APPENDIX 1

News Release 09-05

NEWS RELEASE 09-05

NEW MILLENNIUM CAPITAL CORP. ANNOUNCES POSITIVE RESULTS OF DSO PROJECT PRE-FEASIBILITY STUDY UPGRADE OF MINERAL RESOURCES TO RESERVES

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CALGARY, Alberta, Canada (Marketwire – March 4, 2009) – New Millennium Capital Corp. ("NML" or "the Corporation") (TSX-V: NML) announced today the positive results of the Pre-Feasibility Study ("the Study") on its 100% owned DSO properties ("the Project"). The Consulting Engineer Met-Chem Canada Inc. ("Met-Chem") located in Montreal, Quebec assisted in the preparation of the Study. The estimated mineral resources supporting the Study were established earlier by SGS Geostat Inc. ("Geostat"), also of Montreal. The Study was reviewed by others with expertise critical to some aspects of the Project. An updated National Instrument ("NI") 43-101 Technical Report, prepared with the assistance of Met-Chem, which includes the results of the 2008 drilling program is required to be filed on SEDAR within 45 days of this news release.

The study demonstrates that the DSO Project has the potential to achieve significant near term cash flow for the Corporation. The positive project economics of the Study have allowed the Mineral Resources to be reclassified as reserves according to NI 43-101 guidelines. The Mineral Reserves, which are based on 2008 reverse circulation drilling results, are outlined in Table 1.

Highlights of the DSO Project Pre-Feasibility Study:

- Production assumption of 4 million tonnes per year ("mtpy") Lump ores and Sinter Fine products.
- Proven and Probable Mineral Reserves of 52.5 million tonnes ("mt").
- Reserves are based on 2008 drilling data over a 10 year mine evaluation period.
- Stripping ratio varies from mine to mine and averages 1.18 over the life of the mines for the DSO operation.
- Total initial capital cost of US$ 289 million and working capital of about US$ 4.0 million.
- Internal rate of return ("IRR") of 39% (unleveraged and before corporate taxes and mining taxes).
- Net present value ("NPV") of US$ 488 million (before corporate taxes and mining taxes).[1]
- Payback of 3 years after the start of commercial production.
- Direct jobs creation of 188 at the mine and wash plant.
- Selling Price: Lump Ore US$ 68.25/tonne, Sinter Fines US$55.25/tonne.

Robert Martin, President and CEO, stated: "This study demonstrates that New Millennium is poised to develop near term cash flow and supports the Corporation's transition to becoming a production mining company. The IRR and NPV are robust and relatively insensitive to different cost and pricing variations including prices that are significantly lower than the current iron ore contract price. The Corporation plans to drill and convert the remaining 45 to 50 million tonnes of historical resources to NI 43-101 compliant resources and reserves. However, NML's currently established proven and probable reserves, technical results and financial analysis allows the Corporation to move at this stage to the feasibility study phase. This phase is on track and is expected to be completed by end of Q2 2009. A positive feasibility study will reduce project risk and provide a high degree of certainty that our strategic partner, Tata Steel, will exercise their option to advance the project. Our expectation is to start production by September 2010, subject to regulatory approvals, and advanced engineering and procurement."

[1] Based on an 8% discount rate.

The historical estimates contained in this news release of quantities of direct shipping quality ore are not in accordance with the mineral resources or mineral reserves classifications contained in the CIM Definition Standards on Mineral Resources and Mineral Reserves, as required by National Instrument 43-101 ("NI 43-101"). Accordingly, NML is not treating these historical estimates as current mineral resources or mineral reserves as defined in NI 43-101 and such historical estimates should not be relied upon. A qualified person has not done sufficient work to date to classify the historical estimates as current mineral resources or mineral reserves.

Upgrading of Resources to Reserves:

Table 1
Iron Ore Mineral Reserves (Met-Chem 2008)
(Using cut-off grades of Fe+Mn ≥ 50%, SiO_2 <18% and Mn<3.5%)

Reserve Classification	Tonnes (in millions)	% Fe	% SiO_2	% Mn
Proven	20.7	59.9	5.9	0.13
Probable	31.8	58.2	8.7	0.84
Total P+P	52.5	58.9	7.6	0.56

The Mineral Reserves were established using the following parameters:

- In pit mining recovery of 100%.
- Cut-off grades as indicated above.
- Overall pit slope angle of 50 degrees in the hanging wall.
- Dilution accounted for in the bench compositing.

