

NUCLEAR WASTESOCIÉTÉ DE GESTIONMANAGEMENTDES DÉCHETSORGANIZATIONNUCLÉAIRES

Phase 1 Preliminary Community Well-Being Assessment

TOWN OF CREIGHTON, SASKATCHEWAN

APM-REP-06144-0056

OCTOBER 2013

This report has been prepared under contract to the NWMO. The report has been reviewed by the NWMO, but the views and conclusions are those of the authors and do not necessarily represent those of the NWMO.

All copyright and intellectual property rights belong to the NWMO.

For more information, please contact: **Nuclear Waste Management Organization** 22 St. Clair Avenue East, Sixth Floor Toronto, Ontario M4T 2S3 Canada Tel 416.934.9814 Toll Free 1.866.249.6966 Email contactus@nwmo.ca www.nwmo.ca



H A R D Y STEVENSON AND ASSOCIATES

Preliminary Community Well-Being Assessment: CREIGHTON, SK NWMO Report: APM-REP-06144-0056

October, 2013

PRELIMINARY COMMUNITY WELL-BEING ASSESSMENT

		Dhan
Consultants:	Signature	
	Prepared by	Danya Braun
	Signature	Hours
	Reviewed by	Dave Hardy
	Signature	Block
	Approved by	Dave Hardy

Table of Contents

1.0	Introduction1
2.0	The APM Project4
3.0	Values and Aspirations of Creighton6
4.0	Summary of Community Assets – Key Issues, Aspiration, Capabilities and Capacities8
5.0	Community Well-Being Assessment12
5.1	Implications for Human Assets in Creighton12
5.2	Implications for Economic Assets in Creighton17
5.3	Implications for Infrastructure in Creighton22
5.4	Implications for Social Assets in Creighton26
5.5	Implications for Natural Assets in Creighton30
5.6	Community Well –Being Summary
6.0	Criteria to Assess Factors Beyond Safety - Summary36
7.0	Relationship Building and Engagement Summary41
7.1	Overview of Engagement41
7.2	Summary of Issues and Questions Raised42
7.	2.1 Key Challenges, Issues and Comments
7.	2.2 Summary of Key Interests/Questions
7.	2.3 Ongoing Engagement
8.0	Key Questions in the Site Selection Process - Summary45
9.0	References

1.0 Introduction

This Community Well-being Assessment Report aims to provide a summary of the expected influences that the APM Project will have on the overall community well-being of Creighton, Saskatchewan. Creighton is located on the east central edge of Saskatchewan adjacent to the Manitoba border next to Flin Flon, Manitoba (and Flin Flon, Saskatchewan) and less than 20 kilometres from Denare Beach, Saskatchewan. Creighton has a close relationship with nearby Flin Flon and Denare Beach and many services and facilities are shared among these communities. By road, Creighton is approximately 550 km north east of Saskatoon.

The Report also seeks to answer some fundamental questions to assist the NWMO and the community in understanding the suitability of Creighton to move forward in the siting process. While each of the communities currently participating in the learn more process will likely benefit in many ways from the APM Project and the economic development and employment opportunities associated with it, there are certain unique uncertainties and priorities to be managed for each community.

Work has been completed to understand the overall community profile of Creighton, and also to understand and summarize the ways in which the APM Project might affect the community and the surrounding areas. In concert with the community NWMO worked to develop an understanding of the community today and its goals and aspirations for the future. To this end information has been assembled and studied through a variety of means including a visioning exercise, engagement activities, community visits and tours, Community Liaison Committee meetings, open houses and the development of a community profile.

All of this research and study, along with professional judgement, is used in this report to understand the potential implications of the APM Project on the community's well-being and gain insights into the unique uncertainties and priorities that need to be managed.

As outlined at the inception of this step in the site selection process, the objective of the social, economic and cultural assessment is to assess both the potential to foster the well-being of the community and surrounding area and the potential to create the foundation for community and surrounding area confidence and support needed to implement the APM Project. In Phase 1 of this assessment, which is the focus of this report, the intent is to explore the potential to foster the well-being of the community and, for this reason, the subset of factors and considerations related to the community are addressed at this time. Regional considerations are noted where early insight is available, however more detailed work would be conducted in Phase 2 should the community be selected to proceed to this phase of work and agree to do so.

A number of factors were identified as minimum criteria to consider in the site selection process in assessing the potential to foster well-being¹:

- Potential social, economic and cultural effects during the implementation phase of the APM Project;
- Potential for enhancement of the community's and the region's long-term sustainability through implementation of the APM Project;
- Potential to avoid ecologically sensitive areas and locally significant features;
- Potential for physical and social infrastructure to adapt to changes resulting from the project; and
- Potential to avoid or minimize effects of the transportation of used nuclear fuel from existing storage facilities to the repository site.

In order to ensure that a broad, inclusive and holistic approach is being taken to assessment in these areas, a 'community well-being' framework was identified to help understand and assess the potential effects of the APM Project. This includes exploring the APM Project, understanding how the community may be affected were the APM Project to be implemented in the area, and identifying opportunities to leverage the APM Project to achieve other objectives the community considers important. The framework is also used to explore the relative 'fit' of the APM Project for the community and the potential to create the foundation of confidence and support required for the implementation of the project.

The framework is designed to encourage exploration of the APM Project through five different 'lenses':

- **People or Human Assets** How might the implementation of the project affect people?
- **Economics or Economic Assets** How might the implementation of the project affect economic activity and financial health of the area?
- **Built Environment or Physical Assets** How might the implementation of the project affect infrastructure and the physical structures which the community has established?
- Society and Culture or Social Assets How might the implementation of the project affect the sense of belonging within the community, and among residents, and the services and network of activities created to serve the needs of community members?
- **Natural Environment or Natural Assets** How might the implementation of the project affect the natural environment and the community's relationship with it?

¹ NWMO, 2010. Moving Forward Together: Process for Selecting a Site for Canada's Deep Geological Repository for Used Nuclear Fuel.

This report begins with an overview of the basic assumptions about the APM Project and potential effects used for the preliminary assessment. The community's priorities/key issues, aspirations, capabilities and capacities are described. Next, the report explores the implications of implementing the APM Project on the well-being of the community in terms of the five 'lenses' or asset categories. The preliminary findings are also considered in terms of the 'criteria to assess factors beyond safety' identified by the NWMO prior to the initiation of the siting process. A summary of relationship building and engagement activities, and the issues and questions raised to date is provided. The report concludes by addressing key questions framed by the NWMO at the outset of the site selection process.

Ultimately, the potential effect of the APM Project on the well-being of a community needs to be identified and assessed by the community itself. This includes identifying the broad range of factors that need to be considered, the approach to measuring potential effect on well-being and judgements about the magnitude of this effect. It is also recognized that more detailed studies and further investigations of community specific risks and uncertainties will be required if the community continues in the siting process.

This report reflects the insight from desktop research and professional judgement, as well as reports shared by the community, insight provided by Community Liaison Committee members through their regular meetings over the course of more than a year, and individual discussions with community leaders and residents and others in the surrounding area. In preparing this report, we have been welcomed into the community and community members have graciously shared their time. We are extremely grateful for their time and participation.

2.0 The APM Project

The APM Project is currently still in early stages of design. Thus there remains flexibility in the nature and scope of its implementation. This provides an opportunity for the Project to be structured and operated in a manner that suits the conditions and aspirations of the host community and surrounding area. However, it is important at this early stage of the preliminary assessment to understand the potential implications of the project on the community and its surrounds. In doing so, this requires some basic assumptions about the Project and initial effects. The starting assumptions for this preliminary assessment include the following:

 The on-site labour workforce required by the APM Project is in the range of 400 – 1,200 jobs and further jobs (indirect and induced) and community wealth creation will result from project spending for goods and services and employee income spending². The following table summarizes the estimated number of direct, on-site jobs throughout the life of the APM Project, which spans over 150 years.

APM Phase	Number of Years (approx.)	Direct Jobs per Year (approx.)	Primary Skills Required
Construction	10	400-1,200	Mining, engineering, geoscience, safety assessment, manufacturing, construction, trades, project management, social science, engagement, communication, transportation
Operation	30 or more	700-800	Mining, engineering, geoscience, safety assessment, manufacturing, trades support, project management, social science, engagement, transportation
Extended Monitoring	50 or more	100-150	Geoscience, safety assessment, mining
Decommissioning and Closure	30	200-300	Mining, construction trades, geoscience, safety assessment, regulatory affairs
Long term monitoring	100 or more	25-50	Environmental and health and safety monitoring

Table 1:APM Job Estimate for Creighton³

- 2. Realization of employment benefits will depend on a variety of factors such as:
 - A. Preference for local hiring and sourcing from local businesses;
 - B. Training of local residents for positions in the project or in supporting services; and
 - **C.** Planning to prepare for and leverage future opportunities.

² NWMO, 2012. Description of Canada's Repository for Used Nuclear Fuel and Centre of Expertise.

