activities. Airports and the community centre receive fees from users in both cases. At this time, it appears that the impact of Meadowbank on public physical infrastructure is neutral.
9.2. Use of GN Health Services	Kivalliq Community Health Centre visits per capita, 2006 – 2013	→	Inconclusive	Overall, per capita health centre visits in communities with the most Meadowbank employees (Baker Lake, Rankin Inlet, and Arviat) have not increased significantly since Meadowbank began operating (i.e. consistent or lower than 2006/2007 levels). The number of employees referred to community health care centres for personal or work-related reasons ranges from (14 to 47 people per year) may or may not represent an increased demand on GN health services compared to the impacts of other employers or unemployment.
	Number of Meadowbank employees referred to their community health care centre for personal or work-related reasons, 2010 – 2014			
9.3. Demand on Social Services	<i>Data is currently unavailable. To be included in future reports.</i>			

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
9.4. Social Assistance	Social assistance expenditures by Kivalliq community, 2004-05 to 2013-14	↗	Inconclusive	Social assistance expenditures increased in 2010-2011 for several communities, including Baker Lake, Arviat, and Rankin Inlet. However, the number of recipients, as a fraction of the population, declined from 2008 to 2011 in Baker Lake, Arviat, and Rankin Inlet. These trends may indicate that fewer residents in the communities most affected by the mine are dependent on social assistance, but that the overall cost burden for government has not declined.
	Social assistance recipients (normalized by population) by Kivalliq community, 2006 – 2013	↘	Inconclusive	
<b>VSEC 10. Nunavut Economy</b>				
10.1. Business Expenditures for Nunavut	Meadowbank contract expenditures, by type of business, 2011 - 2014	→	Positive	Over \$100M of expenditures per year are being directed to Nunavut-based businesses, which will have a multiplier effect on the Nunavut economy and generate tax revenue for the GN.
10.2. Royalties and Taxes	Compensation, Royalties and Taxes Paid	→	Positive	Since 2007, Meadowbank has provided \$11.8M to NTI and the KIA in royalties and compensation. Employment taxes at Meadowbank provide \$30M on average per year to the Government of Canada, \$3M on average per year to the GN, with an additional \$1.1M provided to the GN in property taxes.
10.3. Nunavut GDP	Nunavut GDP, 1999 – 2013	→	Positive	According to the Conference Board of Canada, Meadowbank has been a driver of Nunavut's GDP growth, both during the construction of the mine and since production began in 2010.

It is our hope that this compilation of data will provide the SEMC with a useful information base from which to understand emerging trends, impacts and benefits to date, and inform future collaboration and coordination on priority areas for attention.

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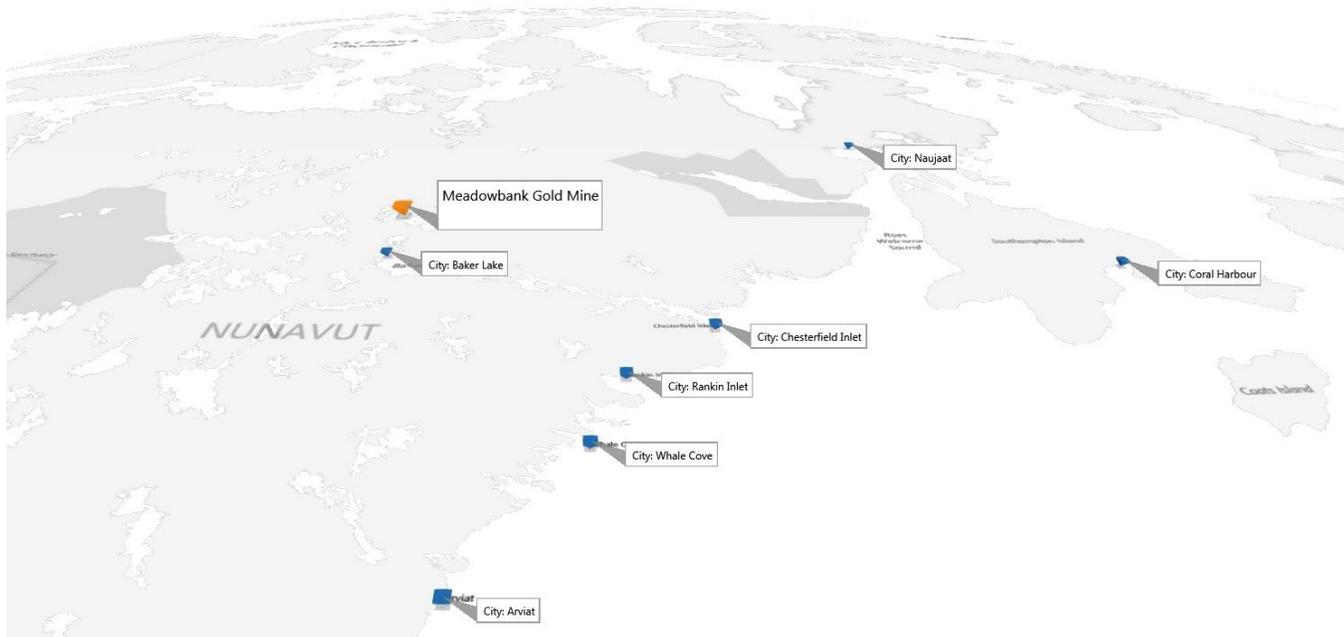
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# Introduction

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## THE MEADOWBANK MINE PROJECT

The Meadowbank gold mine is located in the Kivalliq region of Nunavut, approximately 70 km north of the Hamlet of Baker Lake, or 110km by road. Situated on Inuit Owned Land (IOL), the entire property consists of 66,933 ha and is solely owned by Agnico Eagle Mines (AEM). Meadowbank is one of two operating mines in Nunavut, and the only operating mine in the Kivalliq region.



The Meadowbank property was initially acquired by Cumberland Resources in 1997, following more than a decade of exploration in the area. Between 1997 and 2005, Cumberland undertook a number of exploration programs and feasibility studies, eventually submitting a project application to regulatory agencies for the required permits and approvals. In 2006, the Nunavut Impact Review Board (NIRB) recommended development of the project and an Inuit Impact and Benefits Agreement (IIBA) was signed between Cumberland Resources and the Kivalliq Inuit Association (KIA).

AEM acquired the property from Cumberland in 2007, with construction taking place between 2007 and 2010. Since that time, the Meadowbank Mine has operated as the first open pit mine in Nunavut, processing an average of 11,000 tonnes of ore per day from three deposits. Proven and probable reserves at Meadowbank are 2.3 million ounces of gold from 25 million tonnes of ore. It is expected to continue to produce gold until 2018, although exploration activity on the property continues with the intention of extending the mine life beyond 2018 if feasible.

## REPORT PURPOSE

This report provides the results of the project-specific Socio-Economic Monitoring Program (SEMP) developed in consultation with the Kivalliq Socio-Economic Monitoring Committee (SEMC). As outlined in the Meadowbank SEMC Terms of Reference, this report is intended to:

- comply with the relevant sections of the **Nunavut Land Claims Agreement (NLCA)**,

- comply with the terms and conditions of the **Meadowbank Project Certificate** issued by the NIRB, including reporting on the socio-economic impact predictions made in Cumberland Resource’s Final Environmental Impact Statement (FEIS);
- identify any **unanticipated effects** associated with the mine;
- identify and recommend **mitigation measures**;
- act as the primary vehicle for reviewing the findings of the SEMP in **collaboration** with members of the Socio-Economic Monitoring Committee (SEMC);
- fulfill best practices in **social responsibility**; and
- act as a **valuable resource** for communities, governments and interested stakeholders.

## REPORT STRUCTURE

The following two sections provide background information on the SEMP, including relevant context and methodology. The remainder of this report presents data and interpretation for a suite of socio-economic indicators relating to 10 valued socio-economic components (VSECS).

Each of the 10 VSECs has its own section, which begins with a summary describing the VSEC, the associated indicators and metrics used to monitor the VSEC, and key findings. This is followed by sub-sections providing additional detail and discussion on each indicator, including:

- **Predictions** outlined in the Cumberland FEIS (where available);
- **Data and trends** for one or more metrics making up that indicator; and
- An **interpretation** of the data with respect to trends and FEIS predictions.

## Context

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### SOCIO-ECONOMIC MONITORING COMMITTEES

In 2007, the Government of Nunavut established three regional-based socio-economic monitoring committees (SEMCs) to monitor the socio-economic impacts of projects in each of the Territory’s regions against project certificate terms and conditions specified by the NIRB. The SEMCs’ Terms of Reference state that the committees will assist proponents in developing project monitoring programs and prepare reports and publish information on the impact of major development projects on the health and well-being of communities and residents in the region.

Figure 1 below provides an overview of the Kivalliq region SEMC as compared to the Meadowbank SEMC.

Figure 1: Kivalliq Socio-Economic Monitoring at Regional and Project Level

	Scope & Focus	Membership	Indicator Framework	Output
	Kivalliq-wide monitoring	<ul style="list-style-type: none"> <li>• Hamlets</li> <li>• Government of Nunavut</li> <li>• Government of Canada</li> <li>• Kivalliq Inuit Association</li> <li>• Proponents</li> </ul>	9 Valued Socio-economic monitoring components; 43 indicators	Annual regional monitoring report
	Project-specific monitoring	<ul style="list-style-type: none"> <li>• Agnico Eagle Mines</li> <li>• Government of Canada</li> <li>• Government of Nunavut</li> <li>• Kivalliq Inuit Association</li> </ul>	10 Valued Socio-economic monitoring components; 32 indicators; 52 metrics	Annual Meadowbank Socio-economic Monitoring Report <i>*This Report*</i>

Both the Kivalliq and Meadowbank committees are required to produce annual monitoring reports, with the former focused at the level of the region and the latter at the project level. This system allows for project-level information to inform a regional picture of the socio-economic health of the Kivalliq, better capturing cumulative effects. This will become increasingly important as additional mining operations come on line in the region.

In subsequent years, and in consultation with the SEMC and other parties, it is our hope that this report will evolve further to address gaps (e.g. additional qualitative data for certain indicators), to minimize overlap with regional SEMC reporting, to increase consistency across SEM reports from different operators, and to improve AEM’s and the SEMC’s understanding of trends (i.e. relationships between indicators and causality).

## NIRB PROJECT CERTIFICATE CONDITIONS

Conditions 63 and 64 of the Meadowbank Mine Project Certificate issued by the NIRB require that a Meadowbank SEMC be established and that the project proponent work with the Governments of Nunavut (GN) and Canada to develop a Terms of Reference for a Meadowbank Socio-Economic Monitoring Committee. AEM submitted the Terms of Reference for the Meadowbank SEMC in July of 2007, satisfying Condition 63. In order to better reflect the socio-economic monitoring needs and priorities of the Meadowbank SEMC, the terms of reference were modified in 2012 (see Appendix A). Following a number of iterations and meetings, a Terms of Reference for the Meadowbank Socio-Economic Monitoring Program was finalized in October 2014, at the SEMC working group meeting in Baker Lake.

### Condition 63:

*“Within six (6) months of the issuance of a Project Certificate, the GN and INAC shall form a Meadowbank Gold Mine Socio-Economic Monitoring Committee (“Meadowbank SEMC”) to monitor the socio-economic impacts of the Project and the effectiveness of the Project’s mitigation strategies. The monitoring shall supplement, not duplicate, the monitoring required pursuant to the IIBA negotiated for the Project, and on the request of Government or PC, could assist in the coordination of data collection and tracking data trends in a comparable form to facilitate the analysis of cumulative effects. The terms of reference shall focus on the Project, include a plan for ongoing consultation with KivIA (Kivalliq Inuit Association) and affected local governments and a funding formula jointly submitted by GN, INAC and Cumberland. The terms of reference shall be submitted to NIRB for review and subsequent direction within six (6) months of the issuance of a Project Certificate. Cumberland is entitled to be included in the Meadowbank SEMC.” (Nunavut Impact Review Board, 2006, p. 20)*

**Condition 64:**

*“Cumberland shall work with the GN and INAC to develop the terms of reference for a socio-economic monitoring program for the Meadowbank Project, including the carrying out of monitoring and research activities in a manner which will provide project specific data which will be useful in cumulative effects monitoring (upon request of Government or NPC) and consulting and cooperating with agencies undertaking such programs. Cumberland shall submit draft terms of reference for the socio-economic monitoring program to the Meadowbank SEMC for review and comment within six (6) months of the issuance of a Project Certificate, with a copy to NIRB’s Monitoring Officer.” (Nunavut Impact Review Board, 2006, p. 20)*

**THE INUIT IMPACT AND BENEFIT AGREEMENT (IIBA)**

The original Inuit Impact and Benefits Agreement (IIBA) between Cumberland Resources and the Kivalliq Inuit Association (KIA) was signed in August of 2006. A Production Decision under the IIBA was given to the KIA by AEM in December of 2007. This Production Decision was a key point in triggering many of the requirements under the IIBA and led to implementation of the agreement after the mine went into production.

In 2009, AEM and the KIA began a review of the IIBA with both parties suggesting changes in the text to refine and improve the functionality of the IIBA in achieving its objective of maximizing Inuit benefit from the Meadowbank Project in the form of employment, training and business opportunities. Agreement on a revised IIBA was subsequently reached with the final revised IIBA Agreement approved by the two parties on October 18, 2011.

A key feature of the IIBA was the establishment of an implementation committee with members from the KIA and AEM to monitor and manage the implementation of the IIBA. Since its establishment, this committee has worked to consider Inuit employment, contracting, training and other project-related matters.

# Methods

## INDICATOR SELECTION

In summer 2015, we completed a critical review of AEM’s socio-economic monitoring program to assess the completeness and comparability of indicators, taking into consideration:

- TMAC Resource’s Doris North Project’s Socio-Economic Monitoring Report (a recently submitted Socio-Economic Monitoring Report);
- Cumberland Resource’s Final Environmental Impact Statement for the Meadowbank Mine;
- Terms of Reference for the Meadowbank Socio-Economic Monitoring Program (Appendix A of Draft Meadowbank Socio-Economic Monitoring Program); and
- Data availability and reliability.

This review found that the predictions outlined in the Cumberland FEIS do not touch on all areas currently considered relevant to AEM and the SEMC. As such, this first socio-economic monitoring report goes slightly beyond the scope of the Cumberland FEIS to reflect the evolving context of best practices in corporate sustainability, SEMC expectations, and the change in ownership from Cumberland to AEM. The review also enabled the reporting team to build from the framework provided in the TMAC report and refine the scope and organization of indicators to better reflect best practice in measuring socio-economic performance, including the use of both leading and lagging indicators, and other indicators that reflect the chain of actions and outcomes that lead to a specific impact.

The socio-economic indicators and associated metrics, organized by valued socio-economic component (VSEC), are presented in Table A.

## DATA SOURCES

Table A also shows the data sources for each metric. Data for internal indicators, collected by AEM, cover the years 2010 (or 2011) to 2014. Data for external indicators, obtained from the Nunavut Bureau of Statistics or StatsCan, often cover the years 2006 to 2014. Where available, pre-2006 data is also included for a better understanding of baseline conditions prior to mine construction. Where long-form census data is required, only 2006 and/or 2011 data was available.

**Table A: Meadowbank Socio-Economic Indicators, Metrics, and Data Sources**

Indicator	Metric	Source
<b>1. Employment</b>		
1.1. Total Meadowbank Employment	Meadowbank employment, 2010-2014 (Permanent and Temporary)	AEM
1.2 Meadowbank Inuit and Nunavummiut Employment	Permanent and temporary Meadowbank employment, 2014 (Inuit and Non-Inuit)	AEM
	Meadowbank employment, 2010 - 2014 (Inuit and Non-Inuit)	AEM
	Person hours worked, 2010 - 2014 (Nunavut and non-Nunavut Based Employees)	AEM
1.3 Meadowbank Employment by Gender	Meadowbank employment by gender, 2010 – 2014	AEM
1.4 Meadowbank Employment by Kivalliq Community	Meadowbank employment, 2010 – 2014 (Kivalliq and non-Kivalliq residents)	AEM

Indicator	Metric	Source
	Meadowbank employment by Kivalliq community, 2014	AEM
1.5 Meadowbank Turnover	Turnover rates, 2010 - 2014 (Inuit & Non-Inuit)	AEM
	Turnover (by reason for leaving) and average length of employment, 2010 – 2014	AEM
<b>2. Income</b>		
2.1. Income Paid to Meadowbank Inuit Employees	Income paid to Meadowbank Inuit employees, 2010 – 2014	AEM
	Income paid to Meadowbank contractors and Inuit employment rate of Meadowbank contractors, 2010 – 2014	AEM
2.2 Income by Kivalliq Community	Change in Median Employment Income for Kivalliq Communities, baseline – 2012	StatsCan, 2015 AEM
	Number of tax filers with employment income, 2012	StatsCan, 2015
	Change in proportion of tax filers with employment income in Kivalliq communities, 2004 – 2012	StatsCan, 2015
<b>3. Contracting and Business Opportunities</b>		
3.1. Contract Expenditures	Contract expenditures on Baker Lake and Nunavut-based businesses, 2011 – 2014	AEM
	Contract expenditures on NTI registered businesses, 2011 - 2014	AEM
3.2 Registered Inuit Owned Businesses in the Kivalliq Region	Inuit-owned businesses in the Kivalliq region, 2006 – 2014	NTI, 2014
<b>4. Education and Training</b>		
4.1. Investments in School-Based Initiatives	AEM investments in school-based initiatives, 2010 – 2014	AEM
4.2 Public School Truancy and Secondary School Graduation Rates by Region	Truancy rates by region and community, 2002/03 – 2010/11	GN Education, 2012
	Secondary school graduation rate by region, 1999 – 2014	GN Education, 2015
4.3 Mine Training and Education	AEM investments in mine training and education programs, 2010 – 2014	AEM
	Training hours provided to Nunavut and non-Nunavut based employees, 2010 – 2014	AEM
	Specific training hours provided to Inuit and non-Inuit employees, 2012 – 2014	AEM
	Number of Haul Truck Driver Program graduates, 2010 – 2014	AEM
	Apprenticeships for Inuit employees, 2010 – 2014	AEM
4.4 Percentage of Total Population with Trade Certificates	Percentage of total population with trade certificates & registered apprenticeship certificates in Nunavut and Canada, 2011	StatsCan, 2011c
4.5 Inuit Employees by Skill Level	Inuit employment by skill level, 2011 – 2014	AEM
<b>5. Culture and Traditional Lifestyle</b>		
5.1. Country Food at Meadowbank	Country food served at Meadowbank, 2010 - 2014	AEM
5.2. Use of Traditional Language	Proportion of total population identifying Inuktitut as the mother tongue, by Kivalliq community, 2006 and 2011	StatsCan, 2011a
	Meadowbank Inuit employees identifying Inuktitut as the mother tongue, 2014	AEM
5.3. Traditional Lifestyle	Percentage of Nunavut Inuit population 15 years of age and older partaking in traditional activities, 2006 and 2012	Wallace, 2014 StatsCan, 2011b
<b>6. Migration</b>		
6.1. Inuit Employees That Have Moved to Southern Provinces	Number and rate of Inuit workforce who have moved to southern provinces, 2010 – 2014	AEM

Indicator	Metric	Source
6.2. Population Estimates in Kivalliq Communities	Population estimates of Kivalliq communities, 15 years of age and older, 2006 – 2014	NBS, 2014
	Annual Percentage Change in Population Estimates of Kivalliq Communities 15 years of age and older, 2007 - 2014	NBS, 2014
<b>7. Individual and Community Wellness</b>		
7.1. Counselling Programs and Usage at Meadowbank	Family counselling programs offered, 2010 – 2014	AEM
	Number of employees/families accessing family counselling programs, 2011 - 2014	AEM
7.2. Criminal Violations	Criminal violations per hundred people by Kivalliq community, 2006 - 2013	StatsCan, 2014 NBS, 2014
	Baker Lake criminal violations per hundred people by type, 2006 – 2013	StatsCan, 2014 NBS, 2014
	Change in Baker Lake criminal violations against 2006-2009 average baseline, 2010 - 2013	StatsCan, 2014
7.3. Housing	Persons aged 15 years and over who are on a waiting list for public housing, 2010	NBS and StatsCan, 2010
7.4 Suicide	Inuit suicide rates by community, 2006 – 2014	Hicks, 2015
<b>8. Worker Health and Safety</b>		
8.1. Health and Safety Training	Health and safety training hours for AEM Meadowbank employees, 2014	AEM
8.2. Health and Safety On-site	Combined Lost-time and Light Duty Accident Frequency (200,000 person hours), 2010 – 2014	AEM
	Number of visits by employees to AEM clinics, 2010 – 2014	AEM
<b>9. Community Infrastructure and Services</b>		
9.1. Use of Public Physical Infrastructure	Estimates of use of public physical infrastructure directly related to Meadowbank, 2014	AEM
9.2. Use of GN Health Services	Kivalliq community health centre visits per capita, 2006 – 2013	GN Health, 2015
	Number of Meadowbank employees referred to their community health care centre for personal or work-related reasons, 2010 – 2014	AEM
9.3. Demand on Social Services	<i>Data is currently unavailable. To be included in future reports.</i>	
9.4. Social Assistance	Social assistance expenditures by Kivalliq community, 2004-05 to 2013-14	GN Family Services, 2014
	Social assistance recipients (normalized by population) by Kivalliq community, 2006 – 2013	GN Family Services, 2014 NBS, 2014
<b>10. Nunavut Economy</b>		
10.1. Business Expenditures for Nunavut	Meadowbank contract expenditures, by type of business, 2011 - 2014	AEM
10.2. Royalties and Taxes	Compensation, royalties and taxes paid	AEM
10.3. Nunavut GDP	Nunavut GDP, 1999 – 2013	StatsCan, 2014

## ANALYSIS AND INTERPRETATION

Throughout this report, we present available data using a combination of narrative, tables and charts. We provide an interpretation for the data for each indicator, including identification of significant trends and an explanation for the trend where possible. Given the complexity of socio-economic phenomenon (i.e. multiple factors at play), there are limitations in

establishing causal relationships between mining activity and some socio-economic indicators in this report. For future reports, AEM looks forward to refining indicator selections and analysis, in consultation with the SEMC, to more clearly link socio-economic impacts with AEM activities and/or other factors and to help inform the identification of appropriate mitigation.

## **INVOLVEMENT OF SOCIO-ECONOMIC MONITORING COMMITTEE**

This report was developed through a collaborative process, with engagement taking place at various stages of development. We engaged with members of the SEMC to better understand what types of information they are most interested in and how they hope to use this report in order to ensure the content, structure, and look and feel of this report are as useful as possible. This engagement included:

- Sharing the annotated outline of the report with all SEMC members – July - August 2015
- Follow-up interviews with available members of the SEMC – July – August 2015
- Submission of draft report to SEMC – October 2015
- Discussion of draft report at October 27 SEMC meeting in Rankin Inlet

# VSEC 1: Employment

## IMPACT / GOAL STATEMENT

Increased, stable employment for Inuit (including women and challenged workers) across Kivalliq communities

Five indicators are used to measure and understand Meadowbank's impact on employment in the Kivalliq Region, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS employment prediction:2819

**FEIS Prediction:** "The potential impacts of employment are likely to take some time to gain full momentum, and overall are considered of high magnitude, positive, long term and of high significance, specifically to those individuals and their families who are able to benefit." (Cumberland Resources Ltd., 2006, p. 120).

## INDICATORS

### 1.1. Total Meadowbank Employment

Metrics	Key Findings
<ul style="list-style-type: none"><li>Meadowbank Employment, 2010-2014 (Permanent and Temporary)</li></ul>	<ul style="list-style-type: none"><li>Total employment levels to date have significantly exceeded the levels predicted in the FEIS</li></ul>

### 1.2 Meadowbank Inuit and Nunavummiut Employment

Metrics	Key Findings
<ul style="list-style-type: none"><li>Permanent and Temporary Meadowbank Employment, 2014 (Inuit and Non-Inuit)</li><li>Meadowbank Employment, 2010 - 2014 (Inuit and Non-Inuit)</li><li>Person Hours Worked, 2010 - 2014 (Nunavut and non-Nunavut Based Employees)</li></ul>	<ul style="list-style-type: none"><li>Total Inuit workforce has remained steady over the past 3 years, representing approximately 30% of the total workforce</li><li>In 2014, Inuit employees represented 26% of the permanent employees and 95% of temporary employees</li></ul>

### 1.3 Meadowbank Employment by Gender

Metrics	Key Findings
<ul style="list-style-type: none"><li>Meadowbank Employment by Gender, 2010 – 2014</li></ul>	<ul style="list-style-type: none"><li>At 15% in 2014, female employment at Meadowbank is just below the Canadian mining-sector average of 17% (MiHR, 2015)</li><li>This level has been consistent since 2010, with the exception of a temporary drop to 10% in 2013</li></ul>

### 1.4 Meadowbank Employment by Kivalliq Community

Metrics	Key Findings
<ul style="list-style-type: none"><li>Meadowbank Employment, 2010 – 2014 (Kivalliq and non-Kivalliq residents)</li><li>Meadowbank employment by Kivalliq community, 2014</li></ul>	<ul style="list-style-type: none"><li>Over 30% of Meadowbank's employees are from the Kivalliq region. This level of local employment has remained consistent over the past 4 years, ranging from 31% to 36%</li><li>Baker Lake is home to over half of the total Kivalliq employees in any given year</li></ul>

### 1.5 Meadowbank Turnover

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Turnover Rates, 2010 - 2014 (Inuit &amp; Non-Inuit)</li> <li>Turnover (by reason for leaving) and Average Length of Employment, 2010 - 2014</li> </ul>	<ul style="list-style-type: none"> <li>Since 2010, turnover rates for permanent Inuit employees have been consistently higher than those for permanent non-Inuit employees (26% for Inuit vs. 7% for non-Inuit in 2014)</li> <li>There are many reasons for why employees leave their jobs including: relationship and family issues, dislike for the work, and lack of social supports (e.g. child care, reduction in rent subsidy)</li> </ul>

### 1.6 Employment Rate by Kivalliq Community

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Number of Tax Filers with Employment Income, 2012</li> <li>Change in Proportion of Tax Filers with Employment Income in Kivalliq Communities, 2004 – 2012 (used as proxy for employment rate)</li> </ul>	<ul style="list-style-type: none"> <li>Between 2004 and 2012, the proportion of tax filers reporting employment income has increased more in Baker Lake than any other Kivalliq community. However, similar increases were not consistently observed in other communities with significant Meadowbank employment (e.g. Arviat and Rankin Inlet).</li> </ul>

## EXISTING MANAGEMENT & MITIGATION

A number of programs are in place to encourage Inuit employment and retention at Meadowbank, as outlined in Table 2 below. AEM offers a programs to increase general educational and skills attainment among Kivalliq residents, facilitate entry into Meadowbank employment, as well as training, career development and upward mobility programs for existing employees. While many of these training programs are primarily relevant to VSEC 4: Education and Training, they are also discussed here due to a positive supporting effect on Inuit employment rates and retention.