In addition to the 52.5 mt of proven and probable reserves, there are remaining Measured (1.7 mt) and Indicated (1.8 mt) Mineral resources, and Inferred Mineral Resources estimated at 5.8 million tonnes.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. Mineral resource estimates do not account for mineability, selectivity, mining loss and dilution. These mineral resource estimates include inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to measured and indicated mineral resource categories through further drilling, or into mineral reserves once economic considerations are applied.

Pre-feasibility Study:

NML owns 29 deposits in different locations as shown in the attached map (Figure 1). NML's current development models for the project involve commencement of development in Areas 2 and 3, and then moving the mining operations to Area 4. The proposed wash plant will be located at Timmins in Area 3. The ore will be hauled by truck to the crushing station located in the wash plant area. The crushing and upgrading process involves screening, jigging, hydro-separation, and wet high intensity magnetic separation (WHIMS). The flowsheet is designed to produce a product grade containing less than 5% SiO_2 at an optimum recovery rate.

The previous railway track to the Timmins wash plant site will be rebuilt from the junction at Mile Post 353 on the existing railway line from Sept-Iles to Schefferville. At the wash plant a train loading station will be built to minimize the turnaround time of the ore trains. The trains will be hauled to the Pointe Noire Terminal in Sept-Iles, where a car dumper will be built and the products will be stockpiled in a designated location. It is assumed that the existing dock owned by Sept-Iles Port Authority (SIPA) will be used to load vessels using the existing shiploading equipment.

Discussions are progressing with the railroads for hauling the ore and terminal operators for the use of the handling and ship loading equipment.

Other Project Highlights:

- Anticipated start of construction during Q3 2009, subject to exercise of the participation option by Tata Steel, regulatory approvals and successful completion of project financing.
- Anticipated start of commercial production in Q3, 2010.
- Accuracy of the cost estimates in the Study is considered to be +/- 25%.
- Exchange rates used for cost estimates and revenues are 0.85 US$ per CDN$.
- Average operating cash cost of about US$ 26 per tonne of product over the mine life.
- Total undiscounted Cash Flow of US$ 801 million.
- Forecast average yearly Cash Flow after debt payments exceeds US$ 80 million.
- Economics presented are based on an estimated 10 year mine plan.

Financial Analysis, Revenues and Sensitivity Analysis of the Study:

The revenue assumptions are based on prices of US$ 68.25 (US$ 1.05 per dry metric tonne unit (DMTU)) per tonne of lump ore and US$ 55.25 (US$ 0.85 per DMTU) per tonne of sinter fines. The assumed prices are on average, 60% of the contract price in 2008 which had increased by 65% over the 2007 price. Sinter fine prices started to increase rapidly in 2005 and have grown over 350% since 2004. The lump premium over fines has increased from US¢ 10/ (DMTU) in 2004 to US¢ 57 DMTU. This underscores the strong fundamentals that underpin the demand for lump ores and sinter fines.