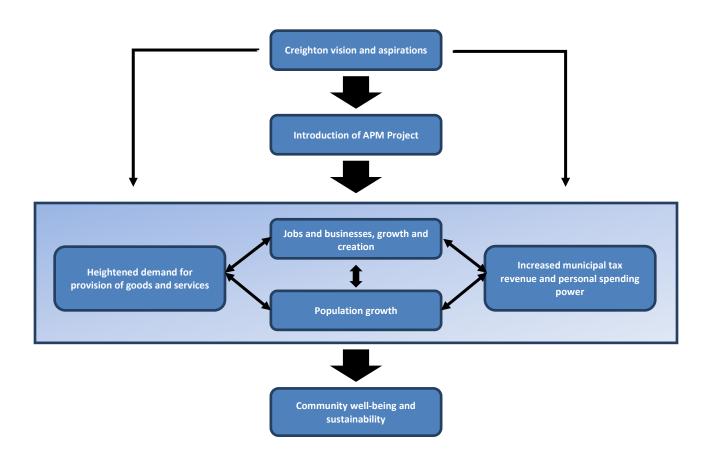
³ NWMO, 2012. Description of Canada's Repository for Used Nuclear Fuel and Centre of Expertise. Pg 33

The APM Project will be implemented through a long-term partnership involving the community, neighbouring communities and Aboriginal peoples in the area and the NWMO. Only through engagement, dialogue and collaboration will the NWMO ensure that needs are addressed at each stage of the process, and determine the specifics of how a partnership arrangement would work. For illustration purposes only, employment opportunities could be in the order of hundreds of new jobs (direct, indirect and induced) within the local area⁴. However, it will be up to the community to determine the nature and scope of how it wishes to grow in discussions with the NWMO.

3. The NWMO is committed to working with communities and those in the surrounding area to optimize the benefits that will positively contribute to the overall well-being of the area.

Figure 1 provides a graphical representation of the direct and indirect effects that may result from the siting of the APM Project. The figure illustrates how the project could be the impetus for growth in population, business activity and municipal finances.

Figure 1: Direct and Indirect Results of the APM Project



⁴ AECOM, 2010. A Preliminary Assessment of Illustrative Generic Community Economic Benefits from Hosting the APM Project.

3.0 Values and Aspirations of Creighton

The Town of Creighton has expressed explicit values, aspirations and desires for its community. These have been documented in the Creighton Community Profile (based on statistical and interview data) and various other community reports including the community vision as documented in the Town of Creighton Official Community Plan (2011). Key themes are summarized in this section. The preliminary assessment, which is the topic of this report, is measured against these values and aspirations:

- 1. Economic Development: Creighton would like to identify a diverse range of economic opportunities and achieve economic diversification, assist entrepreneurs, and attract and develop industries that provide stable and well-paying jobs. Creighton would like to encourage partnerships with economic development agencies at a local and regional level (e.g. regional government organisations as well as local and regional businesses).
- 2. Infrastructure and Facilities Development: Creighton would like to support the renewal of infrastructure and existing facilities (Provincial roads, highways and water/wastewater facilities). They would like to encourage new high quality housing (and affordable housing as well as seniors housing), and more support retail shopping outlets as well as renovate and/or build new cultural and recreational facilities such as a sports-plex.
- 3. **Provide Employment Opportunities:** Creighton would like to provide meaningful and equitable employment opportunities for local residents. They would like to encourage the younger population to live and work in the community, expand training, youth centres and educational opportunities to encourage youth to stay in the community after high school graduation.

These aforementioned values and aspirations are aligned with the Town of Creighton's Municipal Vision⁵:

'Creighton will manage growth in a way that maintains and enhances community livability. Council will ensure that the character of the residential areas is protected and that commercial areas are attractive, viable and complementary to their neighbourhood. Council will protect natural areas, provide green space and enhance recreational opportunities and facilities to meet the needs of residents. Creighton will function as the service and recreation hub for northeast Saskatchewan.'

The Official Community Plan outlines the following goals:

1. Be sustainable, healthy and safe, and a place in which today's quality of life will be enjoyed into the future.

⁵ Town of Creighton, 2011. Creighton Official Community Plan.

- 2. Be a community in which people of all ages, family structure, backgrounds and interests can live, work and play.
- 3. Provide a range of economic opportunities and sustain a healthy and diverse economy.
- 4. Work with the Churchill River Enterprise Region⁶ to identify opportunities and action plans for economic tourism development.
- 5. Balance competing interests and values, maintain fairness and equity and involve residents and stakeholders in decision making processes.
- 6. Be a leader for inter-municipal cooperation to ensure that residents have access to resources and essential services at equitable prices.
- 7. Work with the Hudson Bay Mining and Smelting Company to ensure that mining activities are held to the highest environmental standards to ensure health and safety of residents is maintained.
- 8. Preserve and enhance recreation and park green space in the municipality to ensure residents continue to have the opportunity to live an active and healthy lifestyle⁷.

⁶ Former Saskatchewan regional economic development organization – Disbanded in March 2013.

⁷ Town of Creighton, 2011. Creighton Official Community Plan.

4.0 Summary of Community Assets – Key Issues, Aspiration, Capabilities and Capacities

As described in the Creighton Community Profile, Creighton has several priorities and key issues, aspirations, capabilities and capacities that are most vital to the well-being of the community. These are organized to describe the characteristics of the community through five different perspectives or 'lenses':

- Human: Skills, knowledge and essential services supporting the well-being of the community;
- **Economic**: Monetary or financial resources supporting the well-being of the community;
- Infrastructure: Basic physical infrastructure supporting the well-being of the community;
- **Social**: Social and community activities in which people participate and the resources drawn upon to support well-being; and
- **Natural environment**: Nature and the natural environment important to well-being.

The characteristics of the community are referred to as 'assets' throughout the report. This is intended to highlight their importance and pave the way for a broad and holistic discussion of how the community may be affected by the APM Project, or other large projects which the community may consider.

Table 2 summarizes the priorities and key issues as understood through desktop research, review of municipal documentation and discussions with community leaders and residents. Table 3 sets out the aspirations of the community that were articulated by community leaders and representatives. Table 4 describes some of Creighton's capabilities to overcome key issues, address main priorities and achieve aspirations as understood through discussions with the community.

The findings in these tables provide the foundation for the preliminary assessment of community wellbeing and the potential implications of the APM Project.

Asset Category	Overall Priorities and Key Issues
Human	The population of Creighton (as well as surrounding area) has been in slight decline since 2001. Despite the decline in population, there is growth among some groups. There is some aging of population and seniors are choosing to retire in community. The communities are stable in terms of mobility status, and few people are moving in or out of the wider area.
	Health care is a key issue in the area. The health care facilities and services in Creighton and area serve the local population but there is room for the provision of more bed capacity. There is an opportunity for expansion of health services and the need for additional staff.
Economic	The key priorities are diversification of the economy and achieving economic growth. Taking better advantage of junior mining exploration spending in the area is also a priority economic asset. Priorities and issues also relate to the strength of the labour force, breadth of employment opportunities and continuation of major industries.
	Income is another key priority in Creighton. Income levels are relatively high and people with skilled occupations are well paid. The priority is maintaining affluence and the level of disposable income.
Infrastructure	Priorities and key issues include maintaining and upgrading existing infrastructure, new infrastructure and upgrading regional and provincial roads. Currently, a priority is to achieve more lots for commercial, industrial and residential development.
Social	Overall, the area is well equipped to accommodate growth. There are a range of non-profit and volunteer organizations supporting community well-being in relation to social assets. Quality of life is high in Creighton. The arts and cultural scene is outstanding for a community of this size. The availability of seniors housing is an issue and priority.
Natural Environment	In relation to natural assets, the most important things to note about Creighton are the rich natural resources and outdoor environment. Creighton has a healthy ecosystem with variety of landscapes including some localised features reflecting past mining impacts.

Table 2: Summary of Priorities and Key Issues

Asset Category	Overall Community Aspirations
Human	Residents aspire to maintain their quality of life. There is a sense of community pride, and residents state that Creighton is a great place to raise families. The population has already managed a large project in the community and has addressed changes (e.g. closure of the Hudbay smelter).
Economic	The community aspires to diversify the economy and have another large industry or business locate in the area. They also aspire to continue to have a strong labour force, more mining and exploration companies in the area, and stronger municipal finance to help pay for infrastructure. The economy is supported by the administrative and retail sectors.
	The economy is supported by the natural and resource-based environment. Maintaining and preserving the natural environment is a community aspiration for local use and enjoyment as well as tourism activities. Tourism is an important part of the economy and many people are employed in tourism related jobs.
Infrastructure	A community aspiration involves the provision of suitable housing for existing residents as well as new residents. The housing stock in Creighton is aging. The dominant housing style is the single family detached home, with few apartment dwellings and modular homes. Homes in Creighton are affordable and the community aspires to keep it this way. Creighton has a community centre, schools and a sports arena, although some replacements
	and new facilities are needed. The community aspires to have a modern sports-plex.
Social	Creighton is interested in attracting creative and artistic activities. Creighton's identity and cultural assets set it apart as a unique place to live, work and play and the community encourages the development of its creative scene. Creighton has a vibrant arts and cultural scene with many arts, musicians and historians actively involved in community life. There is also a variety of sports clubs and voluntary organizations. There is volunteerism and community involvement in Creighton and area with many service clubs (e.g. Rotary Club, Lions, Kinsmen, Masons, etc.) actively participating in the community. Creighton aspires to increase community well-being through new sports, arts and meeting complexes.
	Cultural heritage is also prevalent in Creighton. Residents aspire to maintain as well as enhance cultural heritage features such as local museums.
Natural Environment	Maintaining and preserving the natural environment is an aspiration for Creighton. Tourists and local residents value the intrinsic nature of their setting within northern Saskatchewan and northern Manitoba's vast wilderness. There are many lakes and forests, where people participate in various outdoor recreational activities such as ATVing and fishing.