**Table 2: AEM Employment Management and Mitigation Initiatives**

Program	Purpose / Description / Outcomes
MOU with Department of Education	<p>A Memorandum of Understanding was signed in April 2012 to establish a strengthened partnership between the Government of Nunavut Department of Education and AEM, with a focus on increasing the number of students in the Kivalliq region who are able to successfully transition from high school to trades and mining-related career opportunities. The MOU with the Department of Education is currently under review and a renewed agreement should be in place during 2015.</p> <p>During 2014, AEM continued to sponsor the Mining Matters program as part of the MOU with Education. Mining Matters is a branch of the Prospectors and Developers Association of Canada (PDAC) that is dedicated to bringing knowledge and awareness about Canada’s geology and mineral resources to students and educators.</p> <p>In 2013 AEM and the Mining Matters group participated with the GN Department of Education, Curriculum Review Services to assist in a review of Earth Sciences Curriculum of Nunavut Schools.</p>
Kivalliq Science Educations Community	<p>In 2014 AEM invested \$25,000.00 towards the regional Math Camp, Science Camp and Kivalliq Science Fair operated by the Kivalliq Science Educators Community. AEM’s educational partners from Mining Matters assisted with Science camp. The Science camp was organized just outside of Whale Cove and the weeklong program included a mix of traditional, cultural and educational studies related to sciences. The program provides science credits to participants.</p>
Work Readiness Training Program	<p>In collaboration with the Kivalliq Mine Training Society (KMTS), Agnico Eagle developed a Work Readiness Training program as a pre-employment initiative. The program was implemented in April 2013. The program is delivered over a 4 day period at the community level over a schedule through-out the year. During 2014, the program was</p>

	<p>delivered in each Kivalliq community and saw a total of 128 people from the various communities attend, of which 111 have successfully completed the program. In 2014, 57 graduates of the program have been hired by AEM, of which 24 are women.</p> <p>The Work Readiness program provides coaching in the following areas:</p> <ul style="list-style-type: none"> <li>• Insight into personal beliefs that drive behaviors in their social lives;</li> <li>• Awareness of employers' unspoken expectations;</li> <li>• Self-control skills for managing strong emotions;</li> <li>• Communication skills for dealing with difficult social interactions, and;</li> <li>• Problem solving skills for logically resolving interpersonal workplace issues.</li> </ul> <p>The intent is for Inuit workers to be better prepared for the work environment in an industrial setting. Graduates of the program are eligible to join the AEM Labor Pool.</p>
Labor Pool Initiative	<p>The Labor Pool initiative is based on an agreement between Agnico Eagle, the KMTS and the KIA to offer pre-employment opportunities to Inuit from all Kivalliq communities. The program was implemented in 2014.</p> <p>The goal of the program is to pre-qualify candidates from Kivalliq communities. In 2014 Agnico Eagle visited all communities to provide information sessions and conduct interviews with potential candidates. Individuals were selected based on their motivation and previous work experience and then required to complete mandatory training by e-learning as well as participate in the 4 day Work Readiness training program. The objective is to create a ready pre-qualified pool for Agnico Eagle to draw future employees from.</p> <p>Labor pool participants will be retained for short term on call assignments to ensure a good fit and eligibility to gain a full time position. At its peak the labor pool contained 111 graduates of which 57 have been provided a work opportunity at Meadowbank.</p>
Kivalliq Mine Training Society	<p>The KMTS is an Inuit, private sector partnership created to strengthen the Kivalliq region labour force through creating and funding training opportunities in the 7 Kivalliq hamlets. AEM has provided \$6.8 million in cash and in kind support towards the overall initiative. The KMTS has also enjoyed financial support from the GN, Department of Economic Development and Transportation. The KMTS program was valued at approximately \$9.5 million over a two year period, from April 2013 to the end of March 2015</p> <p>A major focus of the KMTS program has been to support AEM's Mine Training Initiatives, such as the Career Path, Apprenticeship and Haul Truck operators' programs. Between April 2013 and December 2014 a total of 197 Inuit Employees participated in Career Path initiatives, of which 178 successfully completed their training and 110 received a promotion.</p>
Summer Student Employment Program	<p>AEM offers a summer employment program for the children of all AEM employees that are participating in University level education. In 2014 AEM Meadowbank considered 10 students per rotation, for a total of 20. There were 21 applications of which 19 were selected. Two applicants were unsuccessful as they were under 18 years of age. There were no applications from Inuit employees in 2014.</p>
Haul Truck Driver Training	<p>A 28 day (336 hour) program to certify haul truck operators, which includes training on a simulator, on the job and in the classroom. The program is aimed at existing employees in entry level positions (dishwashers, janitors, chambermaids, etc.).</p> <ul style="list-style-type: none"> <li>• 34 Inuit workers enrolled in the program in 2014</li> <li>• To date, 33 Haul Truck Trainees have successfully completed the program and are now fully certified Haul Truck Operators working with the mine department</li> <li>• AEM plans to train up to 20 new haul truck operations in 2015.</li> </ul>
Arviat Community	<p>In 2011 the Hamlet of Arviat proposed a partnership to invest in a community based drilling school that would provide Inuit with the skills needed to work in diamond drilling. With advice and support of AEM the Hamlet</p>

Training Programs	<p>brought together a range of partners to acquire the drilling equipment, develop the curriculum and operate the training program. Government training agencies, the KIA and drilling companies provided partnership investments. In 2013 the programs was expanded to include a Welders Helpers program</p> <p>The 2014 drillers program took place between April and June and the intake registered 12 students of which 11 graduated. Over the past 4 years the program has graduated 54 trained driller’s helpers, all who have found employment. The welders program took place in December and saw six graduates. All of the welders helpers graduates found employment.</p>
Career Path Program	<p>The Career Path Program was designed in 2012 with the intention of supporting upward mobility of Inuit employees at Meadowbank. This program identifies the incremental steps that an employee is required to accomplish to advance in their chosen career of interest. The Career Path system is currently available in five (5) areas of activity; Mine, Drill &amp; Blast, Process Plant, Field Services and Road Maintenance. The objective is to have only internal promotions for Inuit and no external candidates (southerners) will be hired to fill a position that is part of the program</p>
Training Curriculum	<p>The Training Curriculum program, implemented in 2014, gives proper tools, tips, guideline and standards to improve the proficiency of Meadowbank trainers. The formal manual is composed of three sections: Training theory, training standards and training delivery.</p>
E-Learning Training at Meadowbank	<p>Before coming to Meadowbank for the first time, newly hired employees must complete their Mandatory Training on-line. The General Induction consists in on-line chapter that provide general information about Agnico Eagle and working life at Meadowbank Mine. The training also ensures that all workers are trained on health and safety matters such as WHMIS, fire extinguisher, etc. prior coming on site</p>
Training and Learning Management System	<p>The Training Management System (TMS) as well as the Learning Management System (LMS) were initially implemented in 2013 in order to ensure better management of training activities and to monitor the proper management of the e-learning training. Both of these tools are in full effect and optimization phases were ongoing in 2014 with the addition of a function designed to track electronic training files for employees.</p>
Apprenticeship Training at Meadowbank	<p>An Apprenticeship Program for the training of Inuit employees in skilled trades is currently under review at Meadowbank. Many fields of study are now available, with AEM aiming to acquire more diversity in terms of trades at Meadowbank. The apprentice positions lead employees to work in various departments such as Mobile Maintenance, Site Services, Process Plant (Maintenance), Kitchen and Electrical. In collaboration with the Kivalliq Mine Training Society and Nunavut Arctic College, Meadowbank is also supporting a pre-trade program to support Inuit without the basic levels of literacy and numeracy required for trade apprenticeships.</p> <ul style="list-style-type: none"> <li>• 4 Inuit employees were enrolled in pre0-trades assessment program in 2014 (3 successfully completed it and were enrolled in apprentice programs)</li> <li>• 6 new Apprentice positions will be created in 2015, for a total of at least 12 apprentice positions.</li> </ul>

## 1.1 TOTAL MEADOWBANK EMPLOYMENT

### 1.1.1 Predictions

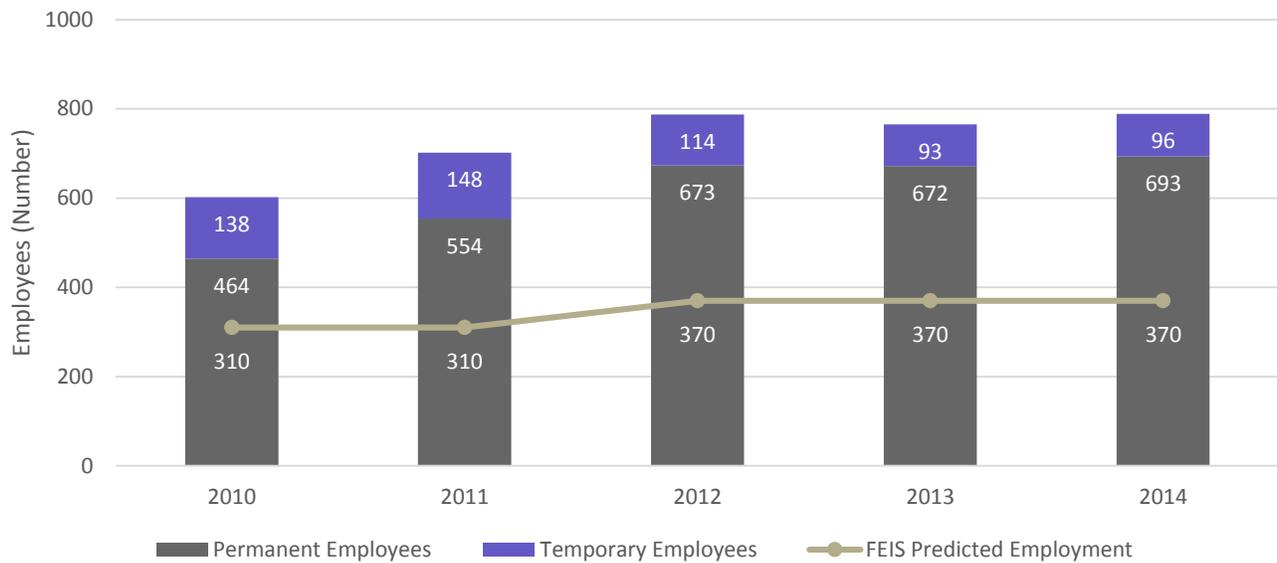
The Meadowbank FEIS makes the following predictions:

- “It is expected that the construction phase workforce will average 160 and peak at 310, and the operation phase workforce is estimated at 370.” (Cumberland Resources Ltd., 2006, p. 119)

### 1.1.2 Data & Trends

The following chart provides an overview of total Meadowbank employment since the mine began operating in 2010.

**Chart 1: Meadowbank Employment, 2010 - 2014 (Permanent and Temporary) (source: AEM)**



### 1.1.3 Interpretation

The years between 2010 and 2014 saw Meadowbank moving from construction and commissioning phases to a full operational mine. The total employee figures to date have significantly exceeded the values predicted in the FEIS for employment at the mine, largely due to an expansion of the project scale from the initial Cumberland project proposal.

## 1.2 MEADOWBANK & NUVAVUMMIUT EMPLOYMENT

### 1.2.1 Predictions

There are no specific predictions in the Meadowbank FEIS regarding Inuit or Nunavummiut employment rates at Meadowbank.

### 1.2.2 Data & Trends

The charts below provide an overview of the number and proportion of Inuit and Nunavummiut employed at Meadowbank Mine.

Chart 2 provides a snapshot of this proportion in 2014 for permanent, temporary and total employment. AEM defines a permanent employee as an employee whose current job is not specifically tied to a short-term project and the position is expected to be required throughout the life of the mine. Temporary employees are those whose current job will not continue beyond a specified period of time (a set contract) as well as on-call employees – those who have an indefinite contract and are called upon when the need arises. This latter group is 100% staffed by Inuit.

**Chart 2: Permanent and Temporary Meadowbank Employment, 2014 (Inuit and Non-Inuit) (source: AEM)**

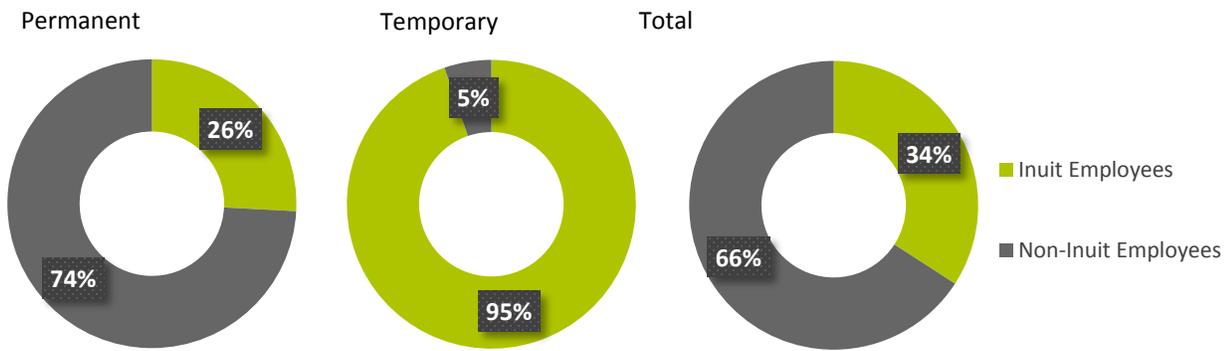


Chart 3, below, shows trends in Inuit and non-Inuit total employment (both permanent and temporary) over the past five years.

**Chart 3: Meadowbank Employment, 2010 - 2014 (Inuit and Non-Inuit) (source: AEM)**

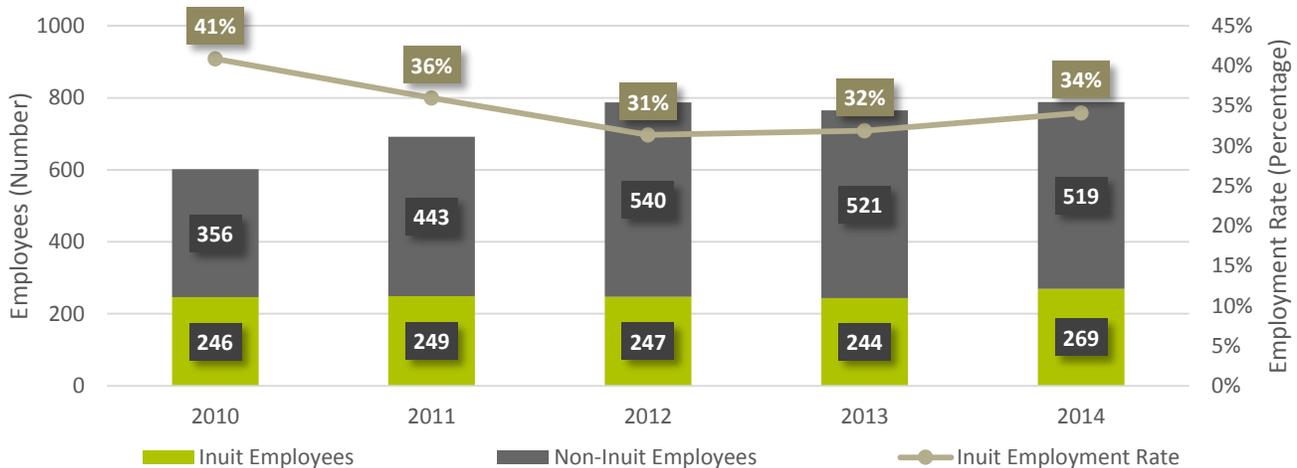
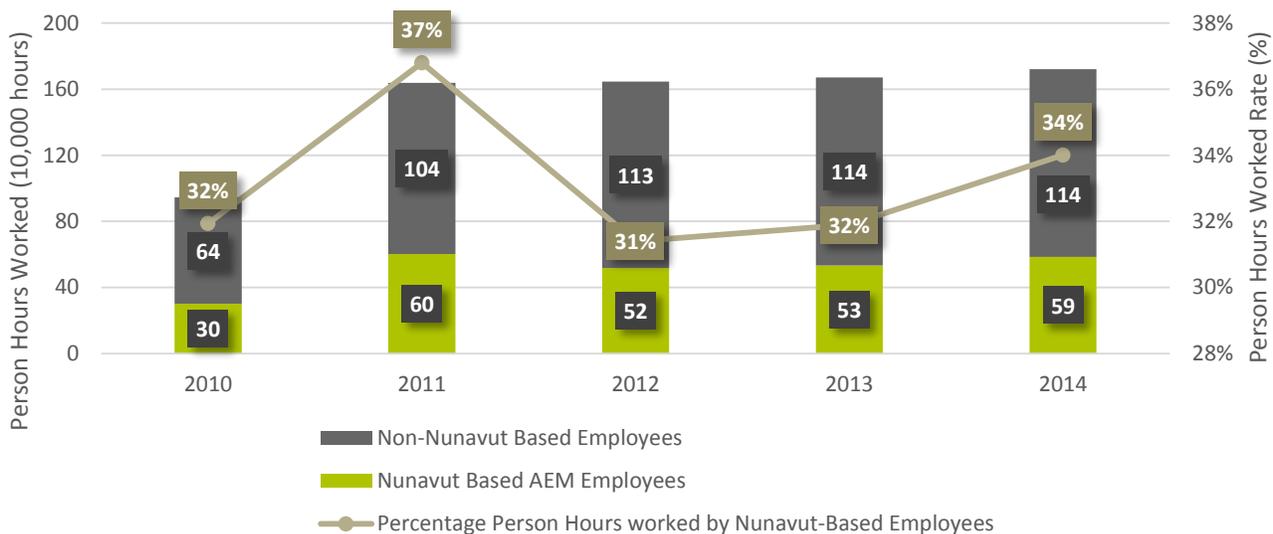


Chart 4 provides an overview of the person-hours worked by Nunavut and non-Nunavut based employees. While closely corresponding to one another, rates of Inuit employment and Nunavummiut employment are two separate metrics. While the former encompasses only those who identify as Inuit, the latter includes all who permanently reside in Nunavut, regardless of ethnicity. Currently, virtually all Nunavummiut employed by Meadowbank are also Inuit. Therefore, this demographic breakdown is functionally equivalent to Inuit and non-Inuit.

That said, person-hours worked (as opposed to employment numbers) can serve to provide a more holistic and accurate picture of Inuit employment at the mine. To clarify, employment numbers – such as those provided in Charts 2 and 3 – are generated as a ‘snapshot’, representing employment statistics on a single day in December. Person-hours worked (Chart 4), on the other hand, is the summation of all hours worked over a given time period, regardless of permanent or temporary status or short-term fluctuations in turnover.

**Chart 4: Person Hours Worked, 2010 - 2014 (Nunavut and non-Nunavut Based Employees) (source: AEM)**



### 1.2.3 Interpretation

No predictions were made in the Cumberland FEIS regarding Inuit employment rates.

Schedule E of Meadowbank’s IIBA sets out measures and requirements for Inuit employment including the development of equivalent qualifications (i.e. those qualifications considered equal to formal qualifications for various positions), preferential hiring policies, and detailed requirements for establishing and meeting Minimum Inuit Employment Goals (MIEGs).

Between 2010 and 2014, the total number of Inuit workers at Meadowbank has remained fairly stable. However, as the total workforce has grown in recent years, the proportion of Inuit employees decreased slightly until 2012 but has remained steady in the low 30% range over the last three years. Inuit comprise the vast majority of temporary employees, averaging 85% over the past 5 years, compared to only 25% of permanent employees. Most (~73% in 2014) of these temporary positions are temporary on-call contracts. These on-call employees, 100% filled by Kivalliq residents, have indefinite contracts and are called upon as the need arises.

Additional information related to types of positions and skill level classification is provided in VSEC 4: Education and Training.

## 1.3 MEADOWBANK EMPLOYMENT BY GENDER

### 1.3.1 Predictions

There are no specific predictions in the Meadowbank FEIS regarding employment rates by gender.

### 1.3.2 Data & Trends

In 2014, 15% of Meadowbank employees were female and 85% were male.

**Chart 5: Meadowbank Employment by Gender, 2010 – 2014 (source: AEM)**



### 1.3.3 Interpretation

There are no formal goals set for gender employment rates at Meadowbank. At 15% in 2014, female employment at Meadowbank is just below the Canadian mining sector average of 17% (MiHR, 2015). Excluding a dip in 2013, the proportion of female employees has been holding relatively steady since the mine’s first full year of production in 2011.

## 1.4 MEADOWBANK EMPLOYMENT BY KIVALLIQ COMMUNITY

### 1.4.1 Predictions

There are no specific predictions in the Meadowbank FEIS regarding Kivalliq community resident employment rates.

### 1.4.2 Data & Trends

Chart 6, below, provides an overview of employment numbers and employment rates of Kivalliq residents at the Meadowbank Mine.

**Chart 6: Meadowbank Employment, 2010 – 2014 (Kivalliq and non-Kivalliq residents) (source: AEM)**

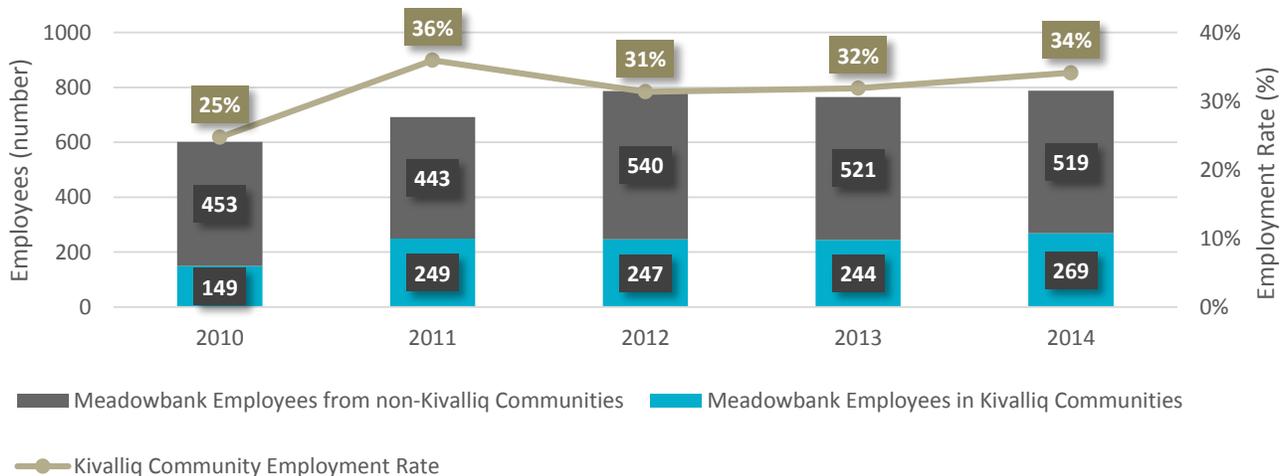
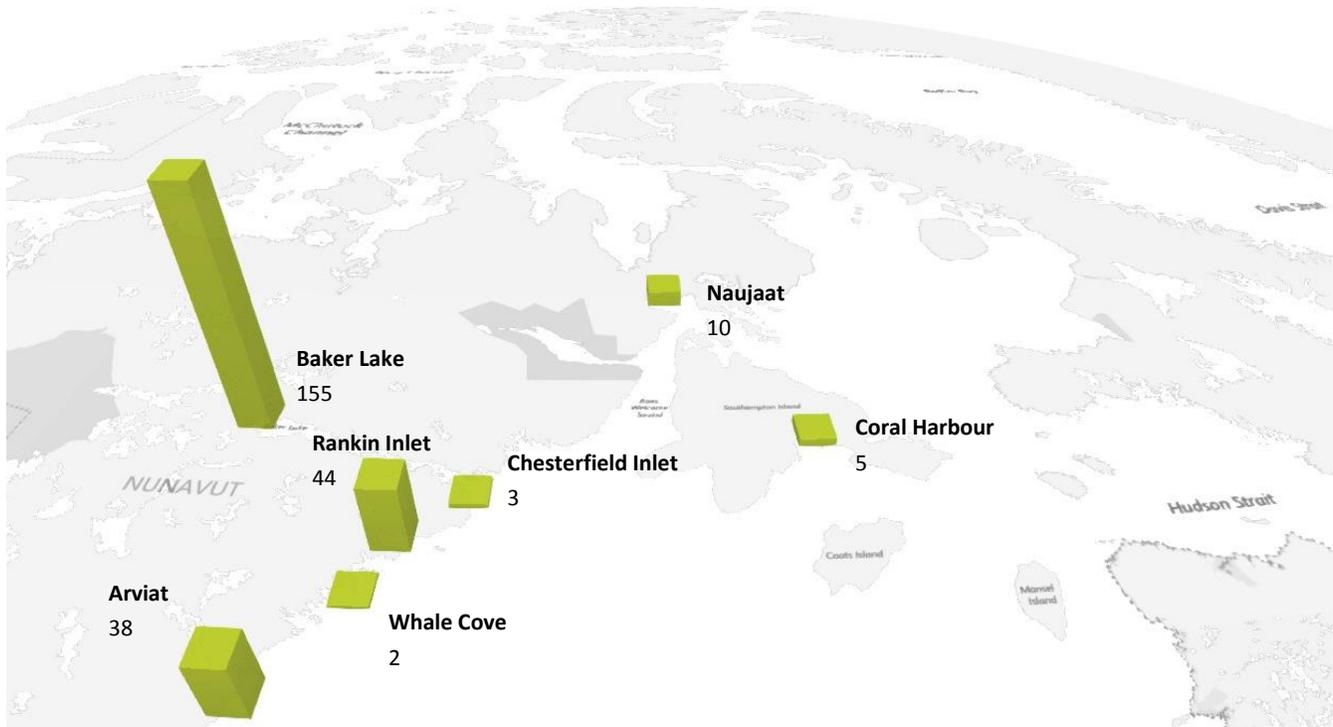


Chart 7 shows the number of residents of each Kivalliq community employed by the Meadowbank Mine.

**Chart 7: Meadowbank Employment by Kivalliq Community, 2014 (source: AEM)**



### 1.4.3 Interpretation

Between 2010 and 2014, the percentage of Meadowbank workers coming from Kivalliq communities has remained fairly stable in the low 30% range. Over half of the total Kivalliq employees are from Baker Lake. This likely reflects a number of factors, including: the mine’s proximity to the hamlet; preferential hiring provisions outlined in the Meadowbank IIBA which give preference to Baker Lake Inuit over Inuit from other communities; as well as training and recruiting efforts by AEM focused on Baker Lake.

## 1.5 TURNOVER

### 1.5.1 Predictions

There are no specific predictions in the Cumberland FEIS regarding turnover rates at Meadowbank.

### 1.5.2 Data & Trends

Chart 8, below, provides an overview of Inuit and non-Inuit turnover rates for permanent and temporary employees. Turnover rates are the percentage of Meadowbank employees that leave AEM’s employ during each fiscal year. Turnover rates are calculated by dividing the number of terminations by the average number of employees in a given year.

**Chart 8: Turnover Rates, 2010 - 2014 (Inuit & Non-Inuit) (source: AEM)**

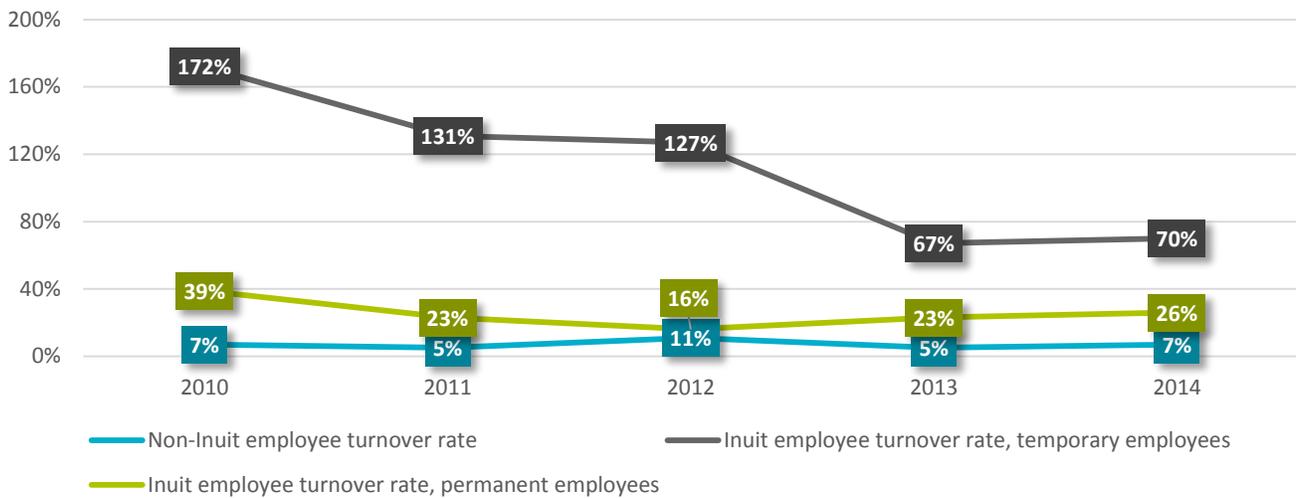


Chart 9, below, provides an overview of turnover by reason, as well as the average length of an employee contract from 2010 to 2011.