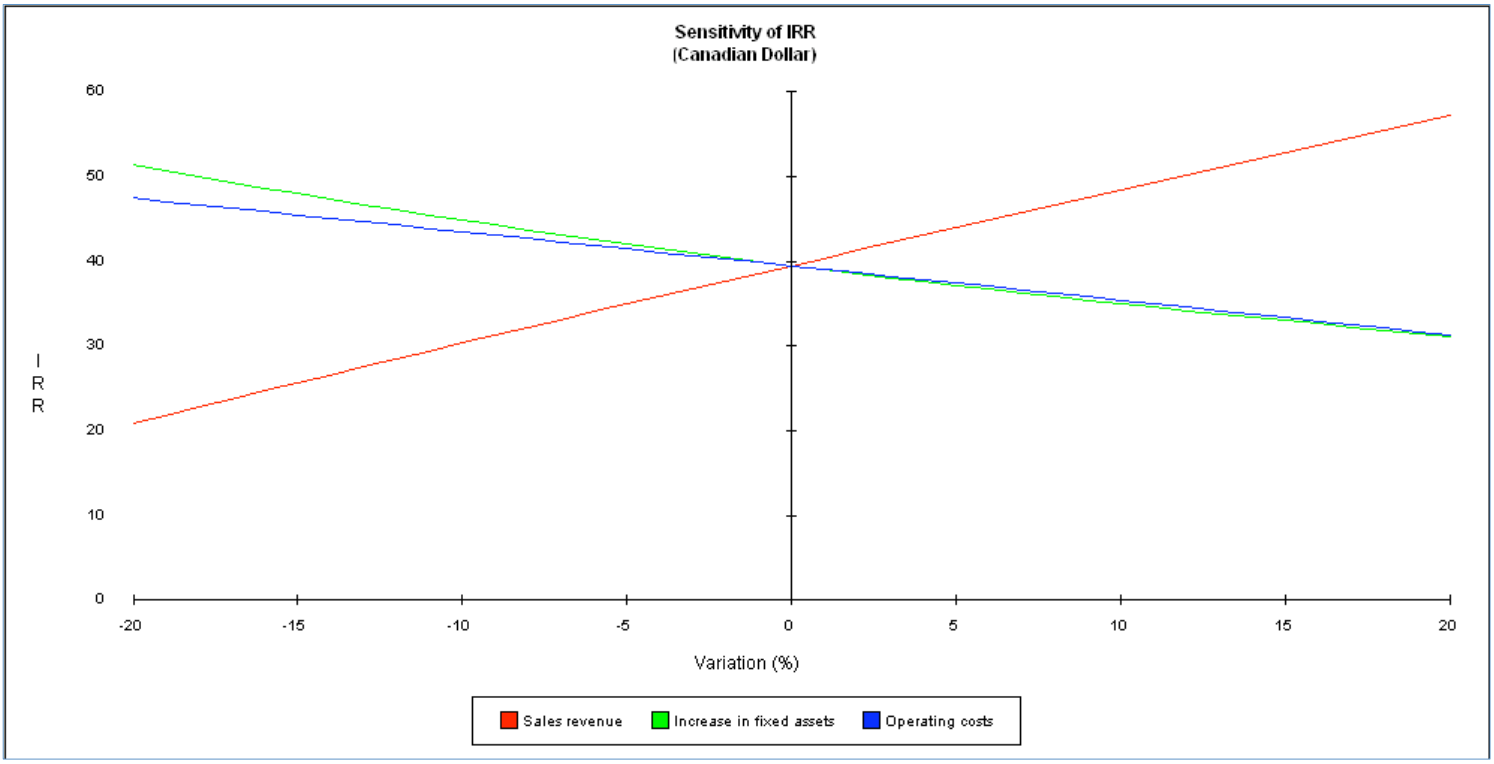
Before the current financial crisis, analysts were projecting another 10-20% increase in 2009. The severe monetary crisis and the resulting credit crunch worldwide have affected the demand for steel. As a result, there are new projections of a 20-30% decline in the price in 2009. However, most analysts are of the opinion that the steel market will start stabilizing in 2010. Long term prices projected by these analysts are in line with NML's assumptions.

The sensitivity analysis illustrated below, indicates that project economics are expected to remain strong even in the case of iron ore prices falling below the base prices used in the Study. The impact of capital and operating costs is also demonstrated by the model and are relatively insensitive.

Table 2 – Sensitivity of IRR

Variation (%)	Sales revenue	Increase in fixed assets	Operating costs
-20%	21%	51%	47%
-16%	25%	49%	46%
-12%	29%	46%	44%
-8%	32%	44%	43%
-4%	36%	42%	41%
0%	39%	39%	39%
4%	43%	38%	38%
8%	47%	36%	36%
12%	50%	34%	35%
16%	54%	33%	33%
20%	57%	31%	31%

Figure 1 – Sensitivity of IRR



Market Projections:

NML has engaged market specialists and reviewed independent market studies and long term price forecasts performed by recognized iron ore market experts and monitors on a regular basis iron ore consumption, market trends, and pricing for the NML product types.

NML expects that the trend towards continued growth in market demand and higher long term prices by historical standards will continue. Despite the current slump in the demand for steel products, the markets are expected to recover by 2010/11 due to, among other things, various stimulative measures put in place by major Western and developing economies. NML's strategic partner, Tata Steel Limited (Tata Steel), if it exercises its option to participate in the project, is required to purchase, at prevailing world prices, 100% of all of the DSO Project's iron ore products during the life of the mine.