 Table 3:
 Summary of Community Aspirations

Asset Category	Community Capabilities
Human	In terms of human assets, the community and area is currently managing a large mining project in a way that maintains their community well-being. Moreover, the workforce in Creighton is well-skilled, highly adaptable and used to changes in economic activity. Even though Creighton and Flin Flon have the one major industry, the communities function as government and administration centres, as well as health and retail service centres. A variety of other employers are prevalent in the communities.
	Educational facilities in Creighton provide special education and training courses. In addition, there are training programs at the local colleges for residents furthering their careers in resource extraction and mining activities.
	Emergency services in Creighton, Flin Flon and Denare Beach are well equipped to handle emergency situations. There is commitment of local volunteers and Hudbay also complements the local services.
Economic	In relation to capabilities and capacities, Creighton has the capacity to take on new enterprises and the community is entrepreneurial. The area is receptive to economic development, supported by agencies such as the Greenstone Community Futures and the Flin Flon Chamber of Commerce. There is a strong governance structure in Creighton with the Mayor and Council, supported by staff. The community and area is capable of taking on economic growth.
Infrastructure	The most relevant infrastructure components are water, waste water and waste management infrastructure services. The area is capable of absorbing increased demands for housing. Housing a larger workforce would require an expansion of housing stock and water and waste water infrastructure. Creighton is accessible by road, rail and air, although it is removed from larger centers.
Social	There are recreational opportunities for both indoor and outdoor activities. The recreational facilities in Creighton cater to a variety of interests including sporting facilities and park space. However, the area has struggled in terms of capability for obtaining finance for additional facilities.
	There are some social assistance households in the community and functional social housing programs. As with many communities, there is a need for more social and affordable housing. There appears to be the capability of achieving more seniors housing through local private investment. There are social support institutions in Creighton. There may need to be the provision of more childcare services Additionally, there is access to social services (e.g. employment support, women's shelters, etc.).
Natural Environment	The Creighton area is noted for mineral deposits, which provide the natural resources for the various extraction activities in the region. This is a vast natural setting that provides many opportunities for tourists and residents to participate in outdoor activities.

Table 4: Summary of Community Capabilities

5.0 Community Well-Being Assessment

In this section, the effect of implementing the APM Project on the well-being of the community is examined through each of five different perspectives or 'lenses'. These are referred to as 'assets'.

5.1 Implications for Human Assets in Creighton

This section provides an analysis of human assets and their implications for the APM Project in Creighton. For the purpose of this analysis, the Human Assets within a community are understood to include the skills and knowledge inherent in it and the ability of a community to provide its residents with access to other skills, knowledge and essential services that are fundamental to maintaining community well-being, quality of life or a desired standard of living. In this analysis, the specific indicators examined included:

- Population Size and Demographics;
- Skills and Labour Supply;
- Education; and
- Health and Safety Facilities and Services.

Current Creighton Profile for Human Assets:

The population of Creighton has been in slight decline since 2001. Despite the decline in population, there is some growth in the area (including other nearby communities). Residents note that there are many Manitoba residents residing at or moving to lake and cottage areas that are considered to be part of the population base but have not been captured in the Census count. The population tends to be younger, but there is some aging of the population and seniors are choosing to retire in the community. The communities are stable in terms of mobility status. While people locate in the area for mineral exploration jobs, there are few net people moving in or out of the wider area.

Educational facilities in the Creighton area are good. There are specialized educational programs (e.g. French immersion) available for students and the quality of the teaching staff is high. In addition, there are training programs at Northlands College and University College of the North for residents furthering their careers in resource extraction, mining and other subjects.

The health care facilities and services in Creighton are good, but there is room for improvement, especially in terms of providing additional bed capacity at Flin Flon General Hospital which also services Creighton. There is also an opportunity for improvement to facilities and a need for additional specialists. More complex procedures require patients to go to larger provincial centres or wait for visiting specialists.

Emergency services in Creighton, Flin Flon and Denare Beach are good and they are well equipped to handle emergency situations. The fire and emergency teams have excellent response capability and they either have modernised equipment or replacement plans for existing equipment. Hudbay has a mine rescue team and supports local community emergency response teams.

The APM Project has the potential to have a positive effect on the human assets in Creighton:

Population and Demographics

The APM Project will attract temporary and permanent workers as well as former out-migrants back to the community thereby increasing population levels. The presence of the APM Project may maintain a broad demographic mix of the population by attracting and retaining a younger workforce as well as creating a more representative mix of age groups in the region. People may continue to be attracted to the region for resource extraction-related activities in parallel to population increases due to the APM Project. This level of growth is desired in Creighton.

Skills and Labour Supply

Government, tourism and retail services are major employers. However, many labour force participants in northern Saskatchewan in general, and Creighton in particular, are engaged in mining or mine related services due to the strength of resource extraction in the region. As a copper and zinc mine operation, Hudbay is already a major employer in these communities. Workers are currently attracted to the region due to employment in other mines. Cameco also has a strong presence in the north. Local Cameco workers commute on a week-on week-off basis to uranium mining jobs further north. Some residents are uranium miners familiar with radiation or are skilled miners familiar with robotic mining techniques.

The APM Project will be able to utilize the available skilled labour force already found within the community specific to mining, engineering, retail services, safety assessment, geoscience and transportation. In addition, the APM Project may contribute to labour and skills diversification within the communities with the influx of workers who have training in many different areas related to facility construction, operations and maintenance. Notwithstanding APM Project labour force requirements, mining, tourism and government services occupations will continue to characterize the skills and labour supply in Creighton. Some of these occupations may see an increase due to demands by the APM Project for certain services.

For illustration purposes only, employment opportunities could be in the order of hundreds of new jobs for current and new residents of Creighton and surrounding local communities including First Nations communities. These jobs may include a variety of professional as well as skilled labour occupations in mining, engineering, safety assessment, manufacturing, trade support, geoscience, project management, social sciences, engagement, communications and transportation. The communities have past experience in managing the expansion and contraction of the workforce.

The APM Project's new occupations may change the skills mix available within the local labour pool. Increased diversity may occur when new types of occupations and skills required for the APM Project that are presently not available within Creighton are introduced. The APM Project may also attract workers into the community from other local and regional locations.

The community is currently experiencing an under-representation of professionals (e.g. doctors, dentists, accountants, surveyors, engineers, and planners) and this may be improved with the APM Project as an influx of workers may attract more professionals to the area to support the growing population. The community has many skilled tradespersons.

Educational Programs and Training Facilities

The APM Project may increase enrolment at day care facilities, public and separate elementary and secondary schools as well as local training institutions. Similarly, there may be increased demand for alternative programs (e.g. Montessori, Waldorf), after school enrichment programs (e.g. clubs, activities, tutors), and for English as a Second Language programs. There may be increased demand for distance education or training at a university level as well as general interest and adult learning programs. There may be changes in curriculum and an expansion of student positions at Northlands College and University College of the North to support APM Project training opportunities. All of the above align with Creighton's aspirations to further expand educational facilities and programs in the community.

Health and Safety Facilities and Services

The APM Project will result in increased demand on all existing health and safety facilities and services due to the increased population. A broader range of medical specialists in local clinics and the Flin Flon hospital may be required. Creighton and Flin Flon health care centres may be expected to provide specialized equipment and staff training to accommodate the increased population's pressures on local facilities. Coupled with increased demand, there will be stimulus for planning and expansion of health care facilities and services.

In summary, it can be expected that the APM Project would bring positive net benefits to the human assets in Creighton were the project to be implemented in the area. The APM Project will help Creighton realize its aspirations and goals, and it would drive development and expansion in other aspects of its community well-being.

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations					
	HUMAN ASSETS:										
Population Size and Demographics	Stable or Increasing Population Retention of youth and young families	Stable population with an aging demographic		Growth in population and diversity		 Creighton has experienced a slight decline in population and an aging demographic profile. Community has expressed a desire to grow and diversify its population. Area has other resource extraction potential and opportunities that may attract population. APM Project offers potential to grow the population by creating jobs and attracting and retaining a younger population. 					
Skills and Labour Supply	Presence of a diverse, skilled workforce	Varied skills suited to resource extraction and associated activities		Job creation and growth of a diverse, skilled workforce		 Creighton has a stable workforce with skills in resource extraction and associated activities. APM, as an additional major employer, would likely attract new skilled and diverse workforce and bring in new families. Offers diverse career opportunities for local residents in direct and indirect jobs. 					
Education	Access to education and training Increased enrolment and programming	Access to post- secondary training is locally available		Increased enrolment and opportunities for education and training Broader range of programming		 Creighton has a number of educational facilities and training programs including some that are post-secondary to serve local and surrounding area communities. Wide range of new local employment/career opportunities with the APM Project will attract young families to the area, increasing enrolment. Creighton would require planning and support to educate and train current workforce and future generations to take advantage of career opportunities. 					