**Chart 9: Turnover (by reason for leaving) and Average Length of Employment, 2010 – 2014 (source: AEM)**



Since the start of production in 2010, AEM has conducted exit interviews and focus group meetings to gather information on reasons for resignation and voluntary termination. Interviews were used to collect qualitative information on common reasons why employees have left. These include:

- Spousal relationship issues
- Did not like the work or too tired to continue working
- Too much gossip amongst co-workers
- No babysitter or daycare
- Found a new job in town or home sick – need to go home
- Family wanted them to come home
- Work was too hard or did not like the work
- Increase in rent for social service housing (example \$30 to \$880 per month)

### **1.5.3 Interpretation**

Since 2010, turnover rates for permanent Inuit employees have been consistently higher than those for permanent non-Inuit employees. The turnover rate for permanent Inuit employees was 26% in 2014, as compared to 7% for non-Inuit permanent employees, and has been rising since 2012.

Overall, turnover has lessened significantly in 2013 and 2014 from the initial years of production. While there are many potential reasons for this, a major one is likely the shift of temporary employees away from set-contracts (contracts with a defined end-point which therefore manifest as turnover) towards on-call temporary employees. These employees have an indefinite contract and are called upon when the need arises.

Several AEM Programs have been developed in response to the reasons for resignation and voluntary termination gleaned through exit interviews. These include the FIFO program and Work Readiness Program. The FIFO program brings in spouses of employees to the mine site for a week to show them what mining life is all about and provides additional support services around financial management and conflict resolution. The Work Readiness Program provides pre-employment coaching to help prepare potential employees for mine life. These programs were implemented in 2014 and 2013, respectively, and as such it will take more time to assess their effectiveness.

# VSEC 2: Income

## IMPACT / GOAL STATEMENT

### Increased income in Kivalliq communities

Two indicators are used to measure and understand Meadowbank's impact on income in the Kivalliq Region, including progress towards meeting the impact / goal statement and the overarching Meadowbank FEIS employment prediction:

**FEIS Prediction:** "The potential impacts of increased income are considered of high magnitude, positive, long-term and of high significance, particularly to those individuals and their families who are able to benefit. It is expected that overall community effects, moderate in significance, are likely to be most experienced in Baker Lake, as most direct employment will occur here."<sup>1</sup> (Cumberland Resources Ltd., 2006, p. 121)

## INDICATORS

### 2.1. Income Paid to Meadowbank Inuit Employees

Metrics	Key Findings
<ul style="list-style-type: none"><li>Income Paid to Meadowbank Inuit Employees, 2010 – 2014</li><li>Income paid to Meadowbank Contractors and Inuit Employment Rate of Meadowbank Contractors, 2010 – 2014</li></ul>	<ul style="list-style-type: none"><li>At approximately \$18M/year since 2011, Inuit employment income far exceeds the FEIS prediction of \$4 million in direct project wages annually</li></ul>

### 2.2 Income by Kivalliq Community

Metrics	Key Findings
<ul style="list-style-type: none"><li>Change in Median Employment Income for Kivalliq Communities, baseline – 2012</li></ul>	<ul style="list-style-type: none"><li>Baker Lake, which has the highest number of Meadowbank employees, has also experienced the largest increase in median income since the beginning of production in 2010</li></ul>

## EXISTING MANAGEMENT & MITIGATION

While no AEM programs are in place with the primary goal of increasing local income, income remains a cross-cutting factor touched on by many of AEM's economic programs. More specifically, programs which aim to encourage greater educational attainment, increase local employment, support professional development and skill advancement, and increase local contracting and business opportunities can all have a positive supporting effect on income indicators in the Kivalliq. These programs are outlined in the respective sections of this report (VSEC 1, 3 and 4).

## 2.1 INCOME PAID TO MEADOWBANK INUIT EMPLOYEES

### 2.1.1 Predictions

The Meadowbank FEIS makes the following specific prediction with regard to income paid to Meadowbank Inuit employees:

<sup>1</sup> The FEIS also highlights the possibility of negative effects as a result of income inequality and personal choices to do with increased use of drugs and alcohol. See VSEC 7: Individual and Community Wellness for further discussion.

- “Direct project wages paid to people in Kivalliq Region, primarily Baker Lake, could exceed \$4 M annually” (Cumberland Resources Ltd., 2006, p. 121)

### 2.1.2 Data & Trends

Chart 10 provides an overview of employment income paid to Meadowbank’s Inuit employees from 2010 to 2014.

**Chart 10: Income Paid to Meadowbank Inuit Employees, 2010 – 2014 (source: AEM)**

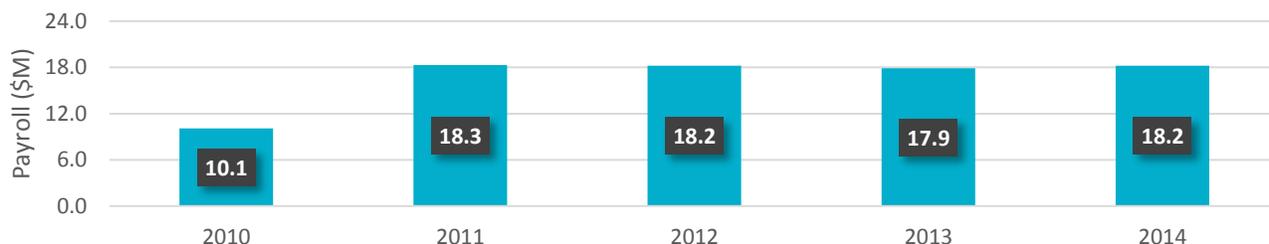
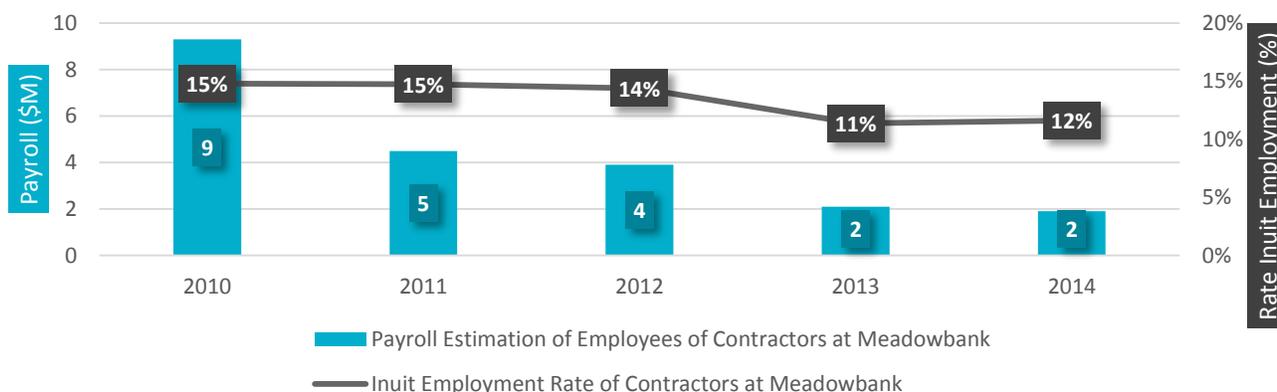


Chart 11, below, provides an overview of the estimated payroll paid to employees of contractors at Meadowbank, along with the Inuit employment rate of these contractors. No data on income paid to Inuit employees of Meadowbank contractors is available.

**Chart 11: Income paid to Meadowbank Contractors and Inuit Employment Rate of Meadowbank Contractors, 2010 – 2014 (source: AEM)**



### 2.1.3 Interpretation

Income paid to Meadowbank’s Inuit employees has been holding steady at approximately \$18 million since the mine began production in 2010. With 95% of Meadowbank’s Inuit workforce residing in the Kivalliq region (58% in Baker Lake), this far exceeds the FEIS prediction of \$4 million in direct project wages annually to Kivalliq residents.

While no specific prediction is made regarding the income paid to Meadowbank contractors, Charts 10 and 11 suggest a shift of income from contractors towards direct employees as the project moved from the construction to the production phase.

## 2.2 INCOME BY KIVALLIQ COMMUNITY

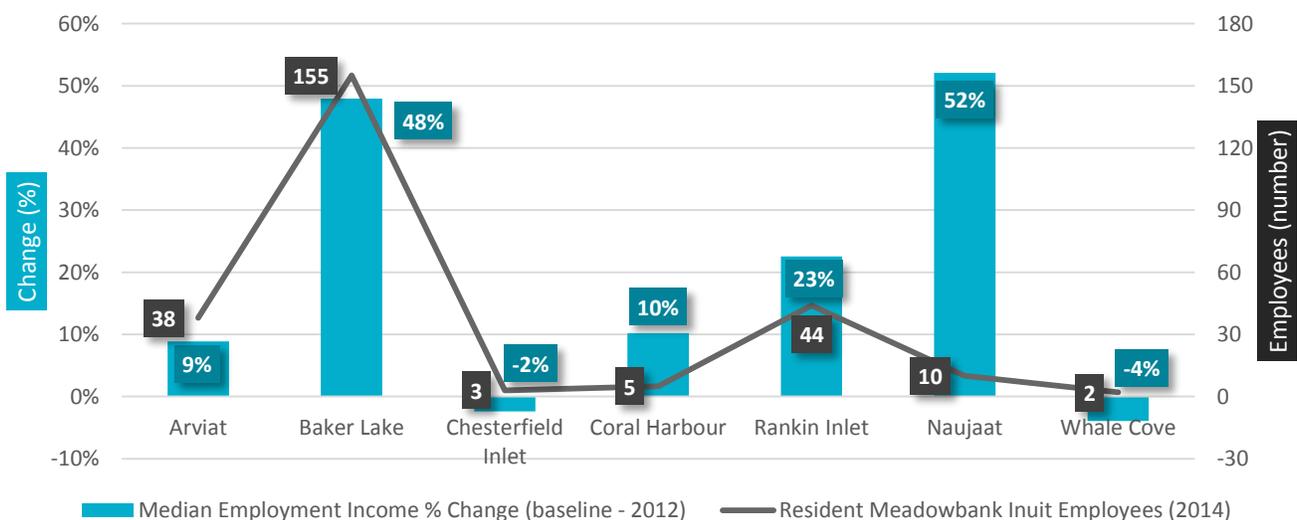
### 2.2.1 Predictions

The Meadowbank FEIS makes no specific predictions regarding changes in the median income of Kivalliq communities, but does predict that Baker Lake will experience the most positive effects of increased income.

### 2.2.2 Data & Trends

Chart 12 provides an overview of the change in median employment income for each Kivalliq community since the mine began production by comparing income in 2012 to the pre-2010 baseline. The baseline is based on the mean value of the median employment income in each year between 2004 and 2009. The chart also shows the number of Meadowbank employees residing in each community.

**Chart 12: Change in Median Employment Income for Kivalliq Communities, baseline – 2012 (sources: AEM; (Statistics Canada, 2015))**



### 2.2.3 Interpretation

Chart 12 shows the change in median employment income and the number of Meadowbank employees residing in each community. Baker Lake, which has the highest number of Meadowbank employees, experienced the largest increase in median income. It is recognized that other factors influence median employment income (spin-off effects, unrelated economic development, changes in public sector employment, etc.) and that these factors may mask the effect of Meadowbank employment income, especially for communities that have relatively few Meadowbank employees or that have a high median employment income to start with (e.g. Rankin Inlet, as the regional centre for the Kivalliq Region, has significant public sector employment).

# VSEC 3: Contracting and Business Opportunities

## IMPACT / GOAL STATEMENT

### Increased opportunities and growth for local and Inuit owned businesses

Two indicators are used to measure and understand Meadowbank's impact on business opportunities and development in the Kivalliq Region, including progress towards meeting the impact / goal statement and the overarching FEIS prediction:

**FEIS Prediction:** "The potential impacts of business expansion and creation are likely to take some time to gain momentum, but overall are considered of high magnitude, positive, long term and of high significance, particularly to those individuals and their families who are able to benefit. The impacts at the community level, of moderate significance, are most likely to be seen in Baker Lake and Rankin Inlet, but some stimulus to business will be felt across the region." (Cumberland Resources Ltd., 2006, p. 121)

## INDICATORS

### 3.1. Contract Expenditures

Metrics	Key Findings
<ul style="list-style-type: none"><li>Contract Expenditures on Baker Lake and Nunavut-Based Businesses, 2011 – 2014</li><li>Contract Expenditures on NTI Registered Businesses, 2011 – 2014</li></ul>	<ul style="list-style-type: none"><li>In absolute dollar terms, the annual value of contract expenditures has fallen significantly in the last 2 years</li><li>Despite the decline, close to 50% of contract expenditures have gone to Nunavut-based businesses each year since 2011, of which 36-52% go to Baker Lake businesses</li><li>The share of total contract expenditures going to NTI-registered (Inuit) businesses is on an upward trend, from 13% in 2011 to 37% in 2014</li></ul>

### 3.2 Registered Inuit Owned Businesses in the Kivalliq Region

Metrics	Key Findings
<ul style="list-style-type: none"><li>Inuit-Owned Businesses in the Kivalliq Region, 2006 – 2014</li></ul>	<ul style="list-style-type: none"><li>There has been a net increase in the number of Inuit-owned businesses in Kivalliq since 2010, but the current number remains below pre-2008 levels</li><li>Given the multitude of factors affecting business expansion and creation, and the relative few businesses directly contracted by Meadowbank, it is difficult to attribute the observed impacts.</li></ul>

## EXISTING MANAGEMENT & MITIGATION

The Meadowbank IIBA acts as the primary vehicle for increasing the level of Inuit participation in Meadowbank contracting. Additionally, Meadowbank launched the Inuit Business Opportunities Initiative in order to support the implementation of the commitments outlined in the IIBA. Details are outlined in the table below.

**Table 3: AEM Contracting and Business Opportunities Management and Mitigation Initiatives**

Initiative	Purpose / Description / Outcomes
AEM’s Inuit Business Opportunities Initiative	<p>AEM launched the Inuit Business Opportunities Initiative in April, 2010 support local and Inuit business contracting. The strategy was designed to guide outsourcing processes for Inuit firms, and guide the role of AEM to assist Inuit businesses participate in contract opportunities at Meadowbank. The initiative ensures that all Inuit businesses gain a competitive opportunity to bid on contracts for the supply of goods and services.</p> <p>Since the launch of the initiative AEM has developed and maintains a database of Inuit Companies that informs AEM buyers what areas of goods or service an Inuit company is interested in providing, who their JV partner is and contact information. AEM uses this database to provide RFP schedules, communicate with suppliers and automatically issue RFP’s documents in advance of public advertising of RFP’s. The database includes 76 areas of types of goods and services that are required by Meadowbank, from work gloves to heavy equipment rentals to construction services. There are 54 Inuit Companies who have indicated an interest to provide goods or services.</p>
Inuit Impact Benefit Agreement	<p>Schedule F of the Meadowbank IIBA includes procedures to increase the participation of Inuit firms in providing goods and services to the Meadowbank project and improve the capacity of Inuit firms to be awarded contracts with the Meadowbank Mine.</p> <p>This includes the application of Inuit preference points in evaluating and awarding contracts as well as a requirement to report on contracts awarded to Inuit firms in the annual IIBA Implementation report by contract classification type.</p> <p>Under the IIBA, AEM is also required to have contractors that represented, as part of their bid, the intention to achieve a stated level of Inuit employment in the labour force engaged in the performance of the contract, to prepare a Contractor’s Inuit Employment Plan (CIEP). These plans are intended to affirm the contractor’s commitment to achieving the stated level of Inuit employment, describe how they plan on achieving it, and provide basic data on Inuit participation.</p>

### 3.1 CONTRACT EXPENDITURES

#### 3.1.1 Predictions

The Meadowbank FEIS makes the following specific prediction regarding contract expenditures:

- “With continuing preferential contracting, local business participation in the project is expected to grow with time.” (Cumberland Resources Ltd., 2006, p. 7)

#### 3.1.2 Data & Trends

Chart 13 shows the value and proportion of contract expenditures that went to Nunavut-based businesses (businesses registered in Nunavut) over time.

**Chart 13: Contract Expenditures on Baker Lake and Nunavut-Based Businesses, 2011 – 2014 (source: AEM)**

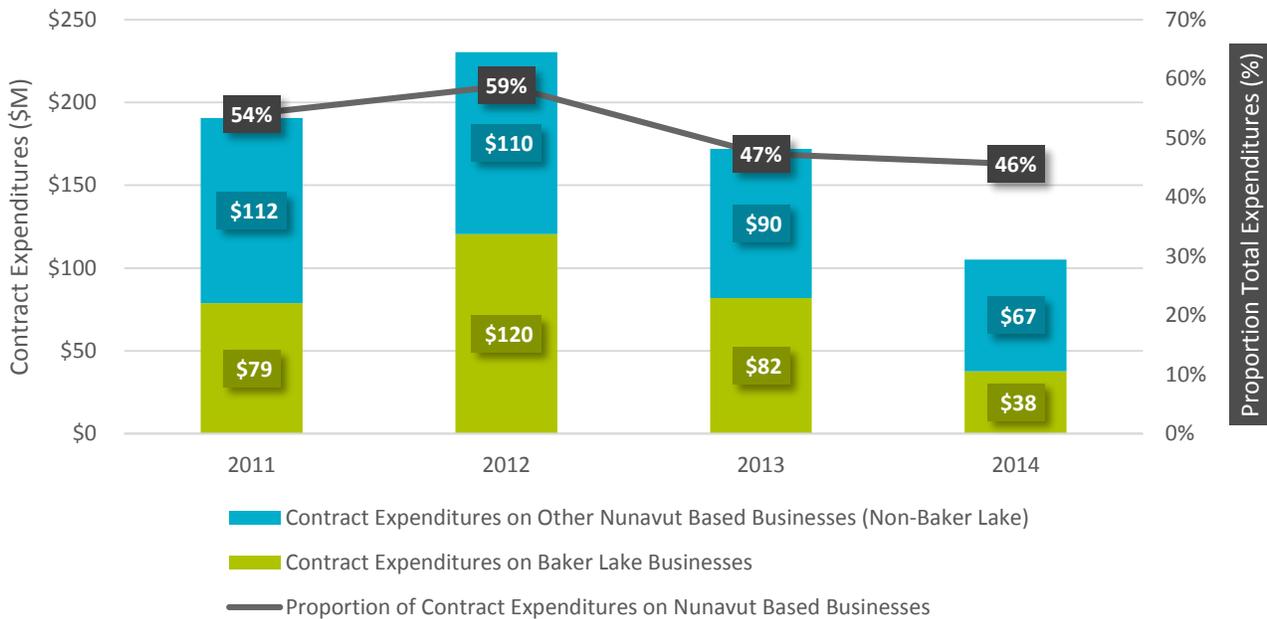
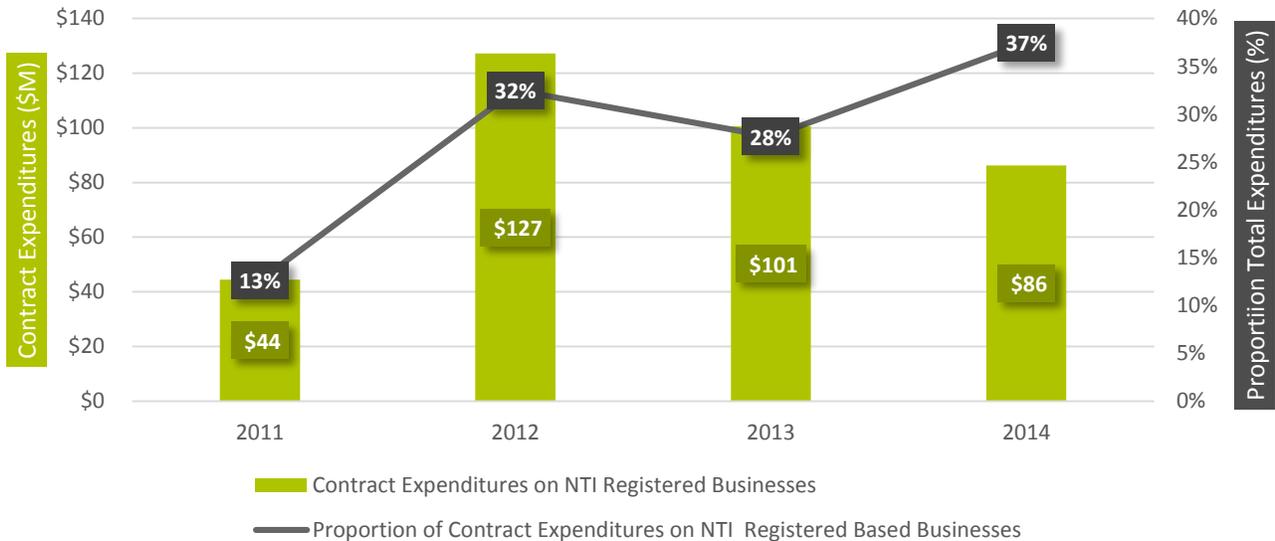


Chart 14, below, shows the value and proportion of contract expenditures that went to NTI-registered businesses, which are Inuit-owned businesses, over time.

**Chart 14: Contract Expenditures on NTI Registered Businesses, 2011 – 2014 (source: AEM)**



### 3.1.3 Interpretation

In absolute dollar terms, the annual value of AEM contract expenditures has fallen significantly since commissioning, with the largest drops in the last 2 years. The relative proportion of contract expenditures on Nunavut-based businesses has remained close to 50%, with the annual percentage varying from a high of 59% in 2012, to a low of 46% in 2014. As anticipated, Baker Lake based businesses have received a significant portion of those expenditures, although their relative share decreased in 2014.

Expenditures on Inuit-owned businesses (NTI-registered) have been declining since 2014, consistent with the trend for total contract expenditures; however, their relative share of contract expenditures is on an upward trend, representing 37% in 2014.

At the time of the FEIS, 25% of exploration expenditures went to Nunavut-based businesses. As indicated above, local business participation (of Nunavut-based businesses and of NTI registered businesses) has exceeded this level since 2012, although contract expenditures in absolute dollars, including those for Nunavut-based businesses have been declining.

Several reasons for the overall decline in contract expenditures in 2013 and 2014 have been provided by AEM. The first of these is the postponement of a number of capital projects due to the low price of gold. Given their labor-intensive nature, capital projects typically require the engagement of many contractors. Additionally, AEM cited a temporary cessation of exploration activity at Meadowbank over the past few years as the company has shifted more of its resources towards the Meliadine exploration project. Exploration activity generally relies heavily on contractors (e.g. drilling contractors).

### 3.2 REGISTERED INUIT-OWNED BUSINESSES IN THE KIVALLIQ REGION

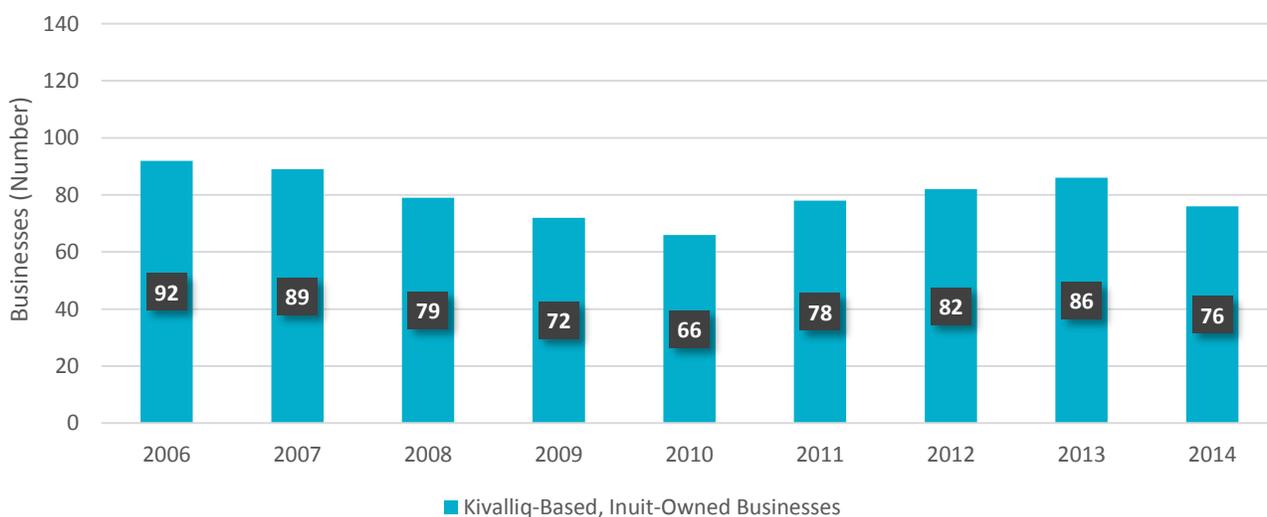
#### 3.2.1 Predictions

There are no specific predictions in the Cumberland FEIS regarding overall numbers of Inuit-owned businesses in the Kivalliq region.

#### 3.2.2 Data & Trends

Chart 15 below outlines the number of Inuit-owned businesses registered with NTI. Since 2011, Meadowbank has issued 25 contracts to Inuit-owned businesses (IIBA implementation report).

**Chart 15: Inuit-Owned Businesses in the Kivalliq Region, 2006 – 2014 (source: (Nunavut Tunngavik Inc. , 2014))**



#### 3.2.3 Interpretation

The total number of Inuit-owned businesses declined significantly from 2006 to 2010, increased from 2011 until 2013, and declined again in 2014. Since 2011, Meadowbank has issued 25 contracts to Inuit-owned businesses (IIBA implementation report). Given that Meadowbank began production in 2010 and has issued 25 contracts to Inuit business since 2011, it may

have contributed positively to the observed increase in the number of Inuit-owned businesses in the region between 2010 and 2013. However, given the multitude of factors affecting the number of businesses, and the relative few businesses directly contracted by Meadowbank, it is difficult to attribute these impacts.

# VSEC 4: Education and Training

## IMPACT / GOAL STATEMENT

**A.** Improved educational attainment in Kivalliq communities (i.e. high school graduation rates)

**B.** Increased mining-related skill level of Kivalliq workforce

**C.** Improved job performance and promotion at Meadowbank

Five indicators are examined in this section in order to better understand and measure Meadowbank's impact on education and training of employees and Kivalliq residents, as well as progress towards meeting the impact / goal statement outlined above and the FEIS prediction:

**FEIS Prediction:** "The potential impacts of education and training are considered of medium magnitude, positive, long term and of high significance, specifically to those individuals and their families who are able to benefit." (Cumberland Resources Ltd., 2006, p. 121)

### 4.1. Investments in School-Based Initiatives

Metrics	Key Findings
<ul style="list-style-type: none"><li>AEM Investments in School-Based Initiatives, 2010 - 2014</li></ul>	<ul style="list-style-type: none"><li>AEM has made consistent annual investments of approximately \$284,000 in a variety of school-based initiatives with the goals of motivating students and increasing educational opportunities and outcomes in the Kivalliq region</li></ul>

### 4.2 Public School Truancy and Secondary School Graduation Rates by Region

Metrics	Key Findings
<ul style="list-style-type: none"><li>Truancy Rates by Region and Community, 2002/03 – 2010/11</li><li>Secondary School Graduation Rate by Region, 1999 – 2014</li></ul>	<ul style="list-style-type: none"><li>Both graduation rates and truancy rates have risen over the measured timeframes. These metrics are affected by a range of factors, which may or may not include those associated with the Meadowbank mine</li></ul>

### 4.3 Mine Training and Education

Metrics	Key Findings
<ul style="list-style-type: none"><li>AEM Investments in Mine Training and Education Programs, 2010 – 2014</li><li>Training Hours Provided to Nunavut and Non-Nunavut Based Employees, 2010 – 2014</li><li>Specific Training Hours Provided to Inuit and non-Inuit Employees, 2012 – 2014</li><li>Number of Haul Truck Driver Program Graduates, 2010 – 2014</li><li>Apprenticeships for Inuit Employees, 2010 – 2014</li></ul>	<ul style="list-style-type: none"><li>AEM has invested almost \$4M annually in external mine training programs over the past three years, most notably the Kivalliq Mine Training Society</li><li>Support for, and participation in, in-house training and apprenticeship programs has largely been steady throughout the mine's operation</li></ul>

### 4.4 Percentage of Total Population with Trade Certificates

Metrics	Key Findings
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- Percentage of Total Population with Trade Certificates & Registered Apprenticeship Certificates in Nunavut and Canada, 2011
- As data on this metric is currently limited to the 2011 census, it is impossible to glean more than a baseline at this time

#### 4.5 Inuit Employees by Skill Level

Metrics	Key Findings
<ul style="list-style-type: none"> <li>• Inuit Employment by Skill Level, 2011 – 2014</li> </ul>	<ul style="list-style-type: none"> <li>• There are no discernable trends to demonstrate career path progression of Inuit employees to higher skill level jobs as a result of AEM education and training programs.</li> </ul>

## EXISTING MANAGEMENT & MITIGATION

AEM offers a number of programs to increase general educational and skills attainment among Kivalliq residents as well as training, career development and upward mobility programs for existing employees.