Technical Report by Met-Chem:

An updated NI 43-101 Technical Report by Met-Chem is required to be posted on www.sedar.com within 45 days of the date of this news release. This will include a summary of the results from the DSO Pre-Feasibility Study. Met-Chem and their Independent Qualified Persons are experienced mining and metallurgical engineering professionals in the field of exploration and mining evaluations and Mineral Resource/Reserve estimates, with particular expertise in iron ore. The forthcoming NI 43-101 report is prepared under the direction of André Boilard, Eng, Project Manager, Daniel Gagnon, Eng., Senior Mining Engineer and Alain Dorval, Eng., Senior Metallurgist. Messrs Boilard, Gagnon and Dorval are all independent Qualified Persons as defined by NI 43-101. Other contributions to the Study related to the design of the Pointe Noire terminal facilities is by GENIVAR, an engineering corporation located in Sept- Iles, Quebec, under the direction of Denis Blouin, Eng. Robert de l'Étoile, Eng., of Geostat, an Independent Qualified Person as defined by NI 43-101, was responsible for the mineral resource estimates.

Dean Journeaux, Eng., Jean-Charles Bourassa, Eng. and Moulaye Melainine, Eng., are the Qualified Persons as defined in NI 43-101 who have reviewed and verified the scientific and technical mining disclosure contained in this news release on behalf of NML.

About New Millennium

New Millennium controls the emerging Millennium Iron Range, located in the Province of Newfoundland and Labrador and in the Province of Quebec, which holds the world's largest undeveloped magnetic iron ore deposits. In the same area, the Corporation is also advancing to near term production its DSO (Direct Shipping Ore) Project. Tata Steel, the world's sixth largest steel corporation, owns 19.9% of New Millennium and is the Corporation's largest shareholder and strategic partner. Tata has an exclusive option to fund the DSO Project, a commitment to take the resulting production, and an exclusive right to negotiate and settle a proposed transaction in respect of the LabMag Project (see news release 0817, October 1, 2008). The Millennium Iron Range currently hosts two advanced projects: LabMag contains 3.5 billion tonnes of Proven and Probable reserves plus 1.0 billion tonnes of Measured and Indicated resources and 1.2 billion tonnes of Inferred resources; KéMag contains 2.1 billion tonnes of Proven and Probable reserves, 0.3 billion tonnes of Measured and Indicated resources and 1.0 billion tonnes of Inferred resources.

The Corporation's DSO project contains 52.5 million tonnes of Proven and Probable Mineral Reserves, 3.5 million tonnes of measured and indicated Mineral Resources, 5.8 million tonnes of Inferred Resources and about 45.0 to 50.0 million tonnes of historical resources that are not currently in compliance with NI 43-101.

The Corporation's mission is to add shareholder value through the responsible and expeditious development of the Millennium Iron Range and other mineral projects to create a new large source of raw materials for the world's iron and steel industries. For further information, please visit www.nmlresources.com, www.tatasteel.com and www.corusgroup.com.

Forward-Looking Statements

This document may contain "forward-looking statements" within the meaning of Canadian securities legislation and the United States Private Securities Litigation Reform Act of 1995. These forward-looking statements are made as of the date of this document and the Corporation does not intend, and does not assume any obligation, to update these forward-looking statements.

Forward-looking statements relate to future events or future performance and reflect management of the Corporation's expectations or beliefs regarding future events and include, but are not limited to, statements with respect to the estimation of mineral reserves and resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production, capital expenditures, success of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims and limitations on insurance coverage. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" or the negative of these terms or comparable terminology. By their very nature forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Corporation to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks related to actual results of current exploration activities; changes in project parameters as plans continue to be refined; future prices of resources; possible variations in ore reserves, grade or recovery rates; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; as well as those factors

detailed from time to time in the Corporation's interim and annual financial statements and management's discussion and analysis of those statements, all of which are filed and available for review on SEDAR at www.sedar.com. Although the Corporation has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

Accordingly, readers should not place undue reliance on forward looking statements.

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Contacts:

New Millennium Capital Corp.
Robert Martin, President & CEO Tel: (514) 935-3204
Email : rmartin@nmlresources.com

Investor Relations.
Andreas Curkovic
Tel: (416) 577-9927
Email : andreascurkovic@sympatico.ca