Table 5:CWB Implications for Human Assets in Creighton

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations
Health & Safety Facilities and Services	Access to full range of health services 24/7 Fully serviced by emergency responders	Available to meet current needs with some requirements for upgrades Emergency response needs adequately met		Increased demand on services and facilities Catalyst to broaden supply of services and facilities, particularly healthcare		 Good healthcare is available; with a broad range of specialty healthcare services. Emergency services are adequate for community at this time. With growth, demand for health and safety services will increase. Conversely, growth may also stimulate planning and expansion of health and safety facilities and services.
Legend						
Declining – Negative Neutral – Offsetting Effect	ts					
Increasing – Enhanced – Po Uncertain	ositive					

5.2 Implications for Economic Assets in Creighton

The economic assets within a community are understood to include the monetary or financial related resources that people use to achieve their well-being objectives. It includes cash or equivalents to individuals and/or their community, and availability of financial and economic resources that allow the community and residents to manage their finances and wealth. In this analysis, the specific indicators examined included:

- Employment;
- Income;
- Business Activity;
- Tourism;
- Economic Development Services; and
- Governance and Municipal Finances.

Current Creighton Profile for Economic Assets:

Labour force activity in Creighton is strong, especially compared to other northern, rural and remote centres. More people in the community are joining the workforce and unemployment is decreasing. Generally, there is resiliency among local merchants, but they are still subject to outside pressure. It is difficult to secure financing for commercial expansion. There is a regional market area that supports a range of small and medium sized enterprises.

As with most Canadian Shield communities, it can be challenging to attract housing in the communities due to the environmental conditions (e.g. rock outcrops) that make it expensive to build. The long distances from major centres and Provincial road conditions are also contributing factors.

Income levels are relatively high and people with skilled occupations are well paid. Creighton residents generally have higher levels of disposable income. Poverty and low income is prevalent in the wider region, although entrepreneurship is increasing.

Creighton is able to take on new enterprises. The community is entrepreneurial and has strong leadership. There is a strong governance structure in Creighton through the Mayor and Councillors and municipal staff. Creighton's municipal finances are in good shape.

The APM Project has the potential to have a positive effect on the economic assets in Creighton:

Employment

The APM Project may provide longer-term stability than resource sector employment. The APM Project will increase the number and diversity of skilled employment opportunities in the community. A greater variety in employment opportunities may offer more sustainable and diverse career paths for youth within the community and the surrounding region and further encourage youth to live and work in Creighton.

The APM Project may attract large numbers of workers to the community from the region, Province and other jurisdictions as well as increase the number of indirect and induced support industries and services. There may be continued stability and profitability for current industries with more demand for local business services from a growing population.

Income

Overall, the APM Project's income effects for local residents will be positive and build on existing higher incomes as well as help people to maintain their current levels of disposable income. Rising household and individual incomes may be achieved when new residents begin earning higher incomes. Through the provision of new income opportunities, the APM Project may help to reduce overall reliance on government transfer payments to individuals and families.

Business Activity

The APM Project and worker related spending may increase the number and diversity of businesses in the community and create new business linkages, synergies and agglomerations. The APM Project and worker spending may also encourage people to spend money in the community. This is especially important for the retention of existing retail and development of new retail businesses. Moreover, there may be some capture of the economic outflow of spending from residents shopping in other urban centres.

The APM Project may expand the employment base, business sales and profitability within the community. Community-based firms such as Canadian Tire and Wal-Mart may have greater certainty and other similar firms may be attracted to Creighton and Flin Flon. Overall, larger businesses may be supported and room can be created for additional large businesses. Moreover, there is the potential for more hospitality services (e.g. an additional hotel, expansion of conference facilities) due to increased local demand.

As an indicator of the strength of the retail sector, local and area merchants are able to capture community spending although the opportunity exists for some updating of retail sector buildings. The new business and industrial activity from the APM Project will allow the labour force of some sectors to grow and expand (e.g. retail and service sector, resource-based supply chain types of industries). The APM Project may provide increased stability and potential expansion in the entertainment and cultural

industries. However, there may be pressure on government services to address increased demands on facilities and services.

Tourism

Creighton has a strong tourism sector. The APM Project may increase the number of travelers and tourists coming to Creighton. Conversely, the APM Project may compromise the perception of the natural wilderness and associated tourism economy. However, based on discussion with community members, any negative perception effect that does occur is expected to be minimal. In addition, with more people visiting the community for business-related activities, there is potential for the APM Project to take up tourist accommodation, thereby displacing tourists. Some community members expressed an interest in the potential for the APM Project to increase business and tourist visitation to the area through an influx of new residents and associated visiting friends and relatives. With the potential for increased tourism, there may be greater support for the establishment of tourist facilities that will make Creighton an attractive place to live and to settle down in. Although there is some uncertainty regarding the impact on public perception, efforts may need to be taken to proactively avoid negative effects due to the presence of the facility.

Economic Development Services

The APM Project will encourage new economic development initiatives across a wider variety of sectors. It may strengthen the community's economic development efforts and allow entrepreneurs to invest with more certainty. The APM Project may provide a focal point for additional developments such as: transportation, post-secondary training and education, tourism, accommodations and other services. This may support a large construction, approvals and operations workforce. Creighton's economic development department resides in its municipal offices. However, there may be a need to facilitate the establishment of additional economic development resources due to the APM Project.

Governance and Finances

Creighton has a stable municipal finance situation due to prudent spending of tax dollars and its ability to collect tax revenues from Hudbay. Assuming Creighton can capture tax revenues, the APM Project may offer an even more favourable ratio of residential to industrial/commercial taxes. Furthermore, increased funding may greatly increase Creighton's ability to support expenditure budgets for new infrastructure (such as roads, water, etc.) and services (e.g. recreation) to support a growing population.

The APM Project will provide Creighton with the potential for strong economic benefits. In order for Creighton to optimize project benefits, it would be helpful to support education and training of the labour force, enhance the capacity of the municipality and residents, and provide advice to businesses on project opportunities.

Criteria / Measures	Ideal CWB Condition	Current Creighton F	rrent Creighton Profile		Profile ect	Observations	
				ECONOMIC AS	SETS:		
Employment	Increasing employment opportunities for residents	Increasing participation rate		Growth in the number of and diversity of employment opportunities in the community		 General labour trends in the community show more people joining the workforce and unemployment is decreasing. Hudbay continues to be the dominant employer in the area. APM Project would offer increased employment and a more diverse range of employment opportunities and careers for both community and regional residents. 	
Income	Household income growth and diminished need for social assistance	Relatively high household income above national average		Growth in employment and as a result growth in household incomes and wealth creation		 Creighton is a relatively affluent community characterized by high incomes and two-income families with high disposable income. APM Project would create more local jobs and diversify the economy and as a result this will further stimulate growth in household income and wealth creation. 	
Business Activity	Business growth and increasing business diversity	Diversity of businesses with some need to ensure people spend locally		Growth in business activity leading to growth in the number and diversity of businesses		 Business activity in the area focuses on mining, smelting, retail and tourism and is relatively stable. APM Project would diversify the economy and further create local direct and indirect jobs and stimulate business activity across the community. 	
Tourism	Stability or growth in area tourism	Tourism is predominately visiting relatives with some national and international visitors for fishing		Potential deterioration in tourism as a result of negative perception and project concerns Potential increase in tourism with		 Tourism is a strong contributor to the local economy and outside of family visits, is focused on the natural environment. APM Project may result in negative perceptions of the area, but may also provide new markets for local tourist industry through population in-migrating to realize employment opportunities and visitors coming to area to learn about the project. 	

Table 6: CWB Implications for Economic Assets in Creighton

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations
				niche market		
Economic Development Services	An active, economic development organization that has demonstrated success in attracting businesses to the community	Creighton and area have active economic development organizations		Businesses will want to locate in the community to take advantage of the business opportunities directly and indirectly created by the APM Project		 Creighton and area are actively pursuing economic development opportunities. APM Project would provide a catalyst for further economic development through its own presence and creation of associated business opportunities. Creighton may need some assistance to plan and implement a strategy that will fully realize the economic development opportunities presented by the APM Project.
Governance and Municipal Finances	Community is financially sustainable over short and long term	Local fiscal strength		An enhanced tax base with solid contributions from industrial and commercial properties Additional revenues to cover operating and capital requirements		 Creighton has a healthy financial position. Community has experience with the implementation of large projects. APM Project by its presence would elevate revenues available to the municipality.
Legend						
Declining – Negative	•					
Neutral – Offsetting	Effects					
Increasing – Enhance	ed – Positive					
Uncertain	\triangle					

5.3 Implications for Infrastructure in Creighton

The infrastructure or physical assets within a community include the basic infrastructure needed to support well-being and the tools or equipment that people use to function more productively. Infrastructure is a public good and improved access to it increases community well-being and quality of life. In this analysis, the specific indicators examined included:

- Land Use;
- Housing and Property Value;
- Municipal Infrastructure and Services; and
- Transportation Infrastructure.

It should be noted that while these indicators are a subset of those included in the Community Profile, these are the key indicators that are thought to be most important to Creighton in terms of its physical well-being.

Current Creighton Profile for Infrastructure Assets:

Creighton has provisions in its Official Community Plan for residential, commercial and industrial development. Creighton has constrained growth ability due to the physical layout of outcrops like most Canadian Shield communities. Furthermore, the cost of servicing lots is high. However, Creighton is proceeding with lot servicing and working to attract private sector developers to build new housing.