**Table 4: AEM Employment Management and Mitigation Initiatives**

Program	Purpose / Description / Outcomes
MOU with Department of Education	<p>A Memorandum of Understanding was signed in April 2012 to establish a strengthened partnership between the Government of Nunavut Department of Education and AEM, with a focus on increasing the number of students in the Kivalliq region who are able to successfully transition from high school to trades and mining-related career opportunities. The MOU with the Department of Education is currently under review and a renewed agreement should be in place during 2015.</p> <p>During 2014, AEM continued to sponsor the Mining Matters program as part of the MOU with Education. Mining Matters is a branch of the Prospectors and Developers Association of Canada (PDAC) that is dedicated to bringing knowledge and awareness about Canada’s geology and mineral resources to students and educators.</p> <p>In 2013 AEM and the Mining Matters group participated with the GN Department of Education, Curriculum Review Services to assist in a review of Earth Sciences Curriculum of Nunavut Schools.</p>
Kivalliq Science Educations Community	<p>In 2014 AEM invested \$25,000.00 towards the regional Math Camp, Science Camp and Kivalliq Science Fair operated by the Kivalliq Science Educators Community. AEM’s educational partners from Mining Matters assisted with Science camp. The Science camp was organized just outside of Whale Cove and the weeklong program included a mix of traditional, cultural and educational studies related to sciences. The program provides science credits to participants.</p>
Work Readiness Training Program	<p>In collaboration with the Kivalliq Mine Training Society (KMTS), Agnico Eagle developed a Work Readiness Training program as a pre-employment initiative. The program was implemented in April 2013. The program is delivered over a 4 day period at the community level over a schedule through-out the year. During 2014, the program was delivered in each Kivalliq community and saw a total of 128 people from the various communities attend, of which 111 have successfully completed the program. In 2014, 57 graduates of the program have been hired by AEM, of which 24 are women.</p> <p>The Work Readiness program provides coaching in the following areas:</p> <ul style="list-style-type: none"> <li>• Insight into personal beliefs that drive behaviors in their social lives;</li> <li>• Awareness of employers’ unspoken expectations;</li> <li>• Self-control skills for managing strong emotions;</li> <li>• Communication skills for dealing with difficult social interactions, and;</li> <li>• Problem solving skills for logically resolving interpersonal workplace issues.</li> </ul>

	<p>The intent if for Inuit workers to be better prepared for the work environment in an industrial setting. Graduates of the program are eligible to join the AEM Labor Pool.</p>
Kivalliq Mine Training Society	<p>The KMTS is an Inuit, private sector partnership created to strengthen the Kivalliq region labour force through creating and funding training opportunities in the 7 Kivalliq hamlets. AEM has provided \$6.8 million in cash and in kind support towards the overall initiative. The KMTS has also enjoyed financial support from the GN, Department of Economic Development and Transportation. The KMTS program was valued at approximately \$9.5 million over a two year period, from April 2013 to the end of March 2015</p> <p>A major focus of the KMTS program has been to support AEM’s Mine Training Initiatives, such as the Career Path, Apprenticeship and Haul Truck operators’ programs. Between April 2013 and December 2014 a total of 197 Inuit Employees participated in Career Path initiatives, of which 178 successfully completed their training and 110 received a promotion.</p>
Summer Student Employment Program	<p>AEM offers a summer employment program for the children of all AEM employees that are participating in University level education. In 2014 AEM Meadowbank considered 10 students per rotation, for a total of 20. There were 21 applications of which 19 were selected. Two applicants were unsuccessful as they were under 18 years of age. There were no applications from Inuit employees in 2014.</p>
Haul Truck Driver Training	<p>A 28 day (336 hour) program to certify haul truck operators, which includes training on a simulator, on the job and in the classroom. The program is aimed at existing employees in entry level positions (dishwashers, janitors, chambermaids, etc.).</p> <ul style="list-style-type: none"> <li>• 34 Inuit workers enrolled in the program in 2014</li> <li>• To date, 33 Haul Truck Trainees have successfully completed the program and are now fully certified Haul Truck Operators working with the mine department</li> <li>• AEM plans to train up to 20 new haul truck operations in 2015.</li> </ul>
Arviat Community Training Programs	<p>In 2011 the Hamlet of Arviat proposed a partnership to invest in a community based drilling school that would provide Inuit with the skills needed to work in diamond drilling. With advice and support of AEM the Hamlet brought together a range of partners to acquire the drilling equipment, develop the curriculum and operate the training program. Government training agencies, the KIA and drilling companies provided partnership investments. In 2013 the programs was expanded to include a Welders Helpers program</p> <p>The 2014 drillers program took place between April and June and the intake registered 12 students of which 11 graduated. Over the past 4 years the program has graduated 54 trained driller’s helpers, all who have found employment. The welders program took place in December and saw six graduates. All of the welders helpers graduates found employment.</p>
Career Path Program	<p>The Career Path Program was designed in 2012 with the intention of supporting upward mobility of Inuit employees at Meadowbank. This program identifies the incremental steps that an employee is required to accomplish to advance in their chosen career of interest. The Career Path system is currently available in five (5) areas of activity; Mine, Drill &amp; Blast, Process Plant, Field Services and Road Maintenance. The objective is to have only internal promotions for Inuit and no external candidates (southerners) will be hired to fill a position that is part of the program</p>
Training Curriculum	<p>The Training Curriculum program, implemented in 2014, gives proper tools, tips, guideline and standards to improve the proficiency of Meadowbank trainers. The formal manual is composed of three sections: Training theory, training standards and training delivery.</p>
E-Learning Training at Meadowbank	<p>Before coming to Meadowbank for the first time, newly hired employees must complete their Mandatory Training on-line. The General Induction consists in on-line chapter that provide general information about Agnico Eagle and working life at Meadowbank Mine. The training also ensures that all workers are trained on health and safety matters such as WHMIS, fire extinguisher, etc. prior coming on site</p>
Training and Learning	<p>The Training Management System (TMS) as well as the Learning Management System (LMS) were initially implemented in 2013 in order to ensure better management of training activities and to monitor the proper</p>

Management System	management of the e-learning training. Both of these tools are in full effect and optimization phases were ongoing in 2014 with the addition of a function designed to track electronic training files for employees.
Apprenticeship Training at Meadowbank	<p>An Apprenticeship Program for the training of Inuit employees in skilled trades is currently under review at Meadowbank. Many fields of study are now available, with AEM aiming to acquire more diversity in terms of trades at Meadowbank. The apprentice positions lead employees to work in various departments such as Mobile Maintenance, Site Services, Process Plant (Maintenance), Kitchen and Electrical. In collaboration with the Kivalliq Mine Training Society and Nunavut Arctic College, Meadowbank is also supporting a pre-trade program to support Inuit without the basic levels of literacy and numeracy required for trade apprenticeships.</p> <ul style="list-style-type: none"> <li>• 4 Inuit employees were enrolled in pre0-trades assessment program in 2014 (3 successfully completed it and were enrolled in apprentice programs)</li> <li>• 6 new Apprentice positions will be created in 2015, for a total of at least 12 apprentice positions.</li> </ul>

## 4.1 INVESTMENTS IN SCHOOL-BASED INITIATIVES

### 4.1.1 Predictions

The Meadowbank FEIS makes the following commitment regarding investments in school-based initiatives:

- “Cumberland and KIA will address the need for a broader based project education and training initiatives to assist those who wish to develop skills that will position them for project employment. This [sic] education and training initiative [sic] will also include an element to address motivational issues around getting children through high school. Such measures would be intended to contribute to encouraging a commitment to education on the part of youth.” (Cumberland Resources Ltd., 2006, p. 121)

### 4.1.2 Data & Trends

Table 5 provides an overview of AEM’s investments in school-based initiatives along with the number of participants in the various programs, where available.

**Table 5: AEM Investments in School-Based Initiatives, 2010 – 2014 (source: AEM)**

Program	Measurement	2010	2011	2012	2013	2014
Mining Matters Science Program	Investment (\$)	\$0	\$90,000	\$80,000	\$70,000	\$70,000
	# of Community schools to which the program was delivered	0	4	3	4	3
Kivalliq Science Educators Community Programs (Science Fairs, Math Fairs, Science Camp)	Investment (\$)	\$0	\$15,000	\$15,000	\$25,000	\$25,000
	# of Participants (only Science camp measured in 2011 & 2012)	0	36	36	1,307	1,578
MOU with Department of Education Programs	Cash and In-kind support	\$0	\$175,000	\$175,000	\$175,000	\$175,000
	Estimated Participants in TASK week (Baker Lake, Arviat & Chesterfield Communities)	0	0	60	65	0
	Estimated Participants in Career Fairs (all Kivalliq Communities)	400	400	400	400	400
Agnico provides the KIA with annual funds to invest specifically in scholarships	Value of AEM investment	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000

### 4.1.3 Interpretation

AEM has made total annual contributions of approximately \$284,000/year to a variety of school-based initiatives with the goals of building interest in math, science and mining among school-aged children; motivating students with scholarships and career opportunities; and increasing educational outcomes overall in the Kivalliq region.

A number of additional points of interpretation regarding the data presented in Table 5 are as follows:

- Education-related investments by AEM began in 2011, following the construction phase of the mine
- The TASK week program was put on hold in 2014 pending the outcome of a program review, explaining that year's drop to 0 participants
- It is unlikely that the number of participants in career fairs is being measured with any level of robustness given the roundness and consistency of the values

## 4.2 PUBLIC SCHOOL TRUANCY AND SECONDARY SCHOOL GRADUATION RATES BY REGION

### 4.2.1 Predictions

There are no specific predictions made in the Meadowbank FEIS regarding school attendance or graduation.

### 4.2.2 Data & Trends

Chart 16 shows truancy rates in the three Nunavut regions, as well as the percent change in the rates by region between the 2002/03 school year and the 2010/11 school year. Truancy Rate is the percentage of total school days for which students have unexcused absences from school. This rate is calculated by dividing the total number of truant days by the total number of scheduled school days.

**Chart 16: Truancy Rates by Region and Community, 2002/03 – 2010/11 (source: (Government of Nunavut Department of Education, 2012))**

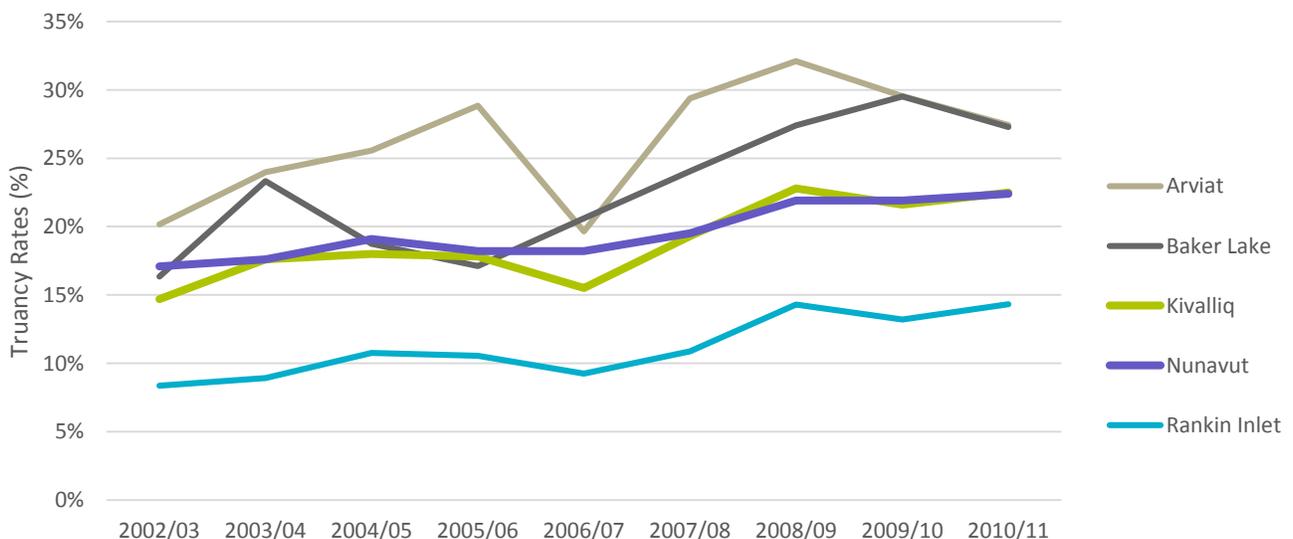


Chart 17, below, provides secondary school graduation rates by region between 1999 and 2014.

**Chart 17: Secondary School Graduation Rate by Region, 1999 – 2014 (source: (Government of Nunavut Department of Education, 2015))**



### 4.2.3 Interpretation

Truancy rates increased the Kivalliq region overall, and in Baker Lake, Rankin Inlet, and Arviat between 2006/07, at the same time that construction of Meadowbank began, and 2008/09. The rates steadied or decreased between 2008/09 and 2010/2011. As the most recent available data on truancy rates is for 2010/2011, no trends on truancy can be determined for the period of mine operation and AEM-supported school-based initiatives. It will be important to look at these data as they become available.

The graduation rate in Kivalliq region has fluctuated since the opening of the Meadowbank mine with no significant trend since 2010. However, graduation rates in Kivalliq region have been at all-time highs for the region, and consistently higher than those in the other two regions, since 2010.

A range of complex and interacting factors affect truancy and graduation rates, including the housing shortage, household food insecurity, health status, social problems such as high rates of teenage pregnancy and substance abuse (higher than the rest of Canada), and the legacy of the residential school system (Office of the Auditor General, 2013). The Meadowbank mine may have an impact on some these factors, as described in subsequent sections, but attribution is a challenge due to the multiple and interacting factors.

Truancy and graduation rates are useful measures but only provide a partial picture of the state of education in the Kivalliq region. The education system in Nunavut faces numerous policy and operational challenges, including the practice of allowing students to move up a grade without achieving required competencies. These challenges can lead to students graduating from high school with inadequate literacy, numeracy and problem solving skills, which can limit their employability and their access to training (e.g. inability to pass apprenticeship entrance exams). At the time of writing, no public data is available on student K-12 performance in Nunavut (i.e. performance relative to international standards or those of other jurisdictions) (Conference Board of Canada, 2014).

## 4.3 MINE TRAINING AND EDUCATION

### 4.3.1 Predictions

The Meadowbank FEIS makes the following commitments regarding investments in mine training and education-based initiatives:

- “Cumberland and KIA will address the need for broader based project education and training initiatives to assist those who wish to develop skills that will position them for project employment.” (Cumberland Resources Ltd., 2006, p. 121)
- “Provide on the job training... to improve skills towards improved job performance and promotion.” (Cumberland Resources Ltd., 2006, p. 121)

### 4.3.2 Data & Trends

Table 6 provides an overview of AEM’s investments in mine training and education programs along with the number of participants, where available.

**Table 6: AEM Investments in Mine Training and Education Programs, 2010 – 2014 (source: AEM)**

Program	Measurement	2010	2011	2012	2013	2014
Kivalliq Mine Training Society	Cash and in-kind support	\$1M	\$0	\$3.3M	\$3.6M	\$3.6M
Arviat Diamond Drillers and Welders Program	Cash and in-kind support	\$250,000	\$60,000	\$190,000	\$190,000	\$190,000
	Number of graduates	12	24	12	24	18

The Kivalliq Mine Training Society (KMETS) has provided support for the development and delivery of community-based Work Readiness and Labour pool initiatives to help prepare Inuit for employment opportunities. The KMETS has also supported the Arviat Drillers program, as well as some interesting community based initiatives, such as the Fly-In Fly-Out program and Community Net-work program, which have provided supports to communities to help employees and their families cope with the challenges that come with employment. Between April 2013 and December 2014, a total of 437 Inuit participated in KMETS community based programs, of which 386 (or 88%) successfully completed their training and 255 (or 58%) found work.

Chart 18 shows training hours provided per employee to Nunavut and non-Nunavut based employees, which includes the following three types of training:

- **Health and Safety training** includes mandatory training related to compliance with the Nunavut Mine Act, as well as training that is mandated according to AEM Health and Safety policies. Many of these training sessions are offered via e-learning prior to the employee’s arrival on site.
- **General training** consists of training activities required at a departmental level and covers many employees working in different departments. General training includes training on light duty equipment as well as enterprise software systems and cross-cultural training.
- **Specific training** is focused on developing individual competencies related to a specific position. This training qualifies individual workers for promotion following their progression through the Career Path. These training programs are provided through a combination of in classroom (theory) learning as well as practical (one-on-one) learning.

**Chart 18: Training Hours Provided to Nunavut and Non-Nunavut Based Employees, 2010 – 2014 (source: AEM)**

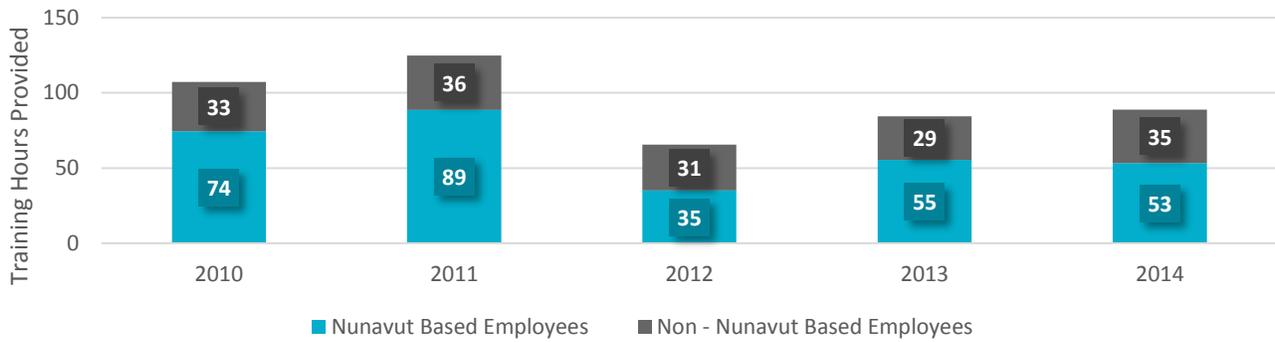


Chart 19, below, provides an overview of specific training hours offered to Inuit and non-Inuit employees. Specific training is focused on developing individual competencies related to a specific position and can be used to qualify employees for a promotion. 2010 and 2011 data is not available for this metric.

**Chart 19: Specific Training Hours Provided to Inuit and non-Inuit Employees, 2012 - 2014 (source: AEM)**

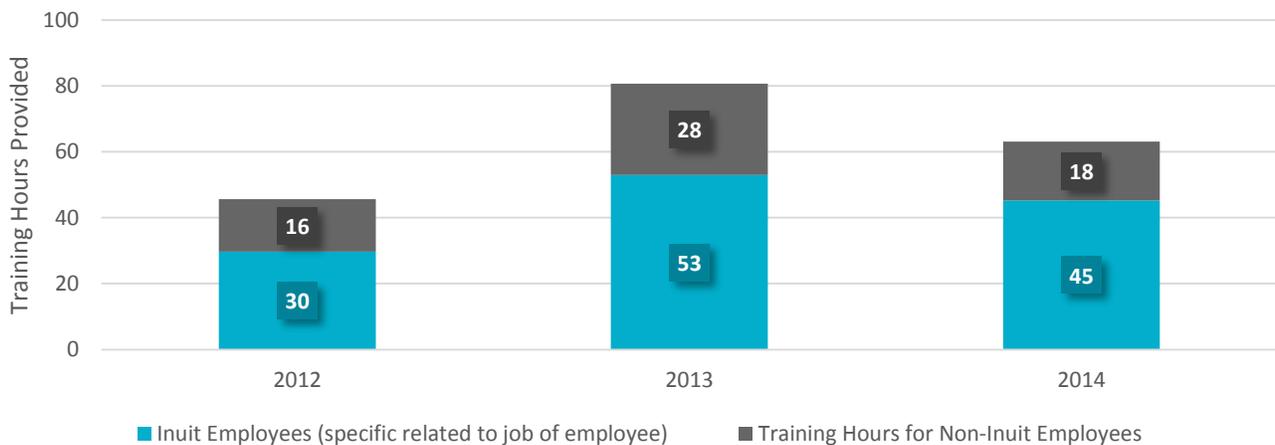


Chart 20, below, provides an overview of the number of graduates from the Haul Truck Driver Program between 2010 and 2014. 100% of graduates from this program are Inuit employees at Meadowbank.

**Chart 20: Number of Haul Truck Driver Program Graduates, 2010 – 2014 (source: AEM)**

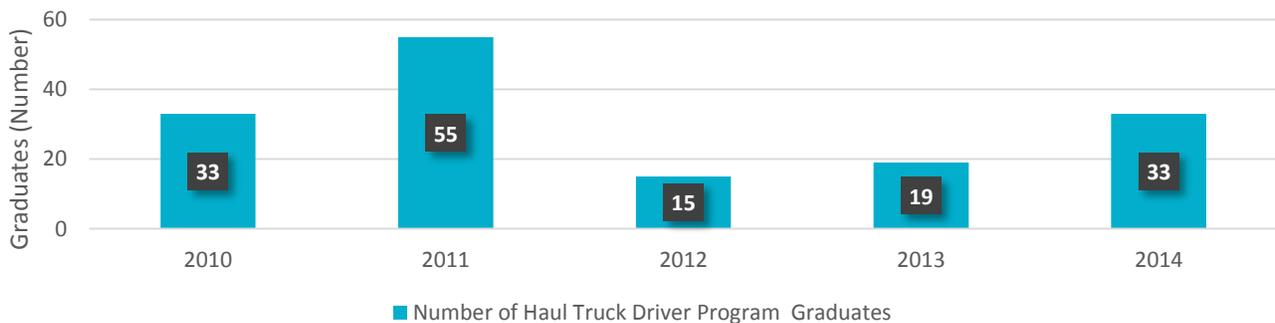
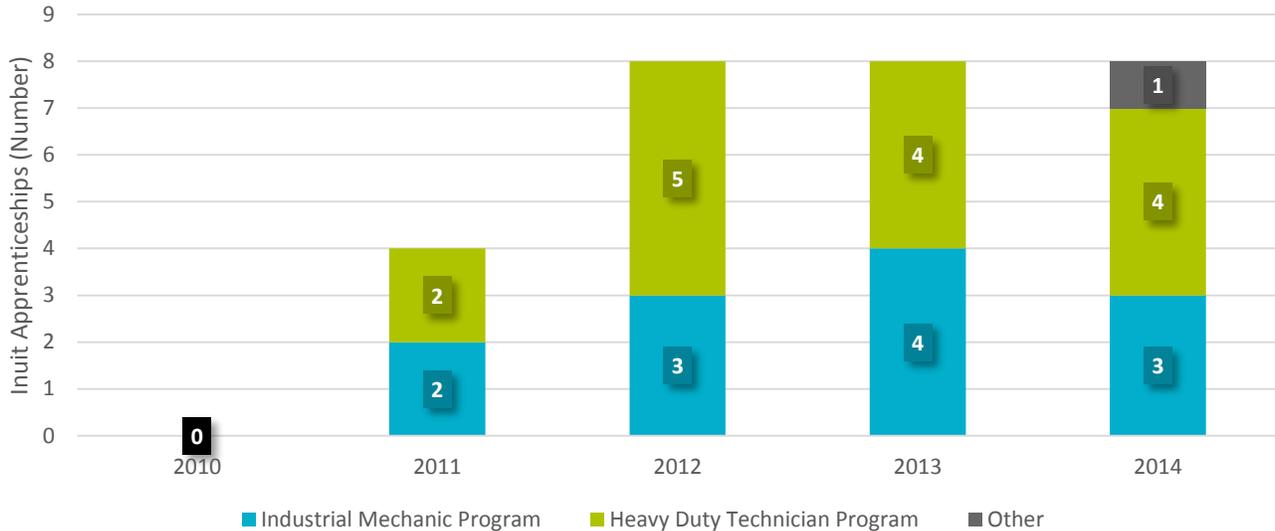


Chart 21 shows the number of Inuit employees in apprentice roles at Meadowbank, divided by the type of apprenticeship (industrial mechanic, heavy duty technician, or other).

**Chart 21: Apprenticeships for Inuit Employees, 2010 – 2014 (source: AEM)**



### 4.3.3 Interpretation

AEM’s financial investments in externally-delivered training programs have been steady at just under \$4M annually for the past three years, with the KMTS being the largest recipient. KMTS programs have delivered positive results in terms of Inuit participation, completion rates, and job placements.

The scope of, and participation in, in-house training and apprenticeship programs has been relatively consistent throughout the mine’s operation. Annual fluctuations in the number of specific training hours and haul truck driver program graduates largely reflect changing demand at Meadowbank for additional positions for which specific training is provided.

## 4.4 PERCENTAGE OF TOTAL POPULATION WITH TRADE CERTIFICATES

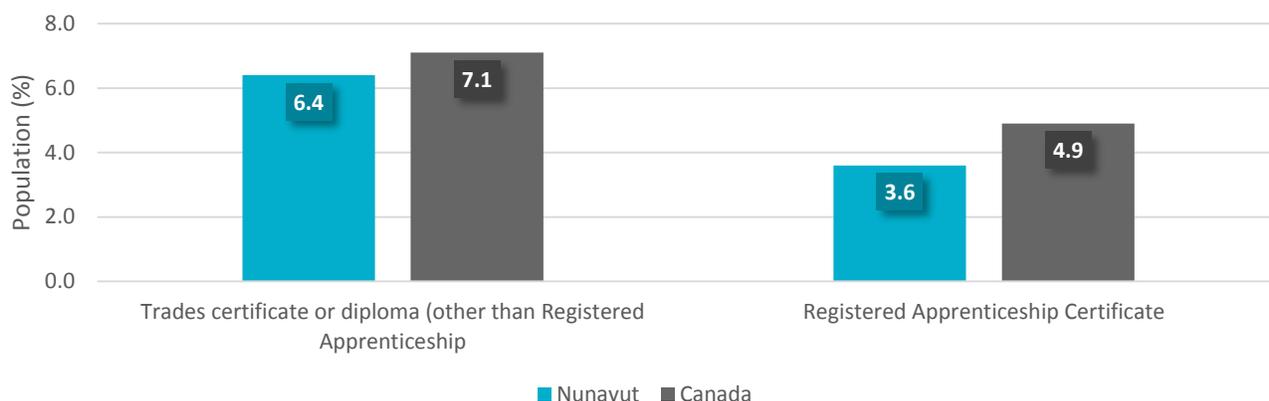
### 4.4.1 Predictions

There are no specific predictions made in the Meadowbank FEIS regarding the total population with trade certificates.

### 4.4.2 Data & Trends

Chart 22 provides an overview of the percentage of the population of both Canada and Nunavut who hold trade certificates or diplomas and registered apprenticeship certificates.

**Chart 22: Percentage of Total Population with Trade Certificates & Registered Apprenticeship Certificates in Nunavut and Canada, 2011**  
 (source: (Statistics Canada, 2011c))



#### 4.4.3 Interpretation

Agnico Eagle supports a number of programs that lead to recognized industry certificate programs – and which could have an effect the rates of trade certificates and registered apprenticeship certificates in the territory (e.g. the Arviat Drilling Program). Other programs, such as the Haul Truck Training, do not represent industry certificates, and as such, would not be reflected in changes to this metric. As only 2011 data is available, and with no regional or community breakdown, the potential impacts of incentives and supports offered by the mine cannot be assessed.