The housing stock in Creighton is aging. The dominant housing style is the single family detached home, with few apartment dwellings and modular homes. More apartment style housing would be needed for incoming residents. Homes in Creighton are affordable. Plans for new seniors housing are currently being considered.

Creighton's community centre, schools and sports arena are also in good shape, although some replacements and new facilities are needed. A new arts/cultural/recreational/ sports-plex type of centre is on the list of 'wants' for local residents and politicians. Creighton has adequate water and wastewater infrastructure, however it will require updating.

Creighton is accessible by road, rail and regularly scheduled passenger air service, although it is removed from larger centres.

The APM Project has the potential to have a positive effect on the infrastructure assets in Creighton:

Land Use

In order to reach the community's development goals and aspirations to attract new businesses and housing developments to the community, Creighton may need to undertake the following activities.

Creighton may have to ensure that its commercial and industrial lands are properly serviced in order to optimize investment and development. Creighton may also require assistance to undertake a commercial and industrial study as well as a retail study to ensure that the preferred and required types of development are attracted to the community. Additional plans for subdivision and land use zoning for residential uses in anticipation for the influx of new residents may be needed.

Depending on the location of the APM Project, there will be a need to address the traditional land uses and other land use requirements such as those defined in the Amisk-Atik Integrated Forest Land Use Plan. The Amisk-Atik Integrated Forest Land Use Plan is a Provincial Plan prepared under the *Forest Resources Management Act*. The Plan will facilitate future resource allocation and land sales decisions.

Housing

The community aspires to increase local housing options. The APM Project has the potential to facilitate the expansion of the number of homes and the diversity of housing stock in Creighton. There is also potential to increase the cost of housing in Creighton and its surrounding area depending on the size and rate of labour in-migration. Moreover, there may be instances of low cost housing taken up by temporary resident workers. Creighton may require assistance to undertake a housing study as well as ensure that there is an adequate supply of rental housing. Rental housing may be needed for new residents when they first move to the community before they purchase homes, or for temporary residents.

Municipal Infrastructure and Services

With an influx of an increased population and increased activities with the APM Project, there will be an increased demand for new infrastructure. Major roads are already in need of repair and water and wastewater systems may need updating. The APM Project will result in the overall growth of the community and may require additional planning and improvements for transportation, water and wastewater and solid waste infrastructure.

The community and the NWMO would need to work cooperatively to effectively plan, build, operate and manage each of the physical asset components were the APM Project to be implemented in the area.

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations					
	INFRASTRUCTURE OR PHYSICAL ASSETS:										
Land Use	Land uses are compatible and land use plans share a common vision.	Commercial, industrial and residential land use plans are in place in Creighton New plan of Subdivision in place	→	Basis for new development for all land uses in Creighton		 Creighton may require assistance to ensure that its commercial and industrial lands are as close as possible to 'shovel ready'. Creighton may have to undertake a commercial and industrial study. A retail study may also be required. Create the need for new plans of subdivision and land use zoning for residential uses. Need to address the Amisk-Atik Integrated Forest Land Use Plan and other traditional land use considerations. 					
Housing	Sufficient housing stock to meet all needs and incomes Average house values increase over time in line with household incomes	Housing supply is tight and a variety of new housing is being actively planned		Stimulus to housing prices New housing development Potential shortage of supply if development does not keep pace with demand		 Need to expand the number and diversity of housing stock in the community. APM Project would create a demand for a mix of housing types and tenure arrangements. A supply/demand balance of housing would need to be maintained to prevent excessive price escalation and ensure there is an appropriate supply of affordable housing. 					

Table 7: CWB Implications for Infrastructure Assets in Creighton

Criteria / Measures	Ideal CWB Condition	Current Creighton	n Profile	Possible Creighton Profile with APM Project		Observations	
Municipal Infrastructure and Services	Infrastructure assets are in good condition, well maintained and adequately sized to meet the short and long term needs of the community	All environmental services are in good condition and have capacity		Increased demand for infrastructure and services Enhanced opportunities for new and renewed infrastructure		Creighton's waste water facility and water servicing is relatively new and is serving the current population. The Creighton landfill has adequate capacity and is located within municipal limits. APM Project may place increased demands on existing infrastructure and may necessitate facility replacement or upgrading in some cases along with increased revenues to facilitate infrastructure and service improvements. Creighton may need assistance to plan, operate, maintain, and build new infrastructure as required to meet service demands associated with the APM Project.	
Transportation Infrastructure and Services	A strong complement of transportation facilities and services to meet the needs of the residents and businesses within the community	Provincial and regional roads in vicinity of community are in need of repair		Enhanced opportunities for road improvements		Creighton is served by a regional airport with passenger service. Provincial and regional roads are in need of repair. APM Project would increase road and airport usage and this may facilitate upgrading and expansions.	
Legend							
Declining – Negativ	e 🗧						
Neutral – Offsetting	Effects						
Increasing – Enhanc	ed – Positive						
Uncertain	\triangle						

5.4 Implications for Social Assets in Creighton

For the purpose of this analysis, the social assets within a community are understood to include the social and community activities in which people participate and the resources that they draw upon in pursuit of their well-being. These activities and resources create networks within and between communities, enhance cohesion and generate trusting relationships and community pride. In this analysis, the specific indicators examined included:

- Community Arts and Recreational Facilities and Programs; and
- Social Services and Organizations.
- Community Character

It should be noted that while these indicators are a subset of those included in the Community Profile, these are the key indicators that are thought to be most important to Creighton in terms of its Social well-being.

Current Creighton Profile for Social Assets:

Creighton and neighbouring communities have a vibrant arts and cultural scene with many performers, artists, and historians actively involved in community life, especially for a community of this size. New residents would typically volunteer and participate in arts and cultural activities. There is also a variety of sports clubs and social clubs. Volunteerism and community involvement is strong in Creighton with many service clubs (e.g. Rotary Club, Lions, Kinsmen, Masons etc.) actively participating in the community. Cultural heritage is also strong in Creighton and neighbouring communities which have local museums and other cultural heritage features.

There are both indoor and outdoor recreational activities. The recreational facilities in Creighton cater to a variety of passive and active recreation such as hiking trails and the golf course. However, Creighton and neighbouring communities have struggled in terms of their capability of obtaining funding for constructing additional facilities and updating the aquatic complex.

There are some social assistance households in Creighton and functional social housing programs. Provisions for seniors housing and care facilities are required in the communities. There are good social support institutions in Creighton. However, there are limited childcare services available in Creighton in part due to restrictions on private home day cares. There is affordable housing available, although there is room for improvement. There is access to social services (e.g. employment support, women's shelters, facilities unique to Aboriginal Peoples, etc.).

The APM Project has the potential to have a positive effect on the social assets in Creighton:

Community Arts and Recreational Facilities and Programs

As the arts, cultural and recreational scene in Creighton and Flin Flon is already obtaining national attention for quality, the support from new residents could enhance this even further. For example, the Community Choir has performed at Carnegie Hall in New York City. The Royal Winnipeg Ballet has a regular presence in Flin Flon.

With the expected increase in population and business activity in the community, there may be increased demand for recreational and social clubs and facilities as well as sports facilities (e.g. hockey arenas, curling pads, baseball diamonds, soccer pitches, etc.). This may place a greater burden on existing facilities and programs. With increased demand and a stronger economy, there may be greater potential to receive funds for a new sports-plex, performance and meeting facilities. There may also be increased demands for children's activities (e.g. sports leagues, dance troupes, etc.) and library services with the influx of young families. In relation to sports leagues, new residents may serve as volunteers who may be able to organize sporting clubs and events.

Creighton and local communities currently support three museums. Heritage resources are known and carefully managed. The Northern Gateway Museum in Denare Beach is known as one of the best museums in northern Canada and it has a partnership arrangement with the larger museums in Regina and Winnipeg. The APM Project may result in increased resources to support local art and cultural facilities.

Social Services and Organizations

The APM Project will increase demands on existing social service providers and programs, particularly child care services, due to an influx of people associated with the APM Project. There may similarly be an increasing demand for a broader range of health and safety services due to in-migrant expectations. Upgrades to existing facilities may be required and local hospitals and clinics may need to hire permanent health specialists. The APM Project will also bring increased revenues and resources to support growth of social services and organizations.

Community Character

Creighton is a close-knit community and many local residents play a prominent role in various aspects of community life. Moreover, residents spend plenty of time outdoors participating in various outdoor activities (e.g. fishing, hiking, etc.) and there is a sense of pride in the local natural environment. New residents associated with the APM project would be expected to continue to build on the existing community character.

In summary, the APM Project would have a net positive benefit on the social assets of the community if it was to be implemented in the area.

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations							
	SOCIAL ASSETS:												
Recreational Facilities and Programs	A strong complement of recreational facilities and programs to meet the needs of the residents	Varied recreational facilities available as well as participation in social/service clubs Nationally recognized arts and culture scene		Increased demand for and patronage of recreation programs Enhanced opportunities for new and renewed facilities		 There are many recreational facilities and social programs in Creighton and area, which are important for current and future residents. The community has expressed a desire to develop a new "sports-plex" The community contains good recreational and social infrastructure for the current population and has capacity to serve a larger population. APM Project would bring population into the community and this population may place demands on existing facilities and services and may create need for new facilities and services along with increased resources to support new facilities and programs. 							
Social Services and Organizations	A wide range of services, organizations and media outlets present to support the social fabric and needs of the community	Able to meet current needs although some more programs needed		Increased demand for and use of social services and organizations Enhanced opportunities for new services and organizations		 There is a range of non-profit and volunteer organizations offering social services to the community. Daycare, senior and social housing have been identified as priority needs. APM Project would bring population in to the community and this population may place demands on existing services and organizations and may create a need for new services and organizations along with increased resources to support growth in services and organizations. 							