### 4.5 INUIT EMPLOYEES BY SKILL LEVEL

#### 4.5.1 Predictions

There are no specific predictions in the Cumberland FEIS regarding the skill level of Inuit employees at Meadowbank.

#### 4.5.2 Data & Trends

Chart 23 below provides an overview of the number of employees at each skill level between 2011 and 2014.

##### *Note on Methodology for Classification of Jobs by Skill Level*

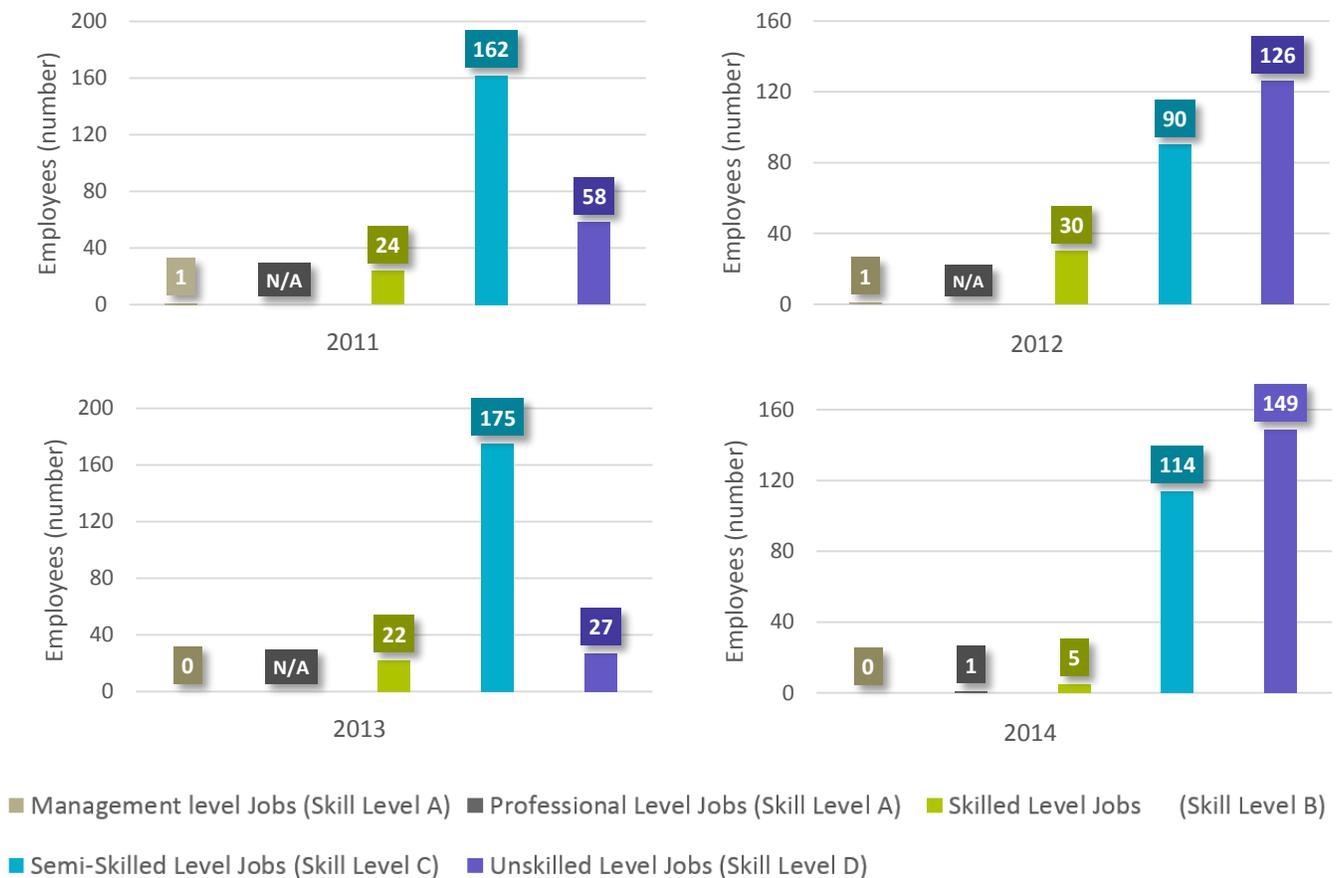
In 2011 and 2012 AEM used their own skills classification system to classify all jobs as either: Management, Skilled, Semi-Skilled or unskilled. In 2013, at the request of the GN, AEM began to employ a skills classification system based on National Occupations Classification System (NOC). The system was reviewed again in 2014, resulting in a new category called ‘Professional’, to better differentiate positions within recognized occupations and those requiring university education. These types of positions were previously included in the category ‘Skilled’.

In addition, as a result of these changes, some positions previously considered as ‘Skilled’ are now classified under the ‘Semi-Skilled’ category in order more accurately clarify levels of qualification. For example, heavy equipment operator positions – which do not require the same education level required of skilled trades positions such as electricians – were moved from the ‘Skilled’ category to the “Semi-Skilled’ category.

At the request of the GN, beginning in 2013, AEM began using a simple system for classification by level of qualification associated with the various positions held at Meadowbank. This system is informed by the National Occupations Classification System (NOC), although it was adapted to the needs of the mining site. Details relating to these codes are

provided in Appendix B. Due to these changes, year to year trends on Inuit employment skill level cannot be drawn from the existing data.

**Chart 23: Inuit Employment by Skill Level, 2011 – 2014 (source: AEM)**



### 4.5.3 Interpretation

In 2014, the vast majority of Inuit employees hold unskilled and semi-skilled jobs, with only 6 employees holding jobs classified as “skilled” or higher. While changes in the job classification scheme limit the ability to directly compare data from different years (see note on methodology in section 4.5.2), there are no indications in the data of increasing Inuit employment at “skilled” or higher job classifications despite individual success stories of Inuit employees advancing within the company as a result of training and education. It is possible that that promotion of Inuit workers at the mine could be offset by the turnover of Inuit employees at higher skills, but more data and analysis are required to understand causes and trends.

# VSEC 5: Culture and Traditional Lifestyle

## IMPACT / GOAL STATEMENT

Respect and support for Inuit culture and traditional lifestyle in the workplace and in communities

Three indicators are used to measure and understand Meadowbank's impact on culture and traditional lifestyle in the Kivalliq Region, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS culture and traditional lifestyle prediction:

**FEIS Prediction:** "There is potential for both negative and positive impacts, of any magnitude, on traditional ways of life, which could be of high significance. Any net impact, since it would be an impact of cultural change, would be long term and continue beyond the life of the project. The impact would be experienced primarily in Baker Lake." (Cumberland Resources Ltd., 2006, p. 123)

## INDICATORS

### 5.1. Country Food at Meadowbank

Metrics	Key Findings
<ul style="list-style-type: none"><li>Country food served at Meadowbank, 2010 - 2014</li></ul>	<ul style="list-style-type: none"><li>Approximately 4,500 meals featuring char or caribou have been served annually since 2011</li></ul>

### 5.2. Use of Traditional Language

Metrics	Key Findings
<ul style="list-style-type: none"><li>Proportion of total population identifying Inuktitut as the mother tongue, by Kivalliq community, 2006 and 2011</li><li>Meadowbank Inuit employees identifying Inuktitut as the mother tongue, 2014</li></ul>	<ul style="list-style-type: none"><li>In 2014, approximately 30% of Inuit employees at Meadowbank identified Inuktitut as their first language</li><li>Between 2006 and 2011 the proportion of the population identifying Inuktitut as the mother tongue has remained relatively stable in all Kivalliq communities with the exception of Rankin Inlet, where there was a 7% decline</li></ul>

### 5.3. Traditional Lifestyle

Metrics	Key Findings
<ul style="list-style-type: none"><li>Percentage of Nunavut Inuit Population 15 years of age and older partaking in traditional activities, 2006 and 2012</li></ul>	<ul style="list-style-type: none"><li>Statistical data, including regional and community-level data, on traditional activities in Nunavut is limited</li><li>In 2012 approximately 81% of Nunavut's Inuit Population partook in traditional activity (hunting, fishing, trapping, or gathering)</li></ul>

## EXISTING MANAGEMENT & MITIGATION

To encourage respect and support for Inuit culture at Meadowbank, AEM provides cross cultural training, access to traditional foods, and documentation and services in Inuktitut.

**Table 7: AEM Cultural and Traditional Lifestyle Management and Mitigation Initiatives**

Program	Purpose / Description / Outcomes
Cross Cultural Training Program	Implemented in 2010, the Cross Cultural Training Program was provided to numerous employees. It is a 5 hour in-class training course. This course allows employees from different cultures and background to understand each other's culture in order to improve understanding and communications at the workplace. The program was revisited with the assistance of the Nunavut Literacy Council in 2013 and a revised program was initiated in 2014. Throughout 2014, 304 employees received the training. Among them, 103 were Inuit employees, including 43 women and 60 men.
Access to Country Food at Meadowbank	As described in section 5.1 below, Meadowbank serves country food meals (i.e. char or caribou) as part of the standard menu served by the mine's kitchen. In addition, employees can bring their own country foods to the mine site and use a separate Inuit kitchen to prepare and share these foods, at no cost.
Inuktitut use at Meadowbank	Meadowbank makes efforts to facilitate the use of the Inuktitut language at the Meadowbank mine by providing the following documentation and services in Inuktitut: <ul style="list-style-type: none"> <li>• Policies, employee handbooks, and other human resource related documents</li> <li>• Online mandatory training materials that focus on health and safety</li> <li>• Key directional and safety signage posted in and around the mine site</li> <li>• Spousal counselling sessions delivered by Inuit speaking consultants/councilors</li> <li>• Bilingual human resource councilors</li> <li>• Bilingual employees based in communities (e.g. community affairs) that support recruitment, retention, and other communications</li> <li>• Religious events (services in Inuktitut held monthly or special events at site)</li> </ul> <p>Note that the <i>Nunavut Mine Act</i> requires, for safety reasons, that all communications during operating hours use English as the common language.</p>

### 5.1 COUNTRY FOOD AT MEADOWBANK

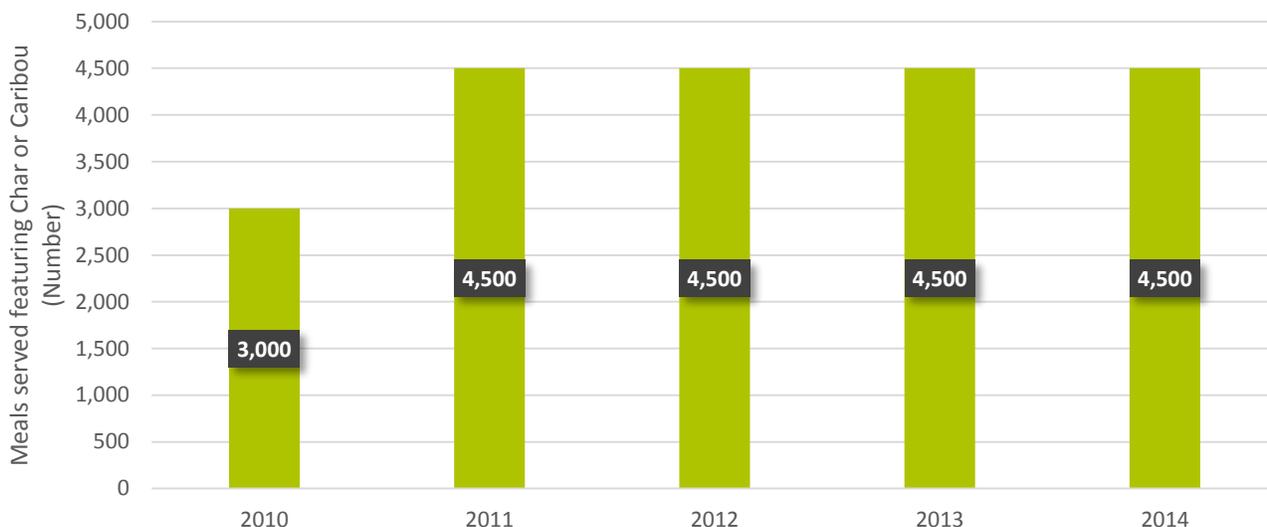
#### 5.1.1 Predictions

There are no predictions in the Meadowbank FEIS specifically related to impacts on the consumption of country foods.

#### 5.1.2 Data & Trends

The following chart provides an overview of the country food use (defined as meals including char, muskox and caribou) at Meadowbank since the mine began operating in 2010. This data represents meals served as part of a standard menu offered by the mine's kitchen. In addition to this, employees can bring their own country foods to the mine site at no cost and use the kitchen to prepare and share these foods – though no data is recorded on use of this option.

**Chart 24: Country Food Served at Meadowbank, 2010 - 2014 (source: AEM)**



### 5.1.3 Interpretation

The number of meals served featuring char or caribou (country food) has remained steady since 2011; the total number of Inuit employees at Meadowbank has also remained relatively steady since it began production in 2010. This number represents one serving of country food per month to all present staff (approximately 375). No data or information was available on baseline levels of country food consumption for Inuit workers prior to employment, nor on consumption of country food while off rotation.

## 5.2 USE OF TRADITIONAL LANGUAGE

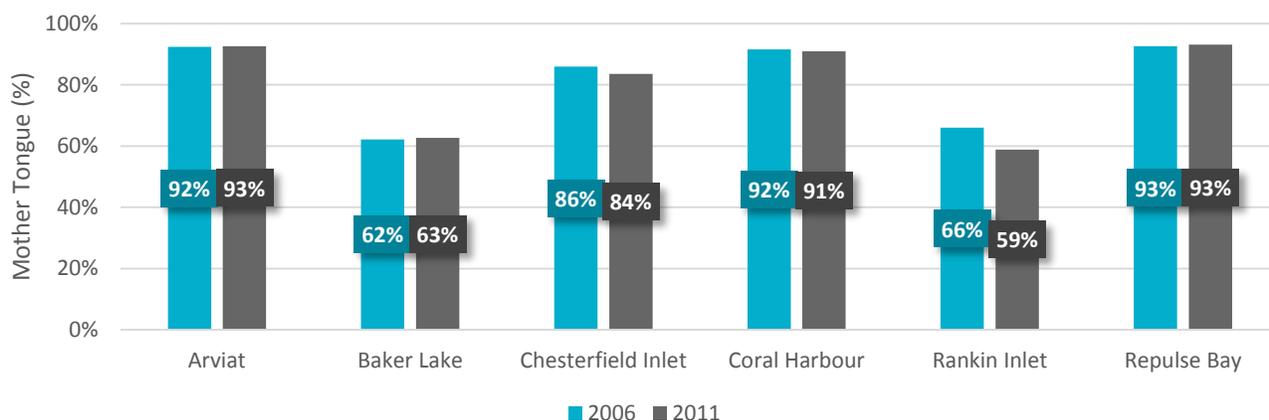
### 5.2.1 Predictions

There are no predictions in the Meadowbank FEIS specifically related to impacts on the use of traditional language in Kivalliq.

### 5.2.2 Data & Trends

Chart 25 shows the proportion of the total community population that identifies Inuktitut as their Mother Tongue, by Kivalliq community.

**Chart 25: Proportion of total population identifying Inuktitut as the mother tongue, by Kivalliq community, 2006 and 2011 (source: (Statistics Canada, 2011a))**



In 2014, AEM conducted a survey of its Inuit employees to determine the number of employees who identify Inuktitut as their first language. Among 269 Inuit employees, 81 (30%) identified Inuktitut as their mother tongue.

### 5.2.3 Interpretation

Chart 25 demonstrates that the proportion of the population identifying Inuktitut as the mother tongue has remained relatively stable in all Kivalliq communities from 2006 to 2011 with the exception of Rankin Inlet, where there was a 7% decline. While the mine offers some services and documentation in Inuktitut, it must also enforce the use of English as the standard language for communication in the workplace for safety reasons.

## 5.3 TRADITIONAL LIFESTYLE

### 5.3.1 Predictions

The Meadowbank FEIS makes the following prediction:

- “The project will not significantly restrict access to or productivity of lands used for traditional activity.” (Cumberland Resources Ltd., 2006, p. 122)

### 5.3.2 Data & Trends

Table 8 provides an indication of the proportion of the Nunavut Inuit population that participates in traditional activities such as hunting, fishing, gathering and trapping. Note that Statistics Canada moved from use of disaggregated data to a composite metric in 2012, preventing direct comparison over time.

**Table 8: Percentage of Nunavut Inuit population 15 years of age and older partaking in traditional activities, 2006 and 2012 (sources: (Statistics Canada, 2011b; Wallace, 2014))**

Traditional Activity	2006	2012
Hunted in the past 12 months	72%	--
Fished in the past 12 months	76%	--
Gathered wild plants (berries, sweet grass, etc.) in the past 12 months	79%	--
Trapped in the past 12 months	30%	--
Hunted, fished, trapped or gathered in previous 12 months	--	81%

### **5.3.3 Interpretation**

Environmental information pertaining to potential impacts of the mine on the productivity of lands used for traditional activities is not addressed in this report. This indicator only addresses the degree to which Inuit still engage in traditional activity.

Since the 2012 data only includes a composite metric (hunted, fished, trapped, or gathered), no conclusions can be drawn regarding changes in individual activities (including any that relate to changes in lifestyle associated with employment at Meadowbank).

# VSEC 6: Migration

## IMPACT / GOAL STATEMENT

Understand what changes are occurring in Kivalliq migration, if any.

Two indicators are used to measure and understand Meadowbank's impact on migration in the Kivalliq Region, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS migration prediction:

**FEIS prediction:** "The potential impacts of migration are complex, and are likely to have both positive and negative components, but of low magnitude. Any effects of migration are long term but are likely to be low significance. It is not likely that migration to any other community than Baker Lake would be significant." (Cumberland Resources Ltd., 2006, p. 126)

## INDICATORS

### 6.1. Inuit Employees That Have Moved to Southern Provinces

Metrics	Key Findings
<ul style="list-style-type: none"><li>Number and Rate of Inuit Workforce Who Have Moved to Southern Provinces, 2010 – 2014</li></ul>	<ul style="list-style-type: none"><li>There has been a gradual increase in the number of Inuit workers moving to southern provinces, from 7 in 2011 to 12 in 2014 (or &lt;5% of Inuit workforce)</li></ul>

### 6.2. Population Estimates in Kivalliq Communities

Metrics	Key Findings
<ul style="list-style-type: none"><li>Population Estimates of Kivalliq Communities, 15 years of age and older, 2006 – 2014</li><li>Annual Percentage Change in Population Estimates of Kivalliq Communities 15 years of age and older, 2007 - 2014</li></ul>	<ul style="list-style-type: none"><li>Population estimates do not indicate an increase in the population growth rate of Baker Lake or other communities with significant Meadowbank employment (Arviat, Rankin Inlet) since the mine opened, or relative to other communities in the region. If other factors (births and deaths) are assumed constant, the population data does not suggest significant migration induced by Meadowbank.</li></ul>

## EXISTING MANAGEMENT & MITIGATION

No specific programs are in place to manage or mitigate migration in the Kivalliq region.

### 6.1 INUIT EMPLOYEES THAT HAVE MOVED TO SOUTHERN PROVINCES

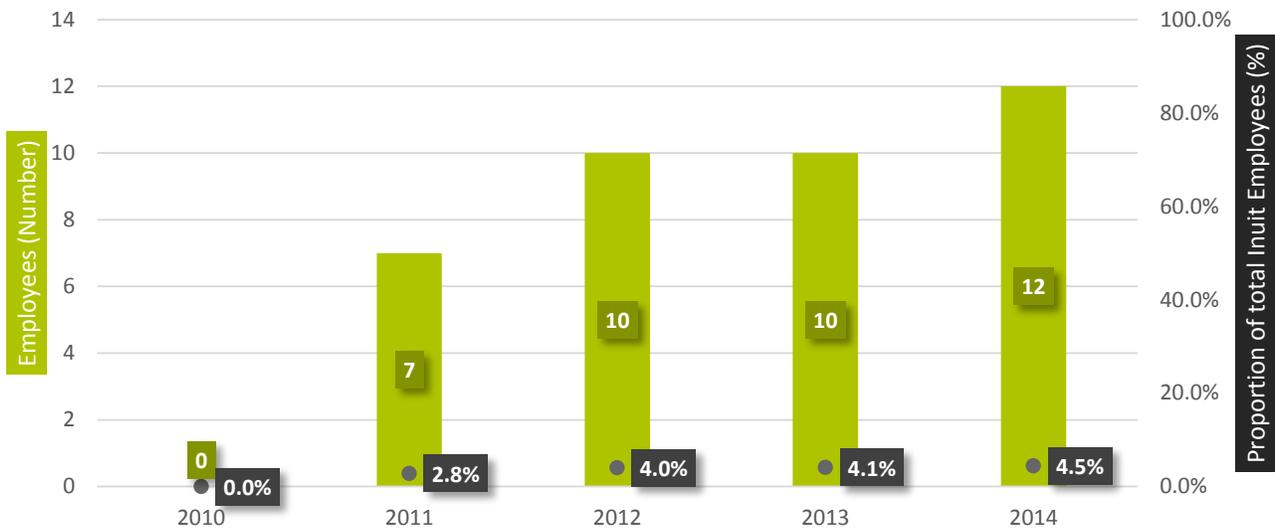
#### 6.1.1 Predictions

The Meadowbank FEIS makes no specific predictions regarding Inuit employees moving to southern provinces.

#### 6.1.2 Data & Trends

Chart 26 presents the number and proportion of Inuit workers at Meadowbank that have moved to southern provinces following employment at Meadowbank.

**Chart 26: Number and Rate of Inuit Workforce Who Have Moved to Southern Provinces, 2010 – 2014 (source: AEM)**



### 6.1.3 Interpretation

There has been a gradual increase in the number of Inuit workers moving to southern provinces, from 7 in 2011 to 12 in 2014. However, since 2012 this number has remained between 4 and 4.5% of the Inuit workforce. Other migration data (e.g. Inuit workforce moving to/from Baker Lake following employment) is not available. Employment at Meadowbank provides Inuit workers with income and skills that may facilitate moving out of the territory. Other factors unrelated to the mine, such as the housing shortage in Nunavut and improved educational and job opportunities in the provinces, may also contribute to migration south.

## 6.2 POPULATION ESTIMATES IN KIVALLIQ COMMUNITIES

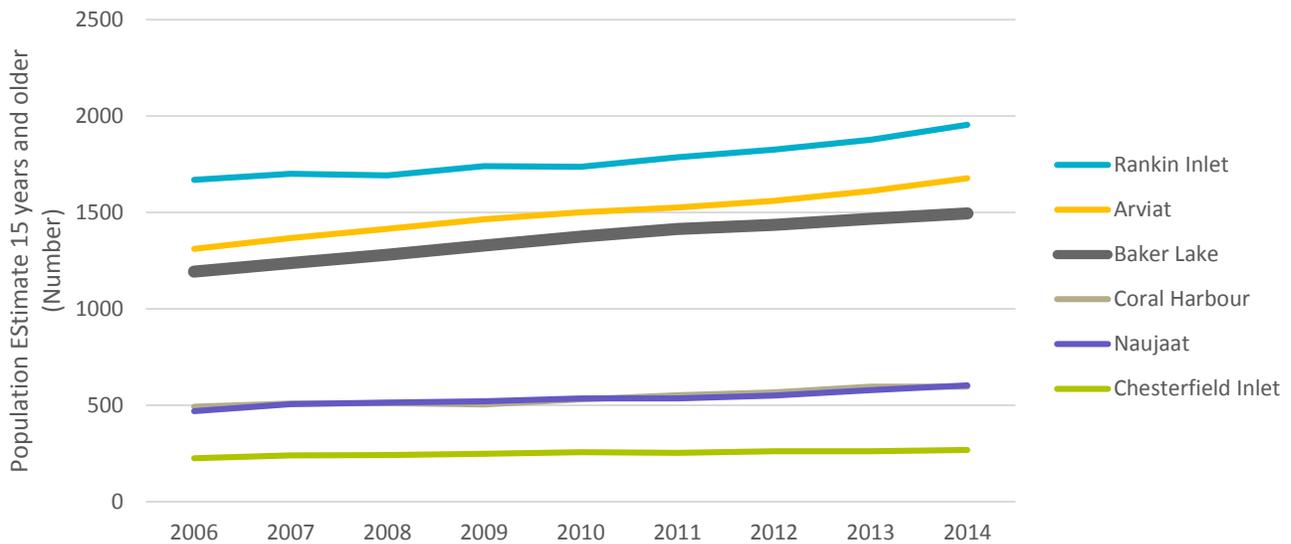
### 6.2.1 Predictions

The Meadowbank FEIS states that “it is not likely that migration to any other community than Baker Lake would be significant”, but does not provide any specific predictions on changes to populations in Kivalliq communities.

### 6.2.2 Data & Trends

Chart 27 presents the population estimates for residents of Kivalliq communities 15 years of age and older. Table 9 presents the year over year percentage change in the population (15 years and older) of Kivalliq communities between 2007 and 2014.

**Chart 27: Population estimates of Kivalliq communities, 15 years of age and older, 2006 – 2014 (source: (Nunavut Bureau of Statistics, 2014))**



**Table 9: Annual Percentage Change in Population Estimates of Kivalliq Communities 15 years of age and older, 2007 - 2014 (source: (Nunavut Bureau of Statistics, 2014))**

Community	2007	2008	2009	2010	2011	2012	2013	2014
Arviat	4%	4%	3%	3%	2%	2%	3%	4%
Baker Lake	4%	4%	4%	3%	3%	2%	2%	2%
Chesterfield Inlet	7%	1%	3%	3%	-1%	3%	0%	3%
Coral Harbour	4%	0%	-1%	5%	4%	3%	5%	0%
Rankin Inlet	2%	-1%	3%	0%	3%	2%	3%	4%
Naujaat	8%	2%	1%	3%	0%	3%	5%	4%

### 6.2.3 Interpretation

Population change results from the interaction of three variables: births, deaths, and migration. Migration can be for economic or other reasons. The populations of all Kivalliq communities have increased at a relatively steady rate since 2006 (with the exception of some years of zero or slightly negative growth in some communities). The data do not indicate an increase in the population growth rate of Baker Lake or in other communities with significant Meadowbank employment (Arviat, Rankin Inlet) since the mine opened, or relative to other communities in the region. If other factors are assumed constant, the population data does not indicate any significant migration to Baker Lake (or other communities with high Meadowbank employment). At this time, both population data and Agnico Eagle’s data on employees moving to southern provinces are not inconsistent with the FEIS prediction that any effects of migration are long term but are likely to be low significance.

# VSEC 7: Individual and Community Wellness

## IMPACT / GOAL STATEMENT

Wellness in terms of health, housing security, criminality/violence, financial security, in the workplace and in communities

*Three indicators are used to measure and understand Meadowbank’s impact on individual and community wellness in the Kivalliq Region, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS individual and community wellness prediction:*

**FEIS prediction:** “Potential impacts on individual and community wellness are complex, far reaching, and given human nature, difficult to predict with certainty. Individual and community wellness is intimately associated with potential impacts on traditional ways of life as discussed above. In addition, however, individual decisions on the use of increased income, household management in relation to rotational employment, migration, public health and safety, disturbance particularly during the construction phase, and Cumberland’s support for community initiatives are being negotiated in the IIBA are [sic] the other drivers that have the potential to effect individual and community wellness.” (Cumberland Resources Ltd., 2006, p. 123)

The indicators presented under this VSEC represent a subset of the many indicators that could be used to characterize individual and community wellness. Data availability was a factor in not including certain indicators. Indicators presented elsewhere in this report under VSECs such as employment, worker health and safety, and traditional lifestyle are also relevant to individual and community wellness.