Table 8: CWB Implications for Social Assets in Creighton

Preliminary Community Well-Being Analysis - Creighton, Saskatchewan

Criteria / Measures	Ideal CWB Condition	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations
Community Character	Strong sense of community identity Cohesive community, Stability of population	Strong sense of pride in history, community and natural environment		Increased sense of community identity		 Creighton has a strong sense of pride associated with community's history, arts and culture and natural environment. Creighton is felt to be a safe, quiet and friendly community for new and existing families. . APM Project would bring growth and stability.
Legend						
Declining – Negative						
Neutral – Offsetting Effects						
Increasing – Enhanced – Positive						
Uncertain						

5.5 Implications for Natural Assets in Creighton

For the purpose of this analysis, the natural environment within a community is understood to include a wide range of natural assets from intangible public goods (e.g. air quality and biodiversity) to resources that are 'used' by people (e.g. water, trees, land and wildlife). In this analysis, the specific indicators examined included:

- Parks and Protected Areas; and
- Natural Areas/Features of Significance.

Current Creighton Profile for Natural Assets:

Creighton has a healthy ecosystem with a variety of landscapes. Moreover, many tourists from the U.S., southern Canada and elsewhere travel long distances to experience these natural assets. Tourists and local residents value the intrinsic nature of their setting within the northern Saskatchewan vast wilderness. There are many lakes and forests, where people participate in various outdoor recreational activities such as ATVing, trapping and fishing. Creighton is noted for its mineral deposits, which provide the natural resources for the various extraction activities in the region.

The APM Project has the potential to have a neutral/positive effect on the natural assets in Creighton:

There may be population pressures on the natural environment with increased residential development, other urban growth and development in the outlying areas (e.g. lakeside cottages). There may also be increased pressure on the natural environment due to recreational activities. With additional people participating in recreational activities in lake areas and trails, more development may occur detracting from the pristine natural environment.

Initial studies on the potential environmental effects associated with the project suggest that the APM Project is unlikely to have any significant negative effects on the natural environment. In principle, there is the potential that visitation to the area may experience some decline with the presence of the facility and any associated negative perceptions due to the project. However, there are examples elsewhere where visitation to natural areas has not been affected. It is expected that through working with Creighton and clearly communicating with the public, any negative perception effects can be mitigated, if not even leveraged to take advantage of increased population growth and visitation associated with the project. Further study is required to better understand and predict the potential effects of the project on visitor perception and use of the area.

As would be the case with any large project, natural areas might be affected during the various phases of the project. Effective mitigation and environmental protection measures will ensure that the overall environmental integrity of the area is maintained. It is understood at this point in time that no significant negative environmental effects are likely during the construction, operation and decommissioning phases of the used fuel repository taking into account mitigation that will be applied. The APM Project contains some flexibility with respect to on-site building designs and energy use to be consistent with environmental and social values. For example, the ability to use renewable sources of electric power, where feasible, coupled with energy-efficient building designs might limit the overall carbon footprint of the project.

Criteria / Measures	Ideal CWB Condition	Current Creighton Prof	File Possible Creigh File Profile with APM Proj		Observations and Implications
			NATURAL ENVIRO	NMENT	:
Parks and Protected Areas	Conservation reserves and parks are supported and maintained and also remain available for use	Natural areas and parks are available for passive and active recreational use Park use has been increasing over time	Potential for increased demand		 Parks and other natural areas have been attracting an increasing number of visitors and are a sense of pride for the community. Potential for increased demand on parks and natural areas. With proper planning and dialogue, resources would remain protected and increased demand managed.
Natural Areas / Features of Significance	Areas and features are protected and contribute to pride of place	Residents are proud of natural areas and use features for passive and active recreation	Potential for increased demand and degradation of features		 As with any large scale project, the APM Project has the potential to have a negative effect on the area's natural areas and features of significance. Further environmental studies would be needed to understand the scale and extent of any environmental effects.
Legend					
Declining – Negative Neutral – Stable Environment – Integ Maintained					

Table 9: CWB Implications for Natural Assets in Creighton

 \Rightarrow

 \triangle

Increasing – Enhanced – Positive

Uncertain

5.6 Community Well –Being Summary

Human assets will be enhanced in Creighton with the introduction of the APM Project. The presence of the APM Project will increase population levels and maintain a broad demographic mix of the population. The APM Project may provide labour and skill diversification within the communities due to an influx of workers. The APM Project may also attract workers to the community from other local and regional locations including people from Aboriginal communities. Additionally, the APM Project will increase enrolment at local schools and will result in increased demand on all existing health and safety facilities and services due to the increased population.

Economic assets will be enhanced in Creighton with the introduction of the APM Project. The APM Project will increase the number and diversity of skilled employment opportunities in the community for residents. Through the provision of new and higher income opportunities, the APM Project may help to reduce overall reliance on government transfer payments to individuals and families. The APM Project will increase the number of travellers/tourists coming to Creighton. With the potential for increased tourism, there may be greater support for the establishment of tourist facilities, making Creighton an attractive place to live and settle down.

In general, infrastructure is in good shape and will be enhanced with the APM Project. APM Project enhancements can bring Creighton in line with its goals and aspirations to attract new businesses and housing developments. Some facilities are new and capable of handling additional growth already. With an increasing population and associated activities due to the APM Project, there will be more demands for new infrastructure. The APM Project will result in the overall growth of the community and may require Creighton to conduct additional planning for infrastructure.

Social assets have the potential to be enhanced in Creighton with the introduction of the APM Project. The APM Project may change the character of the community and the surrounding region due to an influx of skilled residents. Additionally, the APM Project may result in the identification of new archeological sites during on-site investigations. The arts and culture scene is already very good. With the influx of APM workers and families, there may be more variety in arts and cultural activities and more participation in the local arts and cultural scene. Due to increased demands for more recreational opportunities and a stronger economy, there may be greater potential to obtain funds for a new sportsplex and meeting facilities. The APM Project will increase the demand on all existing social service providers and programs, particularly child care services, due to increased population associated with the APM Project.

Some natural areas may be affected by the project. Further dialogue and effective mitigation and environmental protection measures would ensure that the overall environmental integrity of the area is maintained. However, it is expected that effective mitigation and environmental protection measures will be in place to ensure that the overall environmental integrity of the area is maintained.

Table 10:Overall CWB Implications

Criteria / Measures	CWB is Enhanced When	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations and Implications	
			IS:				
Human Assets	Population growth occurs and youth are retained in the community	Positive		Enhanced		 APM Project could grow the community and provide increased stability through economic diversity. Youth would be retained through increased and more diverse employment opportunities and new residents would be attracted to the area. Educational and healthcare resources would be enhanced and new facilities could be developed. 	
Economic Assets	More diverse and stable employment opportunities are available	Positive		Enhanced		 There will be further employment opportunities and a more diverse range of jobs. Increased funding through a wider tax base would provide additional financial resources for Creighton to fund its infrastructure projects, educational developments, community and recreational facilities and programs and social services and organizations. The increased jobs from the APM Project would be the catalyst for Creighton to enhance its community well-being. 	
Infrastructure	Infrastructure is maintained or improved to meet the needs of the community	Stable		Enhanced		 APM Project, while placing increased demands on some of the infrastructure and services, would overall provide increased funding to improve and enhance existing services. 	
Social Assets	Opportunities exist for recreation and social networking. Community is cohesive, and community character is	Positive		Enhanced		 The community would see an overall benefit to its Social Assets through increased participation and funding to its recreational facilities and programs as well as its social services and organizations. With proper planning and communication, no serious social divisions would be expected to occur in the community. Interest in the Project appears to be very positive and the community is largely cohesive on this issue. 	

 \Rightarrow

 \triangle

Environment – Integrity Maintained

Uncertain

Increasing – Enhanced – Positive

Criteria / Measures	CWB is Enhanced When	Current Creighton Profile		Possible Creighton Profile with APM Project		Observations and Implications
OVERALL CWB IMPLIC						IS:
	enhanced.					
Natural Environment	Natural areas, parks and conservation reserves are preserved and maintained for use and enjoyment	Positive		Environment – Integrity Maintained		 Some natural areas might be affected by the APM Project. Effective mitigation and environmental protection measures will ensure that the overall environmental integrity of the area is maintained. It is understood at this point in time that no net negative environmental effects are likely during the construction, operation and decommissioning phase of the used fuel repository itself.
Legend Declining – Negative	e 🔶					
Neutral – Stable						

6.0 Criteria to Assess Factors Beyond Safety - Summary

The previous discussion has taken a holistic approach to the assessment, taking into account the aspirations of the community and the implications of the project for community well-being. The NWMO acknowledges that the process of assessment of community well-being needs to be collaborative and reflective of the community. Before initiating the siting process, and beginning to engage interested communities in the assessment process to understand their aspirations, the NWMO identified five evaluation factors, which, at a minimum would need to be addressed. Table 11 draws on information outlined in the previous discussion to understand the potential to foster well-being in Creighton against these original factors. The table summarizes preliminary findings about the implications of the APM Project, were it to be implemented in the community, on various factors of well-being. Four measures are used: maintained, enhanced, diminished or uncertain. For other evaluation factors, two measures are used: yes or no. The overall conclusion using these evaluation factors and the understanding that has emerged to date is consistent with that outlined in the previous chapter.