## INDICATORS

### 7.1. Counselling Programs and Usage at Meadowbank

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Family counselling programs offered, 2010 – 2014</li> <li>Number of employees/families accessing family counselling programs, 2011 - 2014</li> </ul>	<ul style="list-style-type: none"> <li>Inadequate data to assess program usage and trends</li> </ul>

### 7.2. Criminal Violations

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Criminal violations per hundred people by Kivalliq community, 2006 - 2013</li> <li>Baker Lake criminal violations per hundred people by type, 2006 – 2013</li> <li>Change in Baker Lake Criminal Violations against 2006-2009 average baseline, 2010 - 2013</li> </ul>	<ul style="list-style-type: none"> <li>Among Kivalliq communities, Baker Lake has seen the highest increases in the rate of criminal violations (total violations per hundred people) since Meadowbank began production. Rates of mischief, disturbing the peace, harassment and threats, impaired driving, and drug violations more than doubled or tripled. A decrease in Baker Lake total criminal violations was observed in 2013, but levels remain significantly above the 2006-2009 baseline.</li> </ul>

### 7.3. Housing

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Persons aged 15 years and over who are on a waiting list for public housing, 2010</li> </ul>	<ul style="list-style-type: none"> <li>Inadequate data to assess change in demand for public housing over time or between communities</li> </ul>

#### 7.4. Suicide

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Inuit Suicide Rates by Community 2006 – 2014</li> </ul>	<ul style="list-style-type: none"> <li>Due to the persistent and territory-wide nature of this crisis, it is difficult to assess impacts of Meadowbank on suicide rates. Community suicide rates (e.g. for Baker Lake) are highly variable from year to year. Trends are more apparent in long-term and/or regional data.</li> </ul>

## EXISTING MANAGEMENT & MITIGATION

A number of programs are in place to encourage individual and community wellness in the Kivalliq region, such as site tours for Kivalliq residents, community liaisons, and counselling programs, as outlined in Table 10 below.

**Table 10: AEM Individual and Community Wellness Management and Mitigation Initiatives**

Program	Purpose / Description / Outcomes
Baker Lake Wellness Report & Implementation Plan	<p>In the Meadowbank IIBA, AEM has committed to prepare for the KIA an annual report on the wellness of the Inuit residents of Baker Lake. The KIA has agreed that the report will be community based and driven. The Hamlet of Baker Lake was directing the wellness report with support from the University of Guelph.</p> <p>For the purpose of developing Hamlet wellness indicators that are meaningful to Baker Lake residents, qualitative community-based research was conducted to capture how Baker Lake residents define and perceive their Hamlet's wellness.</p>
Community Coordinators Program	<p>During 2014, Agnico sponsored part time AEM Coordinators within the Hamlets of Chesterfield Inlet and Arviat. AEM's offices in the communities of Rankin Inlet and Baker Lake already have resources to provide for community relations. A roving AEM coordinator makes regular visits to other Kivalliq communities.</p> <p>The objectives of the community based AEM coordinators are to provide a point of contact in each community to facilitate communications, provide services, and coordinate activities in the following areas:</p> <ul style="list-style-type: none"> <li>Provide support to the HR Department               <ul style="list-style-type: none"> <li>Assist HR and other AEM departments to contact employees as required</li> <li>Contact employees in advance of their shift departure times</li> <li>Pick up employees from their residence and take them to the airport on shift departure days</li> </ul> </li> <li>Provide advice and assistance to AEM to organize and hold community information sessions on AEM projects and initiatives</li> <li>Provide advice and assistance on the design, development and implementation of community based projects (training, AEM employee well-being and community development initiatives)</li> <li>Provide updates to the Hamlet Council on AEM activities</li> <li>Distribute AEM information and promotional materials</li> </ul>
Community Liaison Committee	<p>AEM continued to host meetings with the Meadowbank Community Liaison Committee in 2014 to discuss issues of concern or interest. The committee consists of various representatives including the Elders Society, youth, the business community, adult education committee, the Hamlet, Nunavut Arctic College and the Hunters and Trappers Organization of Baker Lake. Meetings are held in both English and Inuktitut and meetings are held about every two months. The Committee brings insight on issues and provides advice to Management on solutions.</p>
Site Tours for Baker Lake Residents	<p>AEM offers tours of the Meadowbank Project site to all residents of Baker Lake throughout the summer months. This program started in 2008 with tours being offered to all elders. It was subsequently extended to youth groups and then to all residents of Baker Lake. People sign up at the AEM Baker Lake office for tours of the site typically offered on a Saturday or Sunday. The tour participants are bused from Baker Lake to the mine, have a tour of the Mine, are served a meal in the camp where they can talk with other residents and see for themselves working and</p>

	living conditions before returning to Baker Lake. It has now become a tradition and will be once again offered to Baker Lake residents next summer. Over 150 residents participated in the site tours during 2014.
Counselling Programs	AEM offers a number of counselling programs for Meadowbank employees and their families. These programs are described in further detail in section 7.1.

## 7.1 COUNSELLING PROGRAMS AND USAGE AT MEADOWBANK

### 7.1.1 Predictions

There are no predictions in the Meadowbank FEIS regarding counselling programs and usage at Meadowbank.

### 7.1.2 Data & Trends

Table 11 provides an overview of the counselling programs offered at Meadowbank from 2010 to 2014.

**Table 11: Family Counselling Programs Offered, 2010 – 2014 (source: AEM)**

Program	Description	Years
Family Employee Assistance Program	External program via Family Employee Assistance Program (Homewood Health). Homewood Health offers a suite of mental health and addition services including organizational wellness, employee and family assistance programs, assessments, outpatient and inpatient treatment, recovery management, return to work and family support services.	2011 – 2014
Doctor Visitation Program	Support provided by visiting doctors <sup>2</sup> and on-site registered nurses	2010 – 2014
Onsite Councilors Program	Inuit employee councilors on site to provide first line support on coping with employment	2011 – 2014
Elder Visitation Program	Monthly visiting Elders program to provide Inuit employees with advice and guidance that is steeped in Inuit cultural values and encourages employees to choose balanced, healthy and productive lifestyles	2012 – 2014
Family Network Program	AEM is a partner and investor in the Kivalliq Mine Training Society (KMTS). The KMTS has established a community based Family Network program. The program is intended to assist the families of current and potential employees to become more prepared about the expectations and realities involved of having a family member employed at Agnico	2013 – 2014
Make it Work Program	In 2014, with support from the KMTS, AEM introduced a FIFO (fly in-fly out) program for the spouses of employees to come to Meadowbank to experience what mining life was like at site. The FIFO program includes spousal counselling sessions on effective communications, financial management, conflict resolutions and healthy living	2014

Table 12 indicates the number of Meadowbank employees and/or families accessing the AEM family counselling programs described in Table 11 above. Program usage is only measured for three of the six programs.

<sup>2</sup> Doctors began visiting Meadowbank in 2012.

**Table 12: Number of Employees/Families Accessing Family Counselling Programs, 2011 – 2014 (source: AEM)**

Family Counselling Program	2011	2012	2013	2014
Family Employee Assistance Program	2	2	3	6
Elder Visitation Program	N/A*	12	12	8
Make it Work Program	N/A*	N/A	N/A	24

\* N/A indicates programs not having been in operation in respective year.

### 7.1.3 Interpretation

It is difficult to assess participation in counselling programs at Meadowbank, as privacy concerns limit the ability to track or publicize this information. Where data are and can be collected, all counselling programs have seen some usage by their intended audience. Over the long term, it may be possible to identify a correlation between usage of counselling programs and positive changes in other indicators (e.g. decrease criminal violations, decrease in turnover).

## 7.2 CRIMINAL VIOLATIONS

### 7.2.1 Predictions

There are no specific predictions in the Meadowbank FEIS regarding criminality in the Kivalliq region.

### 7.2.2 Data & Trends

Chart 28 shows the criminal violations rate (number of violations per 100 people) for each community in the Kivalliq region.

**Chart 28: Criminal Violations per Hundred People, by Kivalliq Community, 2006 – 2013 (sources: (Statistics Canada, 2014; Nunavut Bureau of Statistics, 2014))**

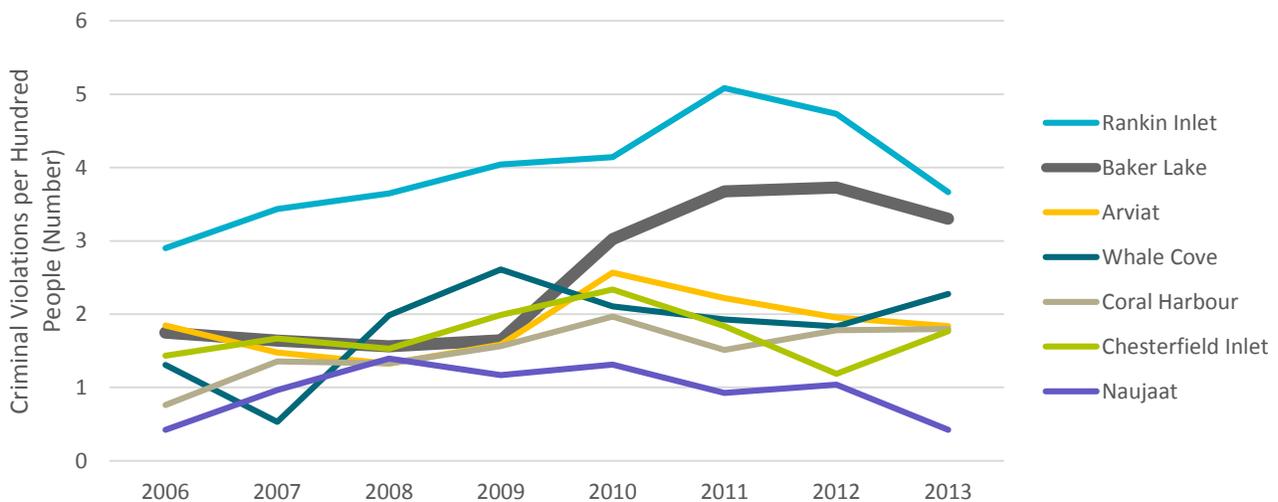


Chart 29 shows the criminal violations rate by type for Baker Lake.

**Chart 29: Baker Lake Criminal Violations per Hundred People by Type, 2006 – 2013 (sources: (Statistics Canada, 2014; Nunavut Bureau of Statistics, 2014))**

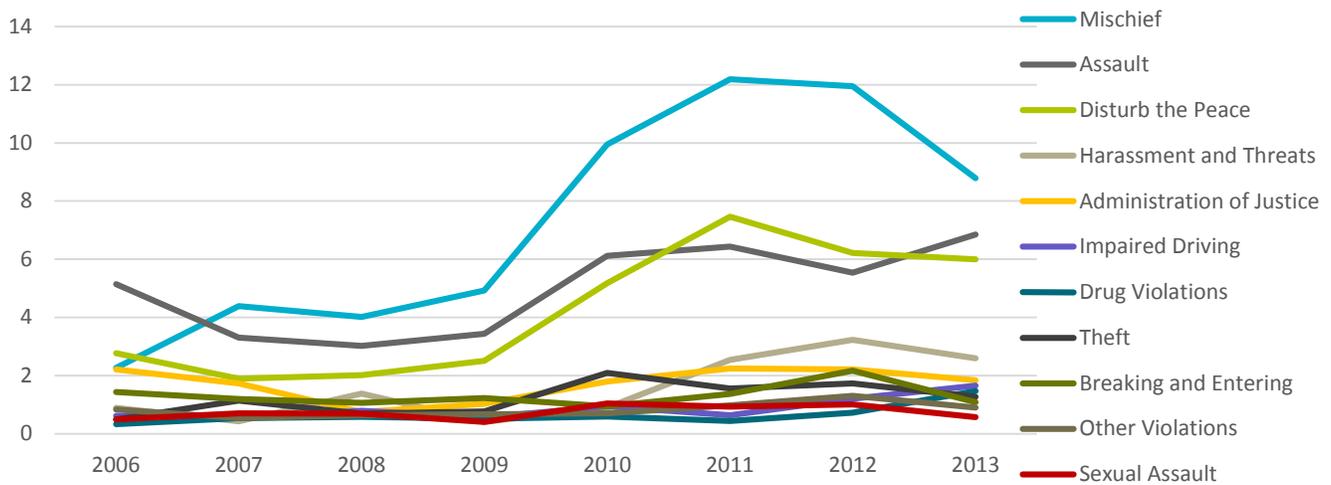


Table 13 shows the change (%) in the number of criminal violations in Baker Lake relative to a baseline derived from the average number of violations between 2006 and 2009.

**Table 13: Change in Baker Lake Criminal Violations against 2006-2009 baseline, 2010 – 2013 (source: (Statistics Canada, 2014))**

Baker Lake Criminal Violations	2010	2011	2012	2013
Mischief	155%	213%	206%	125%
Assault	64%	73%	49%	84%
Disturb the Peace	125%	225%	171%	161%
Harassment and Threats	15%	227%	316%	235%
Administration of Justice	25%	57%	55%	29%
Impaired Driving	51%	1%	92%	164%
Drug Violations	21%	-11%	47%	198%
Theft	170%	102%	124%	65%
Breaking and Entering	-23%	11%	76%	-12%
Other Violations	4%	46%	95%	34%
Sexual Assault	82%	61%	76%	-1%

### 7.2.3 Interpretation

With the exception of Rankin Inlet, all communities had 2 or fewer total criminal violations per hundred people in the 2006 - 2009 period (baseline). Baker Lake, Rankin Inlet, and Arviat all experienced significant increases in total criminal violations rates since the Meadowbank mine began production.

After 2010, the total criminal violations rate in Arviat has steadily decreased and has returned to approximately 2006-levels in 2013. Total criminal violation rates in Baker Lake and Rankin Inlet reached historic high levels of approximately 3.5 and 5 per 100 people, respectively, in 2011 and 2012. Recent data (2013) may signal the beginning of a downward trend in criminal violations in Baker Lake, but the rate remains above the 2006-2009 baseline and above those for other Kivalliq communities (except Rankin Inlet).

In Baker Lake, rates of mischief, disturbing the peace, and theft more than doubled or tripled in the years since the mine began production (2010 – 2012). The rates of more serious crimes including assault and sexual assault also increased significantly (by 49% - 82%) during this same period. With the exception of assault, impaired driving, and drug violations, there was a decrease in all types of violations in Baker Lake in 2013, consistent with the decrease in the rate of total criminal violations.

Additional expendable income can lead to alcohol and drug abuse and intensify existing social problems such as violence and a high percentage of police call-outs are believed to be related to alcohol (Buell, 2006).

## 7.3 HOUSING

### 7.3.1 Predictions

There are no predictions in the Meadowbank FEIS regarding housing in the Kivalliq region.

### 7.3.2 Data & Trends

Table 14 shows the number of citizens in the Kivalliq region who were on a waiting list for public housing in 2010, by community. No data are available for more recent years to show if and how waiting lists have changed.

**Table 14: Persons aged 15 years and over who are on a waiting list for public housing, 2010 (source: (Nunavut Bureau of Statistics and Statistics Canada, 2010))**

Community / Region	Number	% total population
<b>Kivalliq Region</b>	<b>1120</b>	<b>19%</b>
Arviat	210	16%
Baker Lake	300	22%
Chesterfield Inlet	40	17%
Coral Harbour	120	25%
Rankin Inlet	270	15%
Naujaat	120	25%
Whale Cove	60	27%

Additional data related to public housing, including data on overcrowding, are expected to be made available by the Nunavut Housing Corporation in future years and will be included in future reports.

### 7.3.3 Interpretation

The high percentage of people waiting for public housing (15% - 27%) across Kivalliq communities demonstrates the region-wide housing shortage. While Baker Lake had one of the highest percentages of people on the waiting list in 2010, other communities with fewer Meadowbank employees, including Naujaat and Whale Cove, had similar rates. Additional data on changes over time will be required to assess the potential impact that Meadowbank may have on demand for and availability of public housing.

## 7.4 SUICIDE

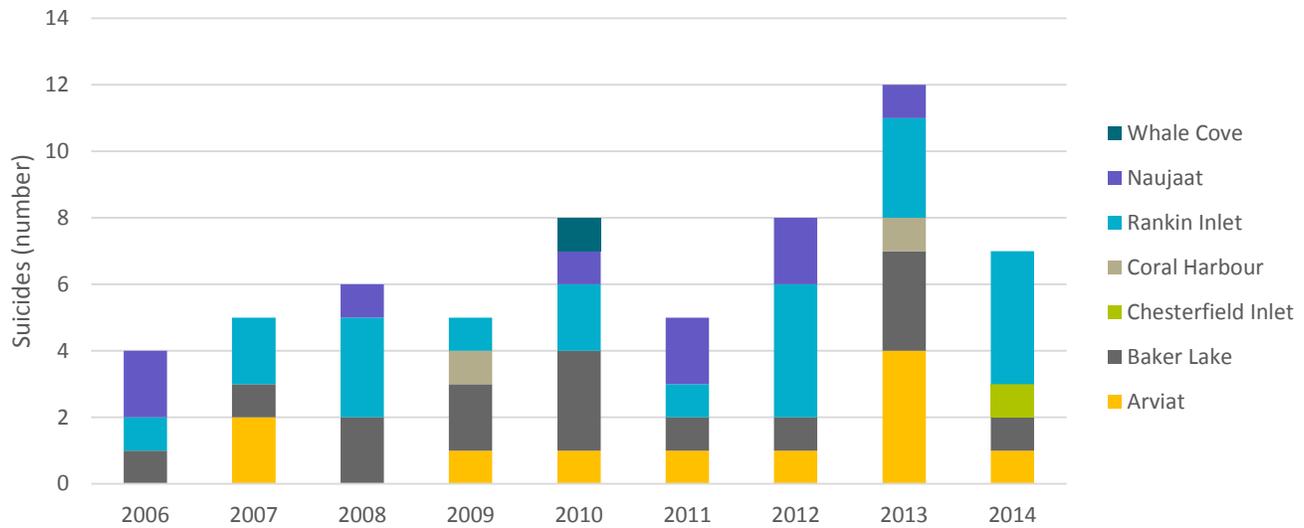
### 7.4.1 Predictions

There are no specific predictions in the Meadowbank FEIS regarding suicide in the Kivalliq region.

### 7.4.2 Data & Trends

The chart below shows the number of suicides rates by community 2006 and 2014.

**Chart 30: Inuit Suicides by Kivalliq Community, 2006 – 2014 (source: (Hicks, 2015))**



### 7.4.3 Interpretation

The suicide rate in Nunavut is at crisis levels – 13 times higher than in the rest of Canada. Underlying risk factors are numerous and long-standing and range from the effects of historical trauma and its symptoms to the high rates of child sexual abuse, alcohol and drug use, poverty, high school dropout rates, and the cultural losses brought about by residential schools and forced relocations. Due to the persistent and territory-wide nature of this crisis, it is difficult to assess the impacts of the mine on suicide rates in Kivalliq communities (Eggerston, 2015).

Furthermore, given the small populations of Kivalliq communities and the highly variable numbers of suicides observed in each community (0 – 4 suicides / community / year), trends are difficult to discern. For example, there were 3 suicides in Baker Lake in 2010 and 2013, and 1 suicide each year in 2011, 2012, and 2014. These numbers do not point to a particular trend since the mine began production.

# VSEC 8: Worker Health and Safety

## IMPACT / GOAL STATEMENT

Strong health and safety culture. Zero workplace incidents.

*Two indicators are used to measure and understand health and safety, particularly occupational health and safety, at Meadowbank, including progress towards meeting the impact / goal statement outlined above:*

*The FEIS considers both the health and safety of workers and the public and recognizes the one may affect the other. "Health and safety of workers and the population at large is subject to legislation and perhaps more importantly to best practices. Health and safety training also has applications in personal life – workers often not only use new health and safety training on-the-job, but also at home in the course of daily tasks".*

## INDICATORS

### 8.1. Health and Safety Training

Metrics	Key Findings
<ul style="list-style-type: none"><li>Health and safety training hours for AEM Meadowbank employees, 2014</li></ul>	<ul style="list-style-type: none"><li>Insufficient data to assess scope and quantity of health and safety training over time</li></ul>

### 8.2. Health and Safety On-site

Metrics	Key Findings
<ul style="list-style-type: none"><li>Combined Lost-time and Light Duty Accident Frequency (200,000 person hours), 2010 – 2014</li><li>Number of visits by employees to AEM clinic, 2010 – 2014</li></ul>	<ul style="list-style-type: none"><li>Lost-time and light duty accident frequency has decreased significantly and consistently since 2011, as have visits to the AEM clinic for work-related injuries</li><li>Since the vast majority of visits to the AEM clinic (ranging from 2600 to 3900 per year) are for non-work-related conditions, it appears the clinic serves an important function in addressing the health/medical needs of workers.</li><li>Currently, none of the data collected permit an assessment of the impacts of the mine and its programs on health and safety practices workers and their families at home.</li></ul>

## EXISTING MANAGEMENT AND MITIGATION

A number of training programs are in place to support a strong health and safety culture and minimize health and safety incidents at Meadowbank, as outlined in Table 15 below.

**Table 15: AEM Health and Safety Management and Mitigation Initiatives**

Program	Purpose / Description / Outcomes
Emergency Response Team (ERT) Training	Meadowbank employs an Emergency Response Team (ERT) to assist and help in any type of situation. To join the team, a possible member must show signs of interest towards safety, prove good attendance and behavior at work and also be in good physical condition. An ERT practice takes place weekly and each member must attend at least six (6) practices throughout the year. In 2014, there were a total of 53 ERT members. Among them, five (5) were Inuit (3 Men, 2 Women). Throughout the year, they were trained on first aid, firefighting, extraction, search & rescue, rope rappelling, etc. This training includes practical aspects as well written exams.
JOH&S Committee Training	Members of the Meadowbank Joint Occupational Health and Safety (JOH&S) committee received training in order to improve their skills related to the management of Health & Safety. The training covered various topics including: Roles & Responsibilities of the JOH&S committee, interpretation of the Mines Act & Regulations, conducting inspections, conducting accident/incident investigations due diligence, part of the Criminal code and Supervision Formula training as well as a coaching phase. During 2014, a total of six Inuit employees received training related and participated in the JOH&S committee.
Employee Health & Safety Training	General health and safety training, as required by the <i>Nunavut Mine Act</i> , and in line with AEM's Health and Safety policies, is provided in English, French and Inuktitut prior to employee's arrival on site. Further information is provided in section 8.1

### 8.1 HEALTH AND SAFETY TRAINING

#### 8.1.1 Predictions

There are no predictions in the Meadowbank FEIS regarding health and safety training at Meadowbank.

#### 8.1.2 Data & Trends

Table 17 identifies the number of health and safety training hours that AEM Meadowbank employees completed in 2014. Health and Safety training includes mandatory training related to compliance with the *Nunavut Mine Act*, as well as training required within AEM's Health and Safety policies and management system. Many of these training sessions are offered via e-learning (available in English, French and Inuktitut) prior to employee's arrival on site. Health and safety training hours will be tracked in greater detail in the future through a newly implemented Training Management System at Meadowbank.

**Table 16: Health and Safety Training Hours for AEM Meadowbank Employees, 2014 (source: AEM)**

Employee Type	2014
Inuit Employees	1,522
Non-Inuit Employees	7,756
Total	9,278

#### 8.1.3 Interpretation

Delivery of health and safety training improves health and safety in the workplace and at home. No trends can be identified as only one year of training hours data is available. As more information becomes available for future reports, trends in training data can be compared with trends in health and safety outcomes (e.g. lost-time and light duty accident frequency).

## 8.2 HEALTH AND SAFETY ON-SITE

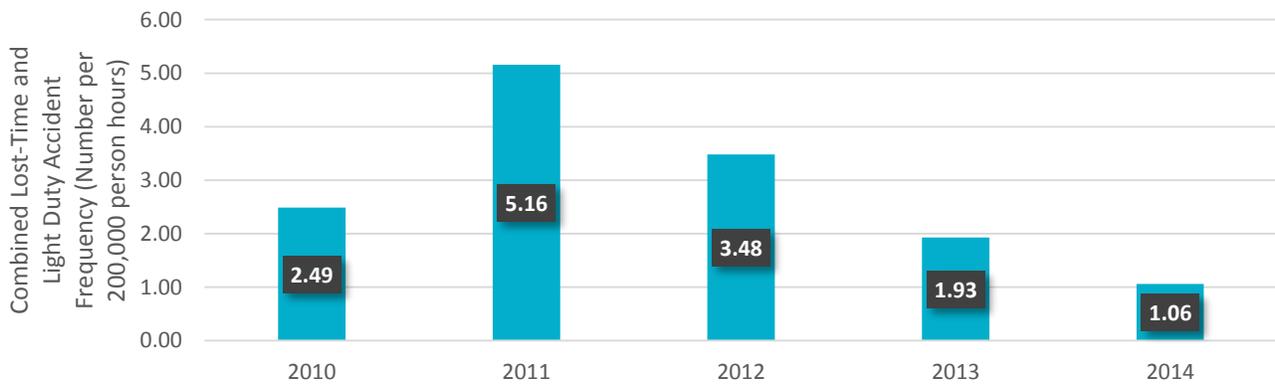
### 8.2.1 Predictions

There are no predictions in the Meadowbank FEIS regarding health and safety on-site at Meadowbank.

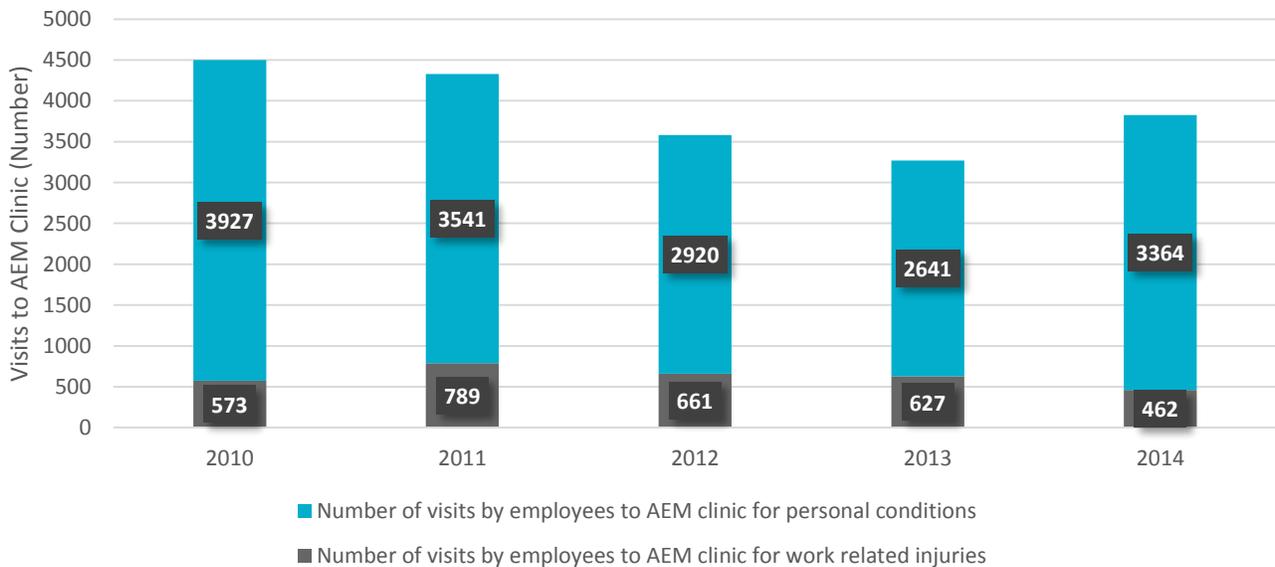
### 8.2.2 Data & Trends

The following charts provide an overview of the health and safety statistics for Meadowbank. Chart 31 provides the combined lost-time and light duty accident frequency on site, per 200,000 person-hours. Chart 32 shows the total number of visits by employees to the AEM clinic, categorized as either work-related injuries or personal conditions (ranging from minor ailments to severe illnesses, e.g., colds to myocardial infarction). Chart 31 and visits for work-related injuries in Chart 32 (lower bar in bar chart) are a reflection of the mine's occupational health and safety performance.

**Chart 31: Combined Lost-Time and Light Duty Accident Frequency (200,000 person hours), 2010 – 2014 (source: AEM)**



**Chart 32: Number of Visits by Employees to AEM Clinics, 2010 – 2014 (source: AEM)**



### **8.2.3 Interpretation**

Lost time and light duty accident frequency has been decreasing consistently since 2011, from a historical high of 5 per 200,000 person hours to 1 per 200,000 person hours in 2014. Unfortunately, it is not unusual to see an increase in accidents in the early years of an operation when there is a new workforce and new management systems. Beginning in 2012, AEM developed and has now implemented its Responsible Mine Management System which addresses workplace health and safety, community relations, and environmental management.

Since the vast majority of visits to AEM clinics are for non-work-related conditions, it appears the clinic serves an important function in addressing the health/medical needs of workers. Clinic visits for work-related injuries peaked at 789 in 2011 and have been declining since then, consistent with the declining lost time and light duty accident frequency over the same period. The current data does not provide any indication of how health and safety training is impacting practices at home and community health and safety outcomes.

# VSEC 9: Community Infrastructure and Services

## IMPACT / GOAL STATEMENT

Community infrastructure (transportation, energy, water, services) is maintained;  
Social assistance costs are reduced in the long term

*Four indicators are used to measure and understand Meadowbank’s impact on community infrastructure and services in the Kivalliq Region, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS community infrastructure and services prediction:*

**FEIS Prediction:** “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)

## INDICATORS

### 9.1. Use of Public Physical Infrastructure

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Estimates of use of GN infrastructure directly related to Meadowbank, 2014</li> </ul>	<ul style="list-style-type: none"> <li>Meadowbank’s use of public physical infrastructure consists of use of Baker Lake airport (300-400 passenger trips/year), use of other Nunavut airports (200-400 passenger trips/year), and use of the Baker Lake Community Centre (5-10 times/year)</li> </ul>

### 9.2. Use of GN Health Services

Metrics	Key Findings
<ul style="list-style-type: none"> <li>Kivalliq Community Health Centre Visits Per Capita, 2006 – 2013</li> <li>Number of Meadowbank employees referred to their community health care centre for personal or work-related reasons, 2010 – 2014</li> </ul>	<ul style="list-style-type: none"> <li>Per capita health centre visits in communities with the most Meadowbank employees (Baker Lake, Rankin Inlet, and Arviat) have not increased significantly since Meadowbank began operating</li> <li>While per capita visits increased slightly in Baker Lake from 2011 to 2013, the levels remain lower than 2006 and 2007 levels</li> <li>The number of employees referred to community health care centres for personal or work-related reasons ranges from 14 to 47 people per year and has been highest in recent years. Overall, these rates may or may not represent an increased demand on GN health services compared to the impacts of other employers or unemployment.</li> </ul>

### 9.3. Demand on Social Services

Metrics	Key Findings
<i>Data is currently unavailable. To be included in future reports.</i>	

## 9.4. Social Assistance

Metrics	Key Findings
<ul style="list-style-type: none"><li>Per Capita Social Assistance Expenditures by Kivalliq Community, 2006 to 2014</li><li>Social assistance recipients by Kivalliq community, 2006 – 2013</li></ul>	<ul style="list-style-type: none"><li>Social assistance expenditures increased in 2010-2011 for several communities, including Baker Lake, Arviat, and Rankin Inlet</li><li>However, the number of recipients, as a fraction of the population, declined from 2008 to 2011 in Baker Lake, Arviat, and Rankin Inlet</li><li>These trends may indicate that fewer residents in the communities most affected by the mine are dependent on social assistance, but that the cost burden for government has not declined</li></ul>

## EXISTING MANAGEMENT & MITIGATION

While no AEM programs are in place with the primary goal of mitigating impacts to community infrastructure and services, a number of AEM's economic programs are meant to improve community infrastructure and services in the long term. For example, programs which aim to increase local employment, contracting and business opportunities can reduce social assistance expenditures over time. These programs are outlined in the respective sections of this report (VSEC 1 and 3).

### 9.1 USE OF PUBLIC PHYSICAL INFRASTRUCTURE

#### 9.1.1 Predictions

The Meadowbank FEIS makes the following prediction:

- “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)

#### 9.1.2 Data & Trends

The Meadowbank mine has its own dedicated energy, water, and communications infrastructure, so it is largely independent of the public physical infrastructure. Areas of potential impact on public infrastructure include the use of airports for travel to and from the mine (e.g. employees beginning and ending their two work rotations), the use of community meeting spaces for public engagement and the use of local health care facilities.

**Estimates of use of this infrastructure directly related to Meadowbank are as follows:**

- Use of Baker Lake Airport to access commercial flights: Between 300 and 400 times per year (passenger trips)
- Use of other Nunavut airports to access commercial flights: Between 200 and 400 times per year (passenger trips)
- Use of Baker Lake Community Centre: Between 5 and 10 times per year

These numbers are best estimates, and do not include use of infrastructure by employees while they are not actively travelling for work related purposes (personal travel) or while they are doing non-work related activities.

#### 9.1.3 Interpretation

The use of public physical infrastructure by Meadowbank and its employees consists primarily of the use of airports and has been relatively consistent since operation began in 2010. There are no indications of significant positive or negative impacts on this infrastructure.

## 9.2 USE OF GN HEALTH SERVICES

### 9.2.1 Predictions

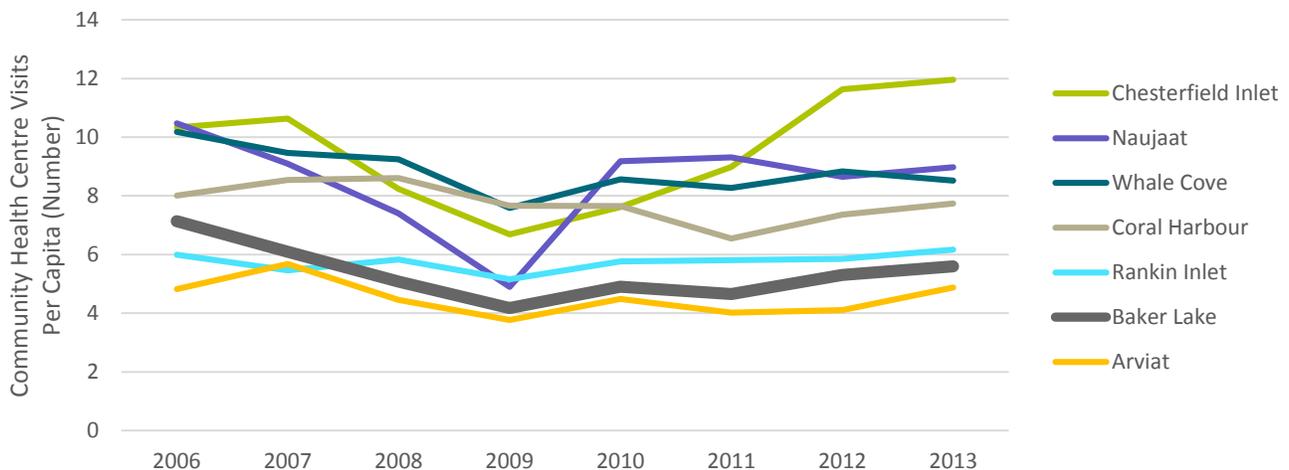
The Meadowbank FEIS makes the following prediction:

- “The potential public health and safety impacts of the project, of unknown magnitude, are negative, and, because there is such high impact at the individual level in the event that a risk is realized, the effects must be considered long term and of high significance.” (Cumberland Resources Ltd., 2006, p. 126)
- “Increased employment and business opportunities will result in increased income, a measure of economic security, capacity building that will contribute to employability over the long term, and improved self-image of employees and their families. This could result in reducing dependence on government social services.” (Cumberland Resources Ltd., 2006, p. 128)

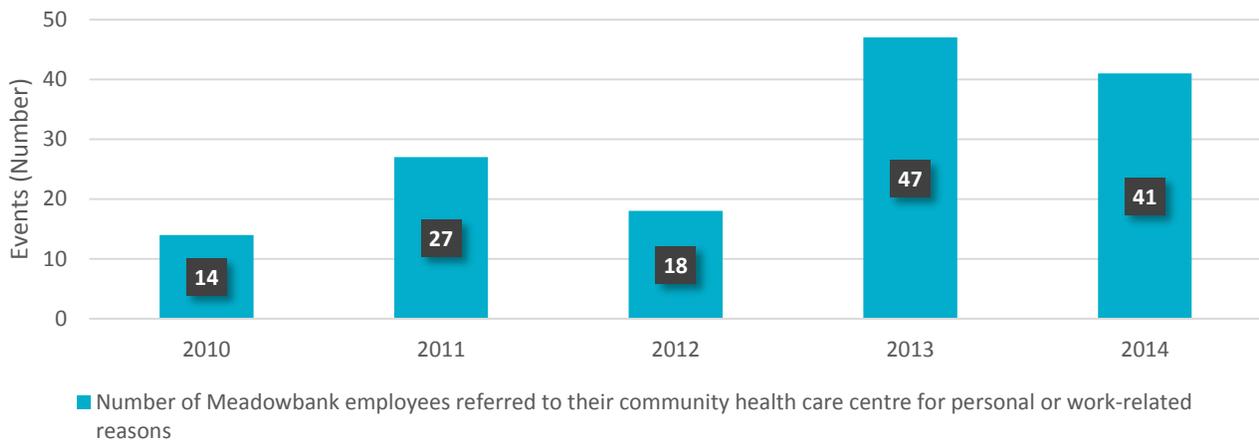
### 9.2.2 Data & Trends

Community health centre visits are an indicator of demand on local health care services. Chart 33 shows per capita health centre visits for each Kivalliq community (Baker Lake indicated with bold line). Chart 34 shows the number of Meadowbank employees referred to their community health care centre for personal or work-related reasons.

**Chart 33: Kivalliq Community Health Centre Visits Per Capita, 2006 – 2013 (source: (Government of Nunavut Department of Health, 2015))**



**Chart 34: Number of Meadowbank employees referred to their community health care centre for personal or work-related reasons, 2010 – 2014 (source: AEM)**



### 9.2.3 Interpretation

Most Kivalliq communities experienced steady or declining community health centre visits up to 2009. From 2009 to 2010, which coincides with Meadowbank’s start-up and operation, per capita visits increased in every community except Coral Harbour. However, since 2010, per capita visits have remained relatively steady in most communities with the exception of Chesterfield Inlet and Baker Lake. While per capita visits increased slightly in Baker Lake from 2011 to 2013, the levels remain lower than 2006 and 2007 levels. Overall, per capita health centre visits in communities with the most Meadowbank employees (Baker Lake, Rankin Inlet, and Arviat) have not increased significantly since Meadowbank began operating. Data for future years will indicate whether recent increases in Baker Lake represent a trend. Additional information on the reasons for health centre visits and client demographics may shed more light on the reasons for changes observed in each community, including the noteworthy increase in Chesterfield Inlet and potential linkages to the Meadowbank mine and/or other factors.

Since the mine began production, between 14 and 47 employees are referred to community health care centres per year. The number of referrals have been highest in recent years (2013 and 2014). Referrals for work-related reasons may represent increased demand on GN health services. However, this data alone does not indicate whether a Meadowbank worker, on average, is a higher user of health care services than other workers or unemployed people.

## 9.3 DEMAND ON SOCIAL SERVICES

### 9.3.1 Predictions

The Meadowbank FEIS makes the following prediction:

- “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)

In terms of positive impacts on social services, the FEIS also describes how increased economic security and well-being may reduce dependence on social services: “Increased employment and business opportunities will result in increased income, a measure of economic security, capacity building that will contribute to employability over the long term, and improved self-image of employees and their families. This could result in reducing dependence on government social services.”

At the time of writing this report, no data on the demand on social services (e.g. social services for children) was available. The Department of Family Services has indicated that it will be assessing the quality of program-level information and data collected and reported to the Department from its service delivery partners. Analysis of the current state of information on the Department's program participation is expected to be completed by April, 2016.

## 9.4 SOCIAL ASSISTANCE

### 9.4.1 Predictions

The Meadowbank FEIS makes the following prediction:

- “The impacts on social services and infrastructure, of low to medium magnitude, are considered largely positive in the medium term and of moderate significance. There is some potential for closure to have a negative impact on social service delivery.” (Cumberland Resources Ltd., 2006, p. 128)

In terms of positive impacts on social services, the FEIS also describes how increased economic security and well-being may reduce dependence on social services, understood to also include social assistance payments: “Increased employment and business opportunities will result in increased income, a measure of economic security, capacity building that will contribute to employability over the long term, and improved self-image of employees and their families. This could result in reducing dependence on government social services.”

### 9.4.2 Data & Trends

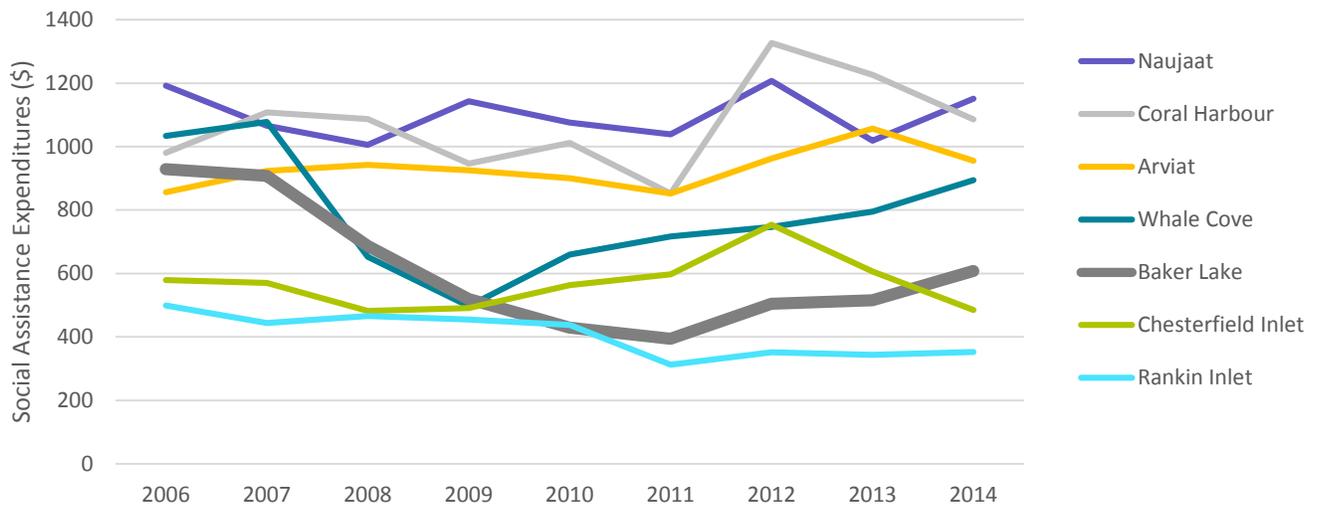
Chart 35 and Chart 36 show social assistance expenditures and the number of social assistance recipients by Kivalliq community over the past decade. Baker Lake data is represented with a bold line in both charts.

The following definitions are used in interpreting the charts below:

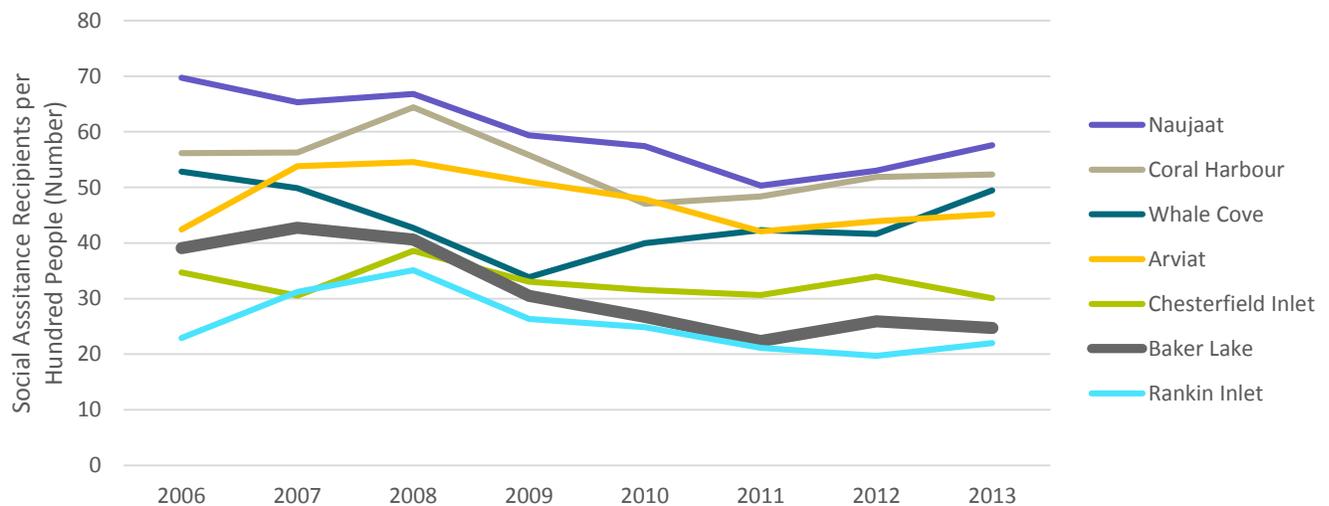
- 1) **Social Assistance** or income support is a program of last resort for Nunavummiut who, because of inability to obtain employment, loss of principal family provider, illness, disability, age or any other cause cannot provide adequately for themselves and their dependents. Social assistance is provided by the Government of Nunavut in the form of monthly financial payments to help individuals to meet a minimum standard of living. All residents of Nunavut between the ages of 18 and 59 can apply for income support.
- 2) **Expenditures** are payments to social assistance recipients for food, shelter, utilities and fuel. This financial support is calculated to meet the basic needs of recipients and their dependents.
- 3) **Recipients** are individuals who receive social assistance payments. There may be multiple recipients within a household. Recipients may receive a single payment or multiple payments within a given year.

The Department of Family Services, Government of Nunavut, notes that it uses reasonable efforts to provide accurate and up-to-date information, but that some of the information provided is gathered manually and as a result may not be completely accurate. Since the year 2000, the social assistance program has been delivered without an electronic case management system.

**Chart 35: Per Capita Social Assistance Expenditures by Kivalliq Community, 2006 to 2014 (source: (Government of Nunavut Department of Family Services, 2014))**



**Chart 36: Social Assistance Recipients (normalized by population) by Kivalliq Community, 2006 – 2013 (sources: (Government of Nunavut Department of Family Services, 2014; Nunavut Bureau of Statistics, 2014))**



### 9.4.3 Interpretation

Per capita social assistance expenditures began to increase in 2010-2011 for several communities (including Baker Lake and Arviat) following a period of declining or steady expenditure in earlier years, including a notable decline in 2007/08 coinciding with construction starting at Meadowbank. However, per capita expenditures in 2013 for Baker Lake and Rankin Inlet are lower in 2013 than historic high levels prior to 2007/08. Arviat’s levels of per capita social expenditures has remained relatively stable since 2002-2003.

The number of social assistance recipients, as a fraction of the population, declined by approximately 15 percentage points from 2008 to 2011 in Baker Lake, Arviat, and Rankin Inlet, coinciding with construction at Meadowbank and the opening of the mine. This trend supports the prediction of decreased dependence on social assistance. The relative number of

recipients have levelled off or slightly increased in 2012 and 2013. Future years will confirm whether this reversal is a lasting trend or whether the number of recipients may drop further in communities where employees and contractors are living.

As the data suggests, social assistance expenditures may not be proportional to the number of recipients because different recipients have different needs. Given these factors and the uncertainty in these data (as indicated by the Government of Nunavut), we are not able to draw conclusions about how the mine is impacting social assistance needs in the Kivalliq region overall.

# VSEC 10: Nunavut Economy

## IMPACT / GOAL STATEMENT

### Increased economic activity (GDP) and benefits to government through royalties and taxation

Three indicators are used to measure and understand Meadowbank's impact on the Nunavut economy, including progress towards meeting the impact / goal statement outlined above, and performance relative to the overarching Meadowbank FEIS Nunavut economy prediction:

**FEIS prediction:** "The economic impacts on the economy of Nunavut, of high magnitude, are positive over the medium term and of high significance, particularly during the construction phase." (Cumberland Resources Ltd., 2006, p. 129)

## INDICATORS

### 10.1. Business Expenditures for Nunavut

Metrics	Key Findings
<ul style="list-style-type: none"><li>Meadowbank contract expenditures, by type of business, 2011 - 2014</li></ul>	<ul style="list-style-type: none"><li>Over \$100M of expenditures per year are being directed to Nunavut-based businesses, which will have a multiplier effect on the Nunavut economy and generate tax revenue for the GN</li></ul>

### 10.2. Royalties and Taxes

Metrics	Key Findings
<ul style="list-style-type: none"><li>Compensation, Royalties and Taxes Paid</li></ul>	<ul style="list-style-type: none"><li>Since 2007, Meadowbank has provided \$11.8M to NTI and the KIA</li><li>Employment taxes at Meadowbank provide \$30M on average per year to the Government of Canada, \$3M on average per year to the GN, with an additional \$1.1M provided to the GN in property taxes</li></ul>

### 10.3. Nunavut GDP

Metrics	Key Findings
<ul style="list-style-type: none"><li>Nunavut GDP, 1999 – 2013</li></ul>	<ul style="list-style-type: none"><li>Meadowbank has been a driver of Nunavut's GDP growth, both during the construction of the mine and since production began in 2010</li></ul>

## EXISTING MANAGEMENT & MITIGATION

Maximizing benefits for the Nunavut economy is achieved through AEM actions to maximize local employment and local contracting, and ensuring community health and safety and well-being – as described under previous VSECs in this report.

### 10.1 BUSINESS EXPENDITURES FOR NUNAVUT

#### 10.1.1 Predictions

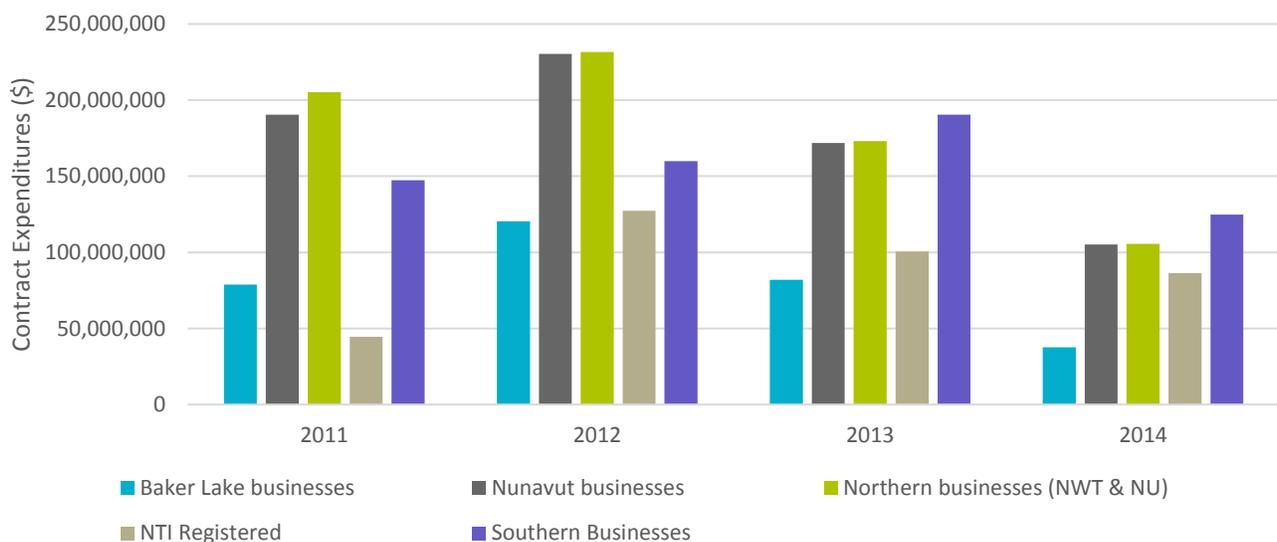
The Meadowbank FEIS makes the following predictions:

- “If at least 20% of expenditures were spent in the region over the lifetime of the project, there would be a total expenditure in Nunavut of over \$224 M. This figure is made up of about \$61 M during the 24-month construction phase, \$20 M per year over a ten year operation phase, and a further \$2.6 M over the closure phase.” (Cumberland Resources Ltd., 2006, p. 119)
- “As project expenditures are comparatively large relative to the size of the regional and territorial economies, the impact is considered of medium magnitude, positive, long term and of moderate significance.” (Cumberland Resources Ltd., 2006, p. 119)

### 10.1.2 Data & Trends

Chart 37 shows contract expenditures, by type of business. The types of business indicate geographical location or ownership (i.e. NTI registered indicates Inuit-owned). Note that expenditures on Baker Lake business are included in the expenditures on Nunavut businesses category, and similarly, expenditures on Nunavut businesses are included in the expenditures on Northern businesses category.

**Chart 37: Meadowbank Contract Expenditures, by Type of Business, 2011 – 2014 (source: AEM)**



### 10.1.3 Interpretation

The prediction indicates an expected \$20M in annual business expenditures in Nunavut over the operations phase. This prediction has been far exceeded, with over \$100M of annual expenditures for Nunavut based businesses. The predicted total expenditure for Nunavut over the lifetime of the project (\$224M) has already been exceeded, only half-way through the predicted ten year operational phase.

## 10.2 ROYALTIES & TAXES

### 10.2.1 Predictions

There are no predictions in the Meadowbank FEIS regarding royalties and taxes for Kivalliq, Nunavut or Canada.

### 10.2.2 Data & Trends

Table 17 provides an overview of the compensation, royalties and taxes paid to NTI / KIA and the GN.

**Table 17: Compensation, Royalties and Taxes Paid (source: AEM)**

Payment	Timeframe	Value
Resource Royalties paid to NTI	Total, 2007 - 2014	\$5.3M
Compensation paid to the KIA (IIBA implementation costs, quarry and other usage fees)	Total, 2007 - 2014	\$6.5M
Payroll Taxes paid by AEM to the GN	Average Annual Value	\$3.0M
Property taxes paid by AEM to the GN	Average Annual Value	\$1.1M
Payroll Taxes paid by employees to the Government of Canada	Average Annual Value	\$30M

### 10.2.3 Interpretation

The Meadowbank Mine provides revenue to the Inuit, Territorial and Federal governments through royalties, taxation and compensation paid to the KIA. Given the location of the mine on Inuit Owned Lands, all resource royalties flow directly to NTI as the Inuit authority. As this data is not broken down by year it is impossible to highlight trends in the value of money flowing to the various governments.

## 10.3 GDP OF NUNAVUT

### 10.3.1 Predictions

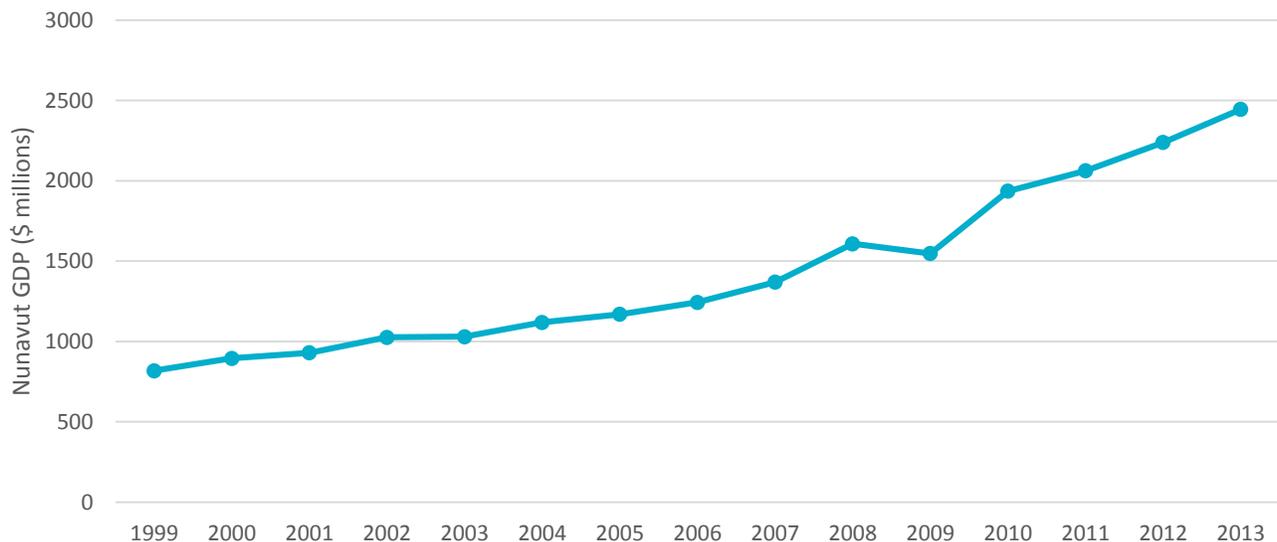
The Meadowbank FEIS makes the following predictions:

- “The results indicate that during the construction phase, the project would contribute \$120.3 M to the GDP of Nunavut ... During the operations phase, the annual contribution to GDP would be \$35.5 M ...” (Cumberland Resources Ltd., 2006, p. 27)

### 10.3.2 Data & Trends

The following chart shows the value of Nunavut gross domestic product (GDP), in current prices, from 1999 to 2013.