Over the course of discussions and conversations, the community identified a number of other important areas for consideration. The community expressed a strong desire to better understand how to engage neighbouring communities, communities on transportation routes and in particular area Aboriginal communities. Creighton realizes that it would be essential to develop relationships with all of the foregoing to support the implementation of the project.

Table 11: Criteria to Assess Factors Beyond Safety

Factors that Address the Well-Being of a Community	Evaluation Factors to be Considered	Potential Effect of APM Project	Discussion Based on Preliminary Assessment
Potential social, economic and cultural effects during	Health and safety of residents and the community	Maintained	• There is a strong safety case, however the community is eager to learn more about safety and health considerations to enhance their confidence in the safety of the project.
the implementation phase of the project, including factors identified by	Sustainable built environments	Enhanced	• Community infrastructure and built fabric may be enhanced through project activities and investments in the community.
Aboriginal Traditional Knowledge	Sustainable natural environments	Maintained	 Some natural areas might be affected by the APM Project. Effective mitigation and environmental protection measures will ensure that the overall environmental integrity of the area is maintained. It is understood at this point in time that no significant negative environmental effects are likely during the construction, operation, and decommissioning phases of the used fuel repository itself.
	Local and regional economy and employment	Enhanced	 Significant employment and population growth will occur in Creighton and surrounding communities – hundreds of new jobs could be created in Creighton. With these jobs comes the potential to increase the current population of Creighton and surrounding communities. New opportunities would be created for local businesses to serve the project and a growing and more diverse population.
	Community administration and decision-making processes	Enhanced	 Local leadership has demonstrated very positive interest in the project and is expected to be able to make informed and effective decisions.
	Balanced growth and healthy, livable communities	Enhanced	 Creighton has expressed a strong desire to diversity its economy and continue to provide stable employment opportunities for new and existing residents. APM Project appears to be a good fit with community objectives and aspirations in this regard.
Potential for enhancement of the community's and	Health and safety of residents and the community	Maintained	 There is a strong safety case, however engagement of surrounding communities is at a preliminary stage and further dialogue would be required to understand and address questions and concerns about safety and

Factors that Address the Well-Being of a Community	Evaluation Factors to be Considered	Potential Effect of APM Project	Discussion Based on Preliminary Assessment
region's long term sustainability through			health considerations related to the repository and transportation of used nuclear fuel.
implementation of the project, including factors identified by Aboriginal	Sustainable built environments	Enhanced	 Infrastructure and built fabric may be enhanced through project activities and investments in the community.
Traditional Knowledge	Sustainable natural environments	Maintained	 Some natural areas may be negatively affected by the project. Further dialogue and effective mitigation and environmental protection measures would ensure that the overall environmental integrity of the area is maintained.
	Local and regional economy and employment	Enhanced	• Substantial employment and economic development opportunities would extend to the surrounding region.
	Community administration and decision-making processes	To be determined	• Engagement of surrounding communities is at a preliminary stage and further dialogue would be required to explore decision making issues and capacities.
	Balanced growth and healthy, livable communities	To be determined	 Engagement of surrounding communities is at a preliminary stage and further dialogue would be required to explore aspirations for growth and well-being.
Potential to avoid ecologically sensitive areas and locally significant features, including factors identified by Aboriginal Traditional Knowledge	Ability to avoid ecologically sensitive areas and locally significant features	Yes	 The area contains suitable sites for the project thus providing flexibility in selecting specific sites that can avoid ecologically sensitive areas and locally significant features.

Factors that Address the Well-Being of a Community	Evaluation Factors to be Considered	Potential Effect of APM Project	Discussion Based on Preliminary Assessment
Potential for physical and social infrastructure to adapt to changes resulting from the project	Potential for physical infrastructure to be adapted to implement the project	Yes	 Creighton and the surrounding areas have multiple modes of transportation, social and economic support services, and capacity to absorb the anticipated growth in population and economic activity. Local roads and infrastructure are generally in good shape and can accommodate some growth in population. Provincial highways can be enhanced. Some investments would be required to accommodate identified infrastructure deficiencies.
	Potential for social infrastructure to be adapted to implement the project	Yes	 Creighton appears to have the necessary core of social infrastructure in place to plan for and adapt to changes resulting from the project.
	The NWMO resources required to put in place physical and social infrastructure needed to support the project	To be determined	 In all likelihood, Creighton would require some assistance in terms of planning, human and financial resources. Further studies will be required to explore the specifics of these requirements.
Potential to avoid or minimize effects of the transportation of used nuclear fuel from existing storage facilities to the repository site	The availability of transportation routes (road, rail, water) and the adequacy of associated infrastructure and potential to put such routes in place from a social perspective	To be determined	 The community and region have access to multiple modes of transportation which appear to have adequate capacity for this project. The accessibility of Creighton to highways and roads is important to community well-being because it demonstrates connectivity between different transportation and community nodes. Creighton is accessible by road, rail and by air. Provincial and regional roads may need upgrading and repairs in order to implement the APM Project. Air travel to major centres is highly accessible with several flights to and from Winnipeg via the Flin Flon Airport on a daily basis. Project transportation will need to address community, logistical and regulatory matters across multiple provinces and multiple jurisdictions including; Ontario, Saskatchewan, Manitoba, Quebec and New Brunswick. Engagement of surrounding communities is at a preliminary stage and further dialogue will be required to help build understanding and address questions and concerns.
	The availability of suitable safe	To be	• Engagement of surrounding communities and those on potential transportation routes is at a preliminary

Factors that Address the Well-Being of a Community		Evaluation Factors to be Considered Potential Effect of APM Project		Discussion Based on Preliminary Assessment		
		connections and intermodal transfer points, if required, and potential to put them in place from a social perspective	determined	stage and further dialogue will be required to help build understanding and address questions and concerns.		
		The NWMO resources (fuel, people) and associated carbon footprint required to transport used fuel to the site	2,320 – 4,470 tonnes of equivalent carbon dioxide emission is expected to be produced per year	 In a scenario of all road transport of 4.6 million fuel bundles from the interim storage sites to an APM facility near Creighton, approximately 4,470 tonnes of equivalent carbon dioxide emissions is expected to be produced per year. In a scenario of transport by mostly rail mode approximately 2,320 tonnes of equivalent carbon dioxide emissions is expected to be produced per year. 		
		The potential for effects on communities along the transportation routes and at intermodal transfer points	To be determined	 There is a robust technical safety case for the safe and secure transport of used nuclear fuel. However, engagement of surrounding communities and those on potential transportation routes is at a preliminary stage and further dialogue will be required to understand and address questions and concerns. 		

7.0 Relationship Building and Engagement Summary

At the present time, based on the engagement program and activities, Creighton appears to show strong support for the APM Project and strong support for its leadership who have demonstrated proactive commitment to staying engaged in the siting process.

7.1 Overview of Engagement

NWMO has engaged with Creighton leadership and community members, as well as initiated dialogue in surrounding communities and First Nations/Aboriginal organizations through a variety of means, including:

- Several community open houses;
- Regular attendance at the Community Liaison Committee meetings;
- Both informal and structured interviews with community members;
- Facilitating the Community Liaison Committee web page and newsletters;
- Preparation of written materials;
- Informal tours and visits with local residents;
- Attendance at the Creighton Trade and Leisure Show;
- 'Ask the NWMO' columns in regional newspapers;
- Meetings with nearby First Nations;
- Attendance at regional meetings, conferences [e.g. Northern Economic Summit, Saskatchewan Association of Rural Municipalities (SARM), Saskatchewan Urban Municipalities Association (SUMA)]; and
- Nuclear waste management facility tours.

Community leaders were identified through desktop research and through referrals as discussions evolved. Initial discussions with a cross-section of community leaders, briefings and conversations with community groups, and conversations with residents during open houses suggest there is interest in the community to continue to learn about the project and consider hosting the project. To this end, opportunities for preliminary discussions were sought with:

- Local political leaders (e.g., Mayor and Councillors);
- Members of the Community Liaison Committee;

- Local business owners/operators;
- Local service providers (e.g. emergency services, social services, education);
- Community groups (e.g. clubs, associations and organizations);
- Surrounding community leaders;
- Residents; and
- First Nations and Métis communities in the vicinity.

Based on discussions with the above, there appears to be strong and growing potential to sustain interest in the local community. There also appears to be a strong and growing interest to continue and move forward with the siting process.

The community has taken steps to engage some of its nearest neighbours (including Aboriginal peoples), and has begun to set the foundation for further constructive consideration of the project and opportunity to work collaboratively to explore the project and interest in the broader area. These steps have elicited positive interest from some surrounding communities and discussions are ongoing. More engagement with communities in the wider area is required to better understand implications for those communities.

7.2 Summary of Issues and Questions Raised

This section summarizes the key challenges, issues and comments as heard from the community and other persons engaged.

7.2.1 Key Challenges, Issues and Comments

The key challenge for Creighton, as identified through the various engagement activities, is to create diversification of the economy by adding additional industry. Although the mining industry is prevalent in the region, there is a concern about being overly dependent upon mining economic activities and related services. There is a desire to provide new opportunities that will provide new skill sets in the area, enable stability in the workforce and encourage professionals to live and work in the community.

Maintenance of the pristine natural environment while providing economic growth is a community desire. Ensuring access to recreational activities (e.g. hiking, boating and fishing) as well as maintaining the intrinsic natural attributes is a goal of the community. Provisions of new and expanded recreational facilities are another community desire. Moreover, the APM project would provide opportunities to partner and work with surrounding communities. The APM project is perceived as a means to attain the aforementioned goals and desires. For instance, improvements to roads and infrastructure as well as the local hospital would be a benefit of the project.

7.2.2 Summary of Key Interests/Questions

In Creighton, most of the people engaged were interested in learning more, were supportive of their community being involved in the siting process and look forward to next steps.

Core Key Interests

Several key interests were recurring and identify the areas which the community is most interested in learning more about. The *core* key interests expressed include:

- Community and infrastructure improvements;
- Economic benefit and opportunities for growth; and
- Health, safety and environmental risks.

Community and Infrastructure Improvements

From discussions with community leaders and residents, it appears that Creighton is very supportive of the APM Project. There is a keen desire to learn more about the project, though it is recognized that there is still potential for community well-being to thrive in the absence of the APM Project. Residents are interested in the potential community benefits the APM Project may bring to Creighton such as increased housing stock, long term care facilities, health care specialists, a professional workforce and increased social housing. The need to work with local leaders in neighbouring communities (e.g. Flin Flon and Denare Beach) is also emphasised. Moreover, there is interest in working with Aboriginal communities as well as the potential for social development initiatives in these communities. In relation to infrastructure improvements, respondents are interested in the potential for upgrades to roads and recreational facilities.

Economic benefits and opportunities for growth

Residents are interested in the potential for the APM Project to bring economic diversity to the community in addition to existing Hudbay and resource development activities. The potential for a wide variety of economic investment as well as professional jobs in the community is seen as a positive motivating factor for the APM Project. The project is seen as a positive means to provide long term economic stability for the community. Questions focus on what type of employment opportunities will be available and how many workers will be required for each phase.

Health, safety and environmental risk

Interview respondents raised questions about the potential effects of the APM Project and used nuclear fuel on the natural environment (e.g. contamination of water and land) over the lifespan of the facility. Questions were also raised on the transportation (e.g. logistics) of used nuclear fuel to the site, as well as the effects on tourism in the area. Protecting the natural environment as well as preserving opportunities for fishing and trapping is an important desire of the interview respondents.

Secondary Interests

In addition to the core key interests, a number of *secondary* key interests were also expressed and include:

- The potential for negative perceptions; and
- APM process and project description details.

The potential for negative perceptions

Although it was not a major issue with the majority of residents, health, safety and risk was brought up in some of the interviews. The potential for the APM Project to create negative perceptions was a concern expressed by some residents. Concerns were raised that a negative perception might arise as a result of the APM Project, which may affect tourism activities as well as property values.

APM process and Project description details

Residents are interested in and actively learning more about the APM process and project. Comments or questions include:

- Involvement of surrounding Aboriginal communities;
- Involvement of surrounding communities;
- Public needs to better understand the NWMO's mandate, vision/mission/values and plans for corporate social responsibility; and
- Need for fairness in local representation (e.g. ensure that oppositional opinions do not overwhelm those in support).

7.2.3 Ongoing Engagement

Moving forward, engagement activities with interest groups within Creighton should continue with an emphasis on working together with surrounding communities and Aboriginal communities. Currently, the engagement process has focused on interviews and meetings in Creighton (and to a lesser extent, Flin Flon and Denare Beach). The engagement process needs to expand to include more interests in the wider area (e.g. other nearby communities in Saskatchewan) as well as dialogue with more First Nations and Métis groups.

8.0 Key Questions in the Site Selection Process - Summary

At the outset of the site selection process, the NWMO framed four key questions respectively addressing safety, the well-being of the community, the well-being of surrounding area communities and the potential to foster sustained interest in exploring this project through subsequent steps in the site selection process⁸. This section addresses and elaborates on a subset of these questions related to community well-being in the context of Creighton.

The preceding chapters have looked at implementation of the APM Project in Creighton and the implications this might have on the community well-being of Creighton. Additionally, key issues and concerns identified through engagement activities have been highlighted. Through desktop research, dialogues with community members and leaders and on-going analysis, it is understood Creighton has a strong interest in hosting the APM Project to realize growth and development opportunities within the community and surrounding area.

There is a high potential for sustained interest in the local community. Creighton is a close knit community and there is potential for committed support from the community for the APM Project and desire to continue in the siting process.

At this point in time, there is some potential for sustained interest in the surrounding communities. Creighton has taken initial steps to engage the surrounding local communities, including Aboriginal peoples. There are members of the Community Liaison Committee (CLC) that are from Denare Beach and Flin Flon. There is initial positive interest in the local surrounding communities and discussions are ongoing. There is a good working relationship among the local surrounding communities as well as regional organizations. Neighbouring communities share community services, facilities and community assets.

There appears to be high potential for the APM Project to foster well-being in Creighton. Creighton's vision and aspirations align with the APM Project and they are adaptable to taking on another large scale project and growing their population. Creighton has previous experience with large scale industries (e.g. Hudbay) and attracting and sustaining a large workforce. Creighton and Flin Flon have a strong arts and cultural scene and retail services that are also attractive to an incoming population.

There is also a high potential for the APM Project to foster well-being in the surrounding communities. Surrounding community aspirations align with those of Creighton. They recognise the need for additional industry to provide economic diversification in order to reach community development goals and to maintain/increase quality of life. Preliminary discussions have revealed a strong interest in the economic development potentials offered by the project. Ongoing discussions will be required to further assess the implications of the project for surrounding area communities.

⁸ NWMO, 2011. Preliminary Assessment of Potential Suitability – Feasibility Studies Draft for Discussion With Communities Involved in the Site Selection Process.

There are some uncertainties associated with the proceeding analysis due to the preliminary nature of the work at this stage. These uncertainties and challenges include:

- 1. Specific land areas that are socially acceptable would need to be identified:
 - a. Community input is required to identify areas which should be reserved for other uses or preservation. The remaining areas must overlap with potentially suitable siting areas identified through scientific and technical studies.
 - b. Further engagement with potentially affected Aboriginal communities is required, including Aboriginal Traditional Knowledge holders in the area. The NWMO acknowledges, respects and honours that Aboriginal peoples Indian, Inuit and Métis peoples of Canada have unique status and rights as recognized and affirmed in s.35 of the *Constitution Act*, 1982. The NWMO is committed to respecting the Aboriginal rights and treaties of Aboriginal peoples⁹.
- 2. Project implementation (including engineering, logistics and/or community well-being) must align with specific community aspirations:
 - a. An acceptable area and regional project implementation plan must be identified which aligns ultimate project configuration with area expectations.
 - b. Effective implementation of project planning at a broader level, involving the surrounding communities and potentially affected Aboriginal peoples, will be important in successful implementation of the project.
- 3. Interest in the community for further learning about the project needs to be sustained:
 - a. The site selection process spans several years and interest and conversation in the community and area needs to be sustained throughout this process, including multiple election cycles.
 - b. The potential effects of the project on the community and area would be substantial and the community and area will need support to further explore their interest and take an active role in discussions of how the project should be implemented.
 - c. Opposition groups, largely from outside of the area, may actively seek to influence community decision-making and community leaders will need to respond to these pressures. Creighton will require support to prepare for the next phases of the siting process if they are to proceed.
- 4. Transportation routes and mode(s) need to be designed and configured taking into account social values:
 - a. Transportation will be spatially extensive from current interim storage sites to the repository. Regulatory matters along routes in several Provinces including, New Brunswick, Quebec, Ontario, and in the case of Creighton, also Manitoba and Saskatchewan would need to be addressed. Social questions and concerns would also need to be heard and taken into account.
- 5. Environment and safety evaluations need to be aligned with community input:

⁹ NWMO, 2010b. NWMO Aboriginal Policy. Toronto, Canada.

- a. This requires regard for input from the community and surrounding communities.
- b. This requires engagement by the NWMO and input from the community and surrounding communities. This may require capacity building to enable this input, which could include Aboriginal Traditional Knowledge.
- c. Input from transportation route communities will also need to be incorporated.

9.0 References

NWMO, 2010. Moving Forward Together: Process for Selecting a Site for Canada's Deep Geological Repository for Used Nuclear Fuel. (Available at

http://www.nwmo.ca/uploads_managed/MediaFiles/1545_processforselectingasiteforcan.pdf).

NWMO,2010b. NWMO Aboriginal Policy. Toronto, Canada. (Available at http://www.nwmo.ca/uploads_managed/MediaFiles/1513_nwmo_aboriginalpolicy-2010en.pdf).

NWMO, 2012. Description of Canada's Repository for Used Nuclear Fuel and Centre of Expertise – Working Draft.

Town of Creighton, 2011. Town of Creighton Official Community Plan.