**Chart 38: Nunavut GDP, 1999 – 2013 (source: (Statistics Canada, 2014))**



### **10.3.3 Interpretation**

Nunavut's GDP was steadily increasing from 1999 to 2008. Following a decline in 2009 due to the global recession, a sharp increase was seen in 2010, when Meadowbank began production. In the operations phase (i.e. from 2010 onwards), these increases ranged from \$127M to \$388M. Overall, Nunavut GDP has grown at a faster rate from 2009 to 2013, coinciding with Meadowbank becoming operational, than during the previous period of 1999 to 2008. Together with the data on contract expenditures and the fact that Meadowbank has been the only operating mine in Nunavut during this period, the GDP growth data suggest that the contribution to GDP predicted in the FEIS has been exceeded.

# Conclusions

## SUMMARY

This is the first report on the results of the project-specific Socio-Economic Monitoring Program (SEMP) for the Meadowbank gold mine, developed in consultation with the Kivalliq Socio-Economic Monitoring Committee (SEMC). Table 18 provides a summary of the monitoring results on ten *valued socio-economic components*, or VSECs.

1. Employment
2. Income
3. Contracting and Business Opportunities
4. Education and Training
5. Culture and Traditional Lifestyle
6. Migration
7. Individual and Community Wellness
8. Health and Safety
9. Community Infrastructure and Services
10. Nunavut Economy

### Understanding Table 18

The *trends* described in the third column are not inherently 'good' or 'bad', but simply indicate whether there has been a consistent change in an indicator as observed in the past 3 or more years. These are represented by the following characters:

 Remaining Stable	 Decreasing	 Increasing
 No Discernable Trends	 Insufficient Data	

The *observed impact* (fourth column) qualifies results for each indicator in terms of contributing to the desired goal or impact for VSEC.

<b>positive</b>	The data and trends indicate positive movement towards the achievement of the desired impact or goal.	<b>negative</b>	The data and trends indicate movement away from the achievement of the desired impact or goal.
<b>neutral</b>	The data and trends do not indicate any movement in regard to the achievement of the desired impact or goal.	<b>inconclusive</b>	No observed impact can be determined given the observed data and trends.

**Table 18: Summary of Monitoring Results**

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
<b>VSEC 1. Employment</b>				
1.1. Total Meadowbank Employment	Meadowbank Employment, 2010-2014 (Permanent and Temporary)	→	Positive	Total employment levels to date have significantly exceeded the levels predicted in the FEIS.
1.2 Meadowbank Inuit and Nunavummiut Employment	Permanent and Temporary Meadowbank Employment, 2014 (Inuit and Non-Inuit)	→	Positive	Total Inuit workforce has remained steady over the past 3 years, representing approximately 30% of the total workforce. Inuit employees represent 95% of temporary employees.
	Meadowbank Employment, 2010 - 2014 (Inuit and Non-Inuit)			
	Person Hours Worked, 2010 - 2014 (Nunavut and non-Nunavut Based Employees)			
1.3 Meadowbank Employment by Gender	Meadowbank Employment by Gender, 2010 – 2014	→	Neutral	At 15% in 2014, female employment at Meadowbank is just below the Canadian mining-sector average of 17% (MiHR, 2015) and has been mainly consistent since 2010.
1.4 Meadowbank Employment by Kivalliq Community	Meadowbank Employment, 2010 – 2014 (Kivalliq and non-Kivalliq residents)	→	Positive	Approximately 30% of employees are from the Kivalliq region, of which more than half are from Baker Lake.
	Meadowbank employment by Kivalliq community, 2014			
1.5 Meadowbank Turnover	Turnover Rates, 2010 - 2014 (Inuit & Non-Inuit)	↕	Negative	Since 2010, turnover rates for permanent Inuit employees have fluctuated but have been consistently higher than those for permanent non-Inuit employees (26% for Inuit vs. 7% for non-Inuit in 2014).
	Turnover (by reason for leaving) and Average Length of Employment, 2010 - 2014			
<b>VSEC 2. Income</b>				
2.1. Income Paid to Meadowbank Inuit Employees	Income Paid to Meadowbank Inuit Employees, 2010 – 2014	→	Positive	At approximately \$18M/year since 2011, Inuit employment income significantly exceeds the FEIS prediction of \$4 million in direct project wages annually.
	Income paid to Meadowbank Contractors and Inuit Employment Rate of Meadowbank Contractors, 2010 – 2014	↘	Negative	Contractor payrolls are declining (consistent with total expenditures and reflective of the change from project development to more mature operations). The Inuit employment rate among contractors has also decreased somewhat (from 15% in 2010/2011 to 11-12% in 2013/2014).
2.2 Income by Kivalliq Community	Change in Median Employment Income for Kivalliq Communities, baseline – 2012	↗	Positive	Baker Lake, which has the highest number of Meadowbank employees, has also experienced the largest increase in median income since the beginning of production in 2010

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
<b>VSEC 3. Contracting and Business Opportunities</b>				
3.1. Contract Expenditures	Contract Expenditures on Baker Lake and Nunavut-Based Businesses, 2011 – 2014	↕	Inconclusive	The annual value of contract expenditures has fallen significantly in the last 2 years. However, the share of these declining expenditures going to local and Inuit businesses has been maintained or increased (~50% to Nunavut-based businesses each year since 2011, of which 36-52% to Baker Lake business; increasing share to NTI-registered (Inuit) businesses from 13% in 2011 to 37% in 2014). Therefore, the FEIS prediction that local business participation in the project is expected to grow with time is being realized in relative terms (i.e. % of total contract expenditures), but the total value of contracts available to local business has been shrinking.
	Contract Expenditures on NTI Registered Businesses, 2011 - 2014			
3.2 Registered Inuit Owned Businesses in the Kivalliq Region	Inuit-Owned Businesses in the Kivalliq Region, 2006 – 2014	↗	Inconclusive (inadequate data)	There has been a net increase in the number of Inuit-owned businesses in Kivalliq since 2010, but still fewer than in 2007. However, given the many factors affecting business expansion and creation, it is difficult to attribute the observed impacts.
<b>VSEC 4. Education and Training</b>				
4.1. Investments in School-Based Initiatives	AEM Investments in School-Based Initiatives, 2010 – 2014	→	Inconclusive (insufficient data)	There has been a consistent level of investment by AEM (~\$284,000/year) in a variety of school-based initiatives aimed at motivating students and increasing educational opportunities and outcomes.
4.2 Public School Truancy and Secondary School Graduation Rates by Region	Truancy Rates by Region and Community, 2002/03 – 2010/11	↗	Inconclusive (post-2011 data not available)	Graduation rates have risen, but so have truancy rates. These metrics are affected by a range of factors, which may or may not include those associated with Meadowbank.
	Secondary School Graduation Rate by Region, 1999 – 2014	↗	Inconclusive	
4.3 Mine Training and Education	AEM Investments in Mine Training and Education Programs, 2010 – 2014	→	Positive	There has also been a consistent level of investment by AEM (~\$4M/year) in external mine training programs over the past three years (e.g. Kivalliq Mine Training Society). Support for, and participation in, in-house training and apprenticeship programs has been
	Training Hours Provided to Nunavut and Non-Nunavut Based Employees, 2010 – 2014			
	Specific Training Hours Provided to Inuit and non-Inuit Employees, 2012 – 2014			

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
	Number of Haul Truck Driver Program Graduates, 2010 – 2014			steady throughout the mine's operation.
	Apprenticeships for Inuit Employees, 2010 – 2014			
4.4 Percentage of Total Population with Trade Certificates	Percentage of Total Population with Trade Certificates & Registered Apprenticeship Certificates in Nunavut and Canada, 2011	?	Inconclusive (insufficient data)	As data on this metric is currently limited to the 2011 census, it is impossible to glean more than a baseline at this time.
4.5 Inuit Employees by Skill Level	Inuit Employment by Skill Level, 2011 – 2014	↕	Inconclusive (insufficient data)	The data do not indicate an overall career path progression of Inuit employees to higher skill level jobs (e.g. Inuit moving from semi-skilled to skilled positions) that one might expect as a result of AEM's investment in education and training programs. The less tangible benefits of training and education, such increased self-confidence and sharing of skills and knowledge within families, were not assessed.
<b>VSEC 5. Culture and Traditional Lifestyle</b>				
5.1. Country Food at Meadowbank	Country food served at Meadowbank, 2010 - 2014	→	Neutral	Approximately 4,500 meals featuring car or caribou have been served at the mine annually since 2011. No data are available on country food consumption levels in communities.
5.2. Use of Traditional Language	Proportion of total population identifying Inuktitut as the mother tongue, by Kivalliq community, 2006 and 2011	?	Inconclusive (insufficient data)	In 2014, ~ 30% of Inuit employees at Meadowbank identified Inuktitut as their first language. Between 2006 and 2011, the proportion of the population identifying Inuktitut as their mother tongue has remained relatively stable in Kivalliq communities (except for Rankin Inlet, which has seen a 7% decline).
	Meadowbank Inuit employees identifying Inuktitut as the mother tongue, 2014			
5.3. Traditional Lifestyle	Percentage of Nunavut Inuit Population 15 years of age and older partaking in traditional activities, 2006 and 2012	?	Inconclusive (insufficient data)	In 2012, approximately 81% of Nunavut's Inuit Population reported partaking in traditional activity (hunting, fishing, trapping, or gathering). Regional and community-level data on traditional activities in Nunavut, which might give an indication of trends since the mine opened, are not available.
<b>VSEC 6. Migration</b>				
6.1. Inuit Employees That Have Moved to Southern Provinces	Number and rate of Inuit workforce who have moved to southern provinces, 2010 – 2014	↗	Inconclusive (limited data)	There has been a gradual increase in the number of Inuit workers moving to southern provinces, from 7 in 2011

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
				to 12 in 2014 (or <5% of Inuit workforce). Future data will indicate whether this trend is significant.
6.2. Population Estimates in Kivalliq Communities	Population Estimates of Kivalliq Communities, 15 years of age and older, 2006 – 2014	↗	Neutral	Yearly population estimates do not indicate an increase in the population growth rate of Baker Lake or other communities with significant Meadowbank employment (Arviat, Rankin Inlet) since the mine opened, or relative to other communities in the region. If other factors (births and deaths) are assumed constant, the population data does not suggest significant migration induced by Meadowbank.
	Annual Percentage Change in Population Estimates of Kivalliq Communities 15 years of age and older, 2007 - 2014			
<b>VSEC 7. Individual and Community Wellness</b>				
7.1. Counselling Programs and Usage at Meadowbank	Family counselling programs offered, 2010 – 2014	→	Inconclusive	Meadowbank has six programs offering counselling and support to employees and their families. There is currently insufficient data to assess program usage and trends.
	Number of employees/families accessing family counselling programs, 2011 - 2014	?		
7.2. Criminal Violations	Criminal violations per hundred people, by Kivalliq community, 2006 - 2013	↗	Negative	Among Kivalliq communities, Baker Lake has seen the highest increases in the rate of criminal violations (total violations per hundred people) since Meadowbank began production. Rates of mischief, disturbing the peace, harassment and threats, impaired driving, and drug violations more than doubled or tripled. A decrease in Baker Lake total criminal violations was observed in 2013, but levels remain significantly above the 2006-2009 baseline.
	Baker Lake criminal violations per hundred people by type, 2006 – 2013			
	Change in Baker Lake Criminal Violations against 2006-2009 average baseline, 2010 - 2013			
7.3. Housing	Persons aged 15 years and over who are on a waiting list for public housing, 2010	?	Inconclusive (insufficient data)	In 2010, 15% to 27% of the population of Kivalliq communities were on waiting lists for public housing. However, there is insufficient data to assess changes over time and the potential impact of the mine on the housing situation.
7.4 Suicide	Inuit Suicide Rates by Community 2006 – 2014	↕	Inconclusive	Due to the persistent and territory-wide nature of this crisis, it is difficult to assess impacts of Meadowbank on suicide rates. Community suicide rates (e.g. for Baker Lake) are highly variable from year to year. Trends are

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
				more apparent in long-term and/or regional data.
<b>VSEC 8. Worker Health and Safety</b>				
8.1. Health and Safety Training	Health and safety training hours for AEM Meadowbank employees, 2014	?	Inconclusive (insufficient data)	Insufficient data to assess scope and quantity of health and safety training over time.
8.2. Health and Safety On-site	Combined Lost-time and Light Duty Accident Frequency (200,000 person hours), 2010 – 2014	↘	Positive	Lost-time and light duty accident frequency has decreased significantly and consistently since 2011, as have visits to the AEM clinic for work-related injuries.  Since the vast majority of visits to the AEM clinic (ranging from 2600 to 3900 per year) are for non-work-related conditions, it appears the clinic serves an important function in addressing the health/medical needs of workers. However, none of the data collected permits an assessment of the impacts of the mine and its programs on the general health status of workers and their families.
	Number of visits by employees to AEM clinics, 2010 – 2014			
<b>VSEC 9. Community Infrastructure and Services</b>				
9.1. Use of Public Physical Infrastructure	Estimates of use of public physical infrastructure directly related to Meadowbank, 2014	→	Neutral	Meadowbank's direct use of public physical infrastructure includes use of public airports for employee travel and the use of the Baker Lake Community Centre (5-10 times/year) for public engagement activities. Airports and the community centre receive fees from users in both cases. At this time, it appears that the impact of Meadowbank on public physical infrastructure is neutral.
9.2. Use of GN Health Services	Kivalliq Community Health Centre visits per capita, 2006 – 2013	→	Inconclusive	Overall, per capita health centre visits in communities with the most Meadowbank employees (Baker Lake, Rankin Inlet, and Arviat) have not increased significantly since Meadowbank began operating (i.e. consistent or lower than 2006/2007 levels). The number of employees referred to community health care centres for personal or work-related reasons ranges from (14 to 47 people per year) may or may not represent an increased demand on GN health
	Number of Meadowbank employees referred to their community health care centre for personal or work-related reasons, 2010 – 2014			

Indicator	Metrics	Trend	Observed Impact	Observations / Impacts vs. Predictions
				services compared to the impacts of other employers or unemployment.
9.3. Demand on Social Services	<i>Data is currently unavailable. To be included in future reports.</i>			
9.4. Social Assistance	Social assistance expenditures by Kivalliq community, 2004-05 to 2013-14	↗	Inconclusive	Social assistance expenditures increased in 2010-2011 for several communities, including Baker Lake, Arviat, and Rankin Inlet. However, the number of recipients, as a fraction of the population, declined from 2008 to 2011 in Baker Lake, Arviat, and Rankin Inlet. These trends may indicate that fewer residents in the communities most affected by the mine are dependent on social assistance, but that the overall cost burden for government has not declined.
	Social assistance recipients (normalized by population) by Kivalliq community, 2006 – 2013	↘	Inconclusive	
<b>VSEC 10. Nunavut Economy</b>				
10.1. Business Expenditures for Nunavut	Meadowbank contract expenditures, by type of business, 2011 - 2014	→	Positive	Over \$100M of expenditures per year are being directed to Nunavut-based businesses, which will have a multiplier effect on the Nunavut economy and generate tax revenue for the GN.
10.2. Royalties and Taxes	Compensation, Royalties and Taxes Paid	→	Positive	Since 2007, Meadowbank has provided \$11.8M to NTI and the KIA in royalties and compensation. Employment taxes at Meadowbank provide \$30M on average per year to the Government of Canada, \$3M on average per year to the GN, with an additional \$1.1M provided to the GN in property taxes.
10.3. Nunavut GDP	Nunavut GDP, 1999 – 2013	→	Positive	According to the Conference Board of Canada, Meadowbank has been a driver of Nunavut's GDP growth, both during the construction of the mine and since production began in 2010.

## MANAGEMENT RESPONSE

Agnico Eagle Mines will continue to implement and support the existing management and mitigation activities described in this report. Agnico Eagle Mines is also working together with the community of Baker Laker to improve community wellness through the Baker Lake Wellness Report and Implementation Plan.

Given the complexity of socio-economic phenomenon (i.e. multiple factors at play), there are limitations in establishing causal relationships between mining activity and some socio-economic indicators in this report. For future reports, AEM looks forward to refining indicator selections and analysis and addressing data gaps, in consultation with the SEMC, to more clearly link socio-economic impacts with AEM activities and/or other factors. This will help inform the refinement of existing management and mitigation activities (described in this report) as well as the identification of new mitigation.

It is our hope that this compilation of data will provide the SEMC with a useful information base from which to understand emerging trends, impacts and benefits to date, and inform future collaboration and coordination on priority areas for attention.

# Appendix A: Meadowbank SEMC Terms of Reference

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## Meadowbank Gold Mine Project

### Terms of Reference for the Meadowbank Socio-Economic Monitoring Program

#### 1. Premise

1.1 The implementation of the project-specific monitoring program, developed in consultation with the Kivalliq Socio-Economic Monitoring Committee (SEMC), is the responsibility of the proponent.

1.2 Regional (or cumulative) socio-economic monitoring is the responsibility of Government(s).

#### 2 Introduction

2.1 The Meadowbank Socio-Economic Monitoring Program (the “Program”) has been designed to satisfy Condition 64 of the Meadowbank Gold Project Certificate which states:

“Cumberland shall work with GN and INAC to develop the terms of reference for a socio-economic monitoring program for the Meadowbank Project, including the carrying out of monitoring and research activities in a manner which will provide project certificate specific data which will be useful in cumulative effects monitoring (upon request of Government or NPC) and consulting and cooperating with agencies undertaking such programs. Cumberland shall submit draft terms of reference for the socio-economic monitoring program to the Meadowbank SEMC for review and comment within six (6) months of the issuance of a Project Certificate, with a copy to NIRB’s Monitoring Officer.”

2.2 The Program is designed to meet the intent of Article 12, Part 7 of the Nunavut Land Claim Agreement. From a socio-economic monitoring point of view, the Program is primarily concerned with fulfilling sections 12.7.2.a and 12.7.2.d of the Nunavut Land Claims Agreement:

- (a) to measure the relevant effects of projects on.... socio-economic environments of the Nunavut Settlement Area;
- (d) to assess the accuracy of the predictions contained in the project impact statements.

#### 3. Program Framework

3.1 This program framework is meant to assist the proponent in fulfilling its annual obligation to report on socio-economic project impacts to NIRB (as per Project Certificate Appendix ‘D’). It comprises six steps leading to the verification of the socio-economic impacts predictions contained in the Final Environmental Impact Statements (FEIS). In this context the proponent should:

- a) Review impact predictions for each Valued Socio-economic Component contained in the Meadowbank FEIS.
- b) Select indicators to determine prediction changes (up/down, toward/away from expectation, magnitude, etc.).
- c) Gather data needed to verify impact predictions. Some data (both mine-site specific and employee level) is expected to be generated by the Proponent. Other information will be acquired from external sources.
- d) Conduct qualitative data collection (such as employee satisfaction or exit surveys, traditional lifestyle questionnaires, community wellness focus groups, etc.), in an attempt to gain additional community level perceptions, comments, and information on the project, and its predicted impacts.
- e) Analyze information from steps 3 and 4 and assesses the accuracy of impact predictions as contained in Final Environmental Impact Statements, as well as the positive and negative impacts of the Meadowbank Project on the closest communities
- f) Report annually to the Nunavut Impact Review Board with an assessment of the positive and negative impacts of the Meadowbank Project on the affected communities and on mitigation and adaptive management strategies undertaken (or proposed). Reports will be submitted to the NIRB by 31 March of every year, reporting on indicators for the previous calendar year.
- g) Data should have some degree of consistency and quality, and the Proponent will collect information with guidance from Statistics Canada’s Quality Assurance Framework.

- h) Members of the Meadowbank Socio-Economic Monitoring Program shall meet at least once a year, preferably immediately before or after the Kivalliq Socio Economic Monitoring Committee.

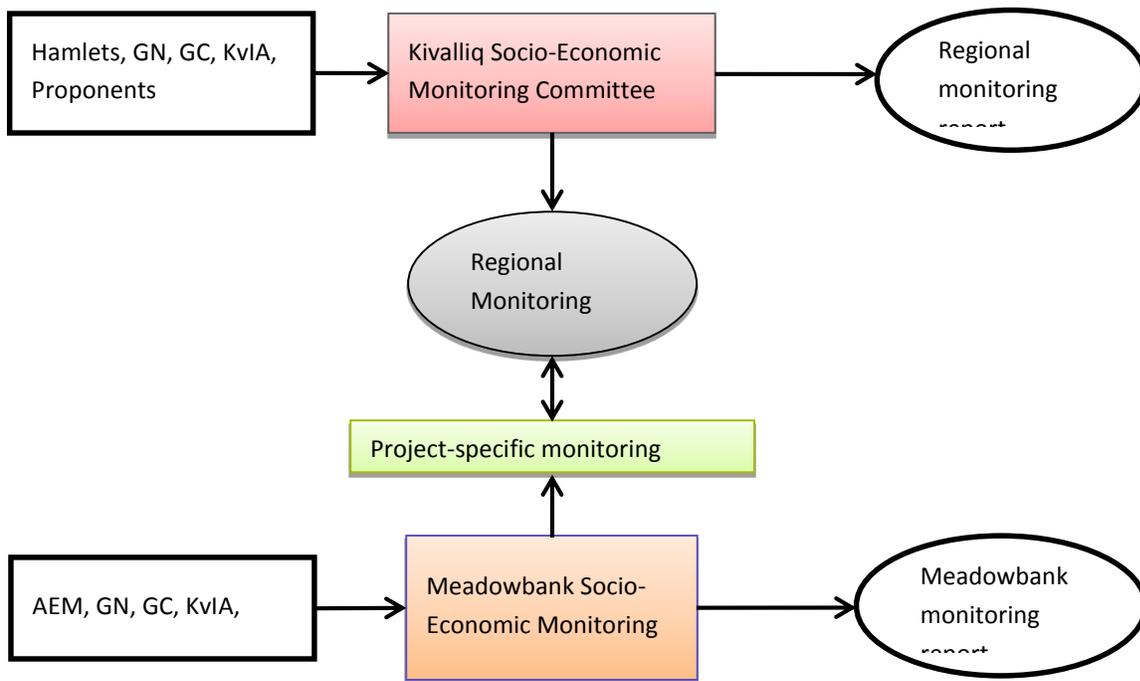
4. Membership

4.1 Membership to the Meadowbank Socio-Economic Monitoring Program shall be composed of:

- a) The Proponent;
- b) Government of Nunavut;
- c) Government of Canada;
- d) Kivalliq Inuit Association; and
- e) Additional members as needed.

4.2 Members are responsible for their own costs associated with attending any meetings.

4.3 Members are responsible for ensuring that project-specific monitoring meets the requirements of the Project Certificate and that efforts are aligned with other monitoring initiatives in the Territory such as the Kivalliq SEMC, and the Nunavut General Monitoring Plan.



## Appendix B: Skills Level Classification

Job Category	Lead Statement	Main duties	Example Titles	Employment Requirements	Reference to NOC
Unskilled	<p>Unskilled workers perform work that requires no specific education or experience. They hold positions that are not necessarily critical to achieving production although they are important for the smooth running of operations.</p> <p>No specific skill level and education requirements. Basic on-the-job training is usually provided for these occupations.</p>	<ul style="list-style-type: none"> <li>-Perform material handling, clean-up, packaging</li> <li>- Clean work areas and equipment</li> <li>- Assist in repairing, maintaining and installing material and equipment</li> <li>- Move tools, equipment and other materials to and from work areas</li> </ul>	Janitor, Dishwasher, Labor, Helper	-High school degree may be required.	Skill level D
Semi-skilled	<p>Semi-skilled workers perform jobs that require some skills but do not possess the skill level and/or experience to perform specialized work.</p> <p>Occupations usually require high school diploma and/or occupation specific training.</p>	<ul style="list-style-type: none"> <li>- Operate and clean equipment</li> <li>- Follow operating procedures and achieve production targets</li> <li>-Perform routine maintenance of machinery</li> <li>- Record production data and complete reports</li> </ul>	Security Guards, Building Mechanic, Driller & Blaster, Process Plant operators, Heavy Equipment Operators, Apprentice	<ul style="list-style-type: none"> <li>- High school degree may be required.</li> <li>- On-the-job training is provided.</li> <li>- Relevant experience depending on the position.</li> </ul>	Skill level C
Skilled	<p>Skilled workers possess special skills, training, knowledge, and ability in their work. They occupy jobs that are generally characterized by high education or expertise levels.</p> <p>Occupations usually require college or apprenticeship training. In house skilled training may be seen as an equivalent to formal education.</p>	<p>TRADES</p> <ul style="list-style-type: none"> <li>- Maintain and repair tools and equipment</li> <li>- Read and interpret drawings and sketches to determine specifications and calculate requirements</li> <li>-Install, repair and maintain industrial mobile and fixed systems</li> <li>- Test equipment and components</li> </ul> <p>TECHNICIANS</p> <ul style="list-style-type: none"> <li>- Conduct or direct mining survey programs</li> <li>- Prepare and analyze</li> </ul>	Electricians, Heavy Duty Mechanic, Mining Technicians, Millwright, Environmental Technician	<p>TRADES</p> <ul style="list-style-type: none"> <li>- Completion of high school level usually required.</li> <li>- Completion of an apprenticeship program or equivalent</li> <li>- Red Seal endorsement according to the level of the position occupied</li> </ul> <p>TECHNICIANS</p> <ul style="list-style-type: none"> <li>- Completion of high school level usually required.</li> <li>- Completion of a</li> </ul>	Skill level B

		<p>notes, sketches and maps</p> <ul style="list-style-type: none"> <li>- Record measurements and other information</li> <li>- Assist professionals in supervising technical delivery of work</li> </ul>		<p>college degree</p> <ul style="list-style-type: none"> <li>- Relevant experience in the concerned discipline</li> </ul>	
Professionals	<p>Professionals occupy a profession recognized as such and support the operations of near or far from their own expertise. They are normally subject to professional standards and can be part of an established order that envelops the performance of their work.</p> <p>Occupations that usually requires university education.</p>	<ul style="list-style-type: none"> <li>- Plan, develop, implement and evaluate strategies including policies, programs and procedures to address an organization's requirements.</li> <li>- Determine and advise on appropriate and safe working methods</li> <li>- Plan, organize and supervise the technical aspect of work</li> </ul>	Engineers, Geologist, Nurses, HR professionals	<ul style="list-style-type: none"> <li>- University degree</li> <li>-Relevant experience according to the level of the position</li> </ul>	Skill level A
Management	<p>Managers plan, organize, direct, control and evaluate the activities of a department or service. They are performing in different sectors directly related to operations or to the support of mining operations.</p> <p>Occupations that usually requires university education or equivalent extensive work experience with a supervisory component to the job.</p>	<ul style="list-style-type: none"> <li>- Plan, organize, direct, control and evaluate the activities and operations of a department;</li> <li>- Develop and implement policies, standards and procedures</li> <li>- Supervise, co-ordinate and schedule the activities of workers;</li> <li>- Establish methods to meet work schedules and co-ordinate work activities with other departments</li> </ul>	Supervisors, Superintendents	<ul style="list-style-type: none"> <li>- University degree</li> <li>-Extensive experience in the discipline</li> <li>- Experience with supervision of a team</li> </ul>	Skill level A

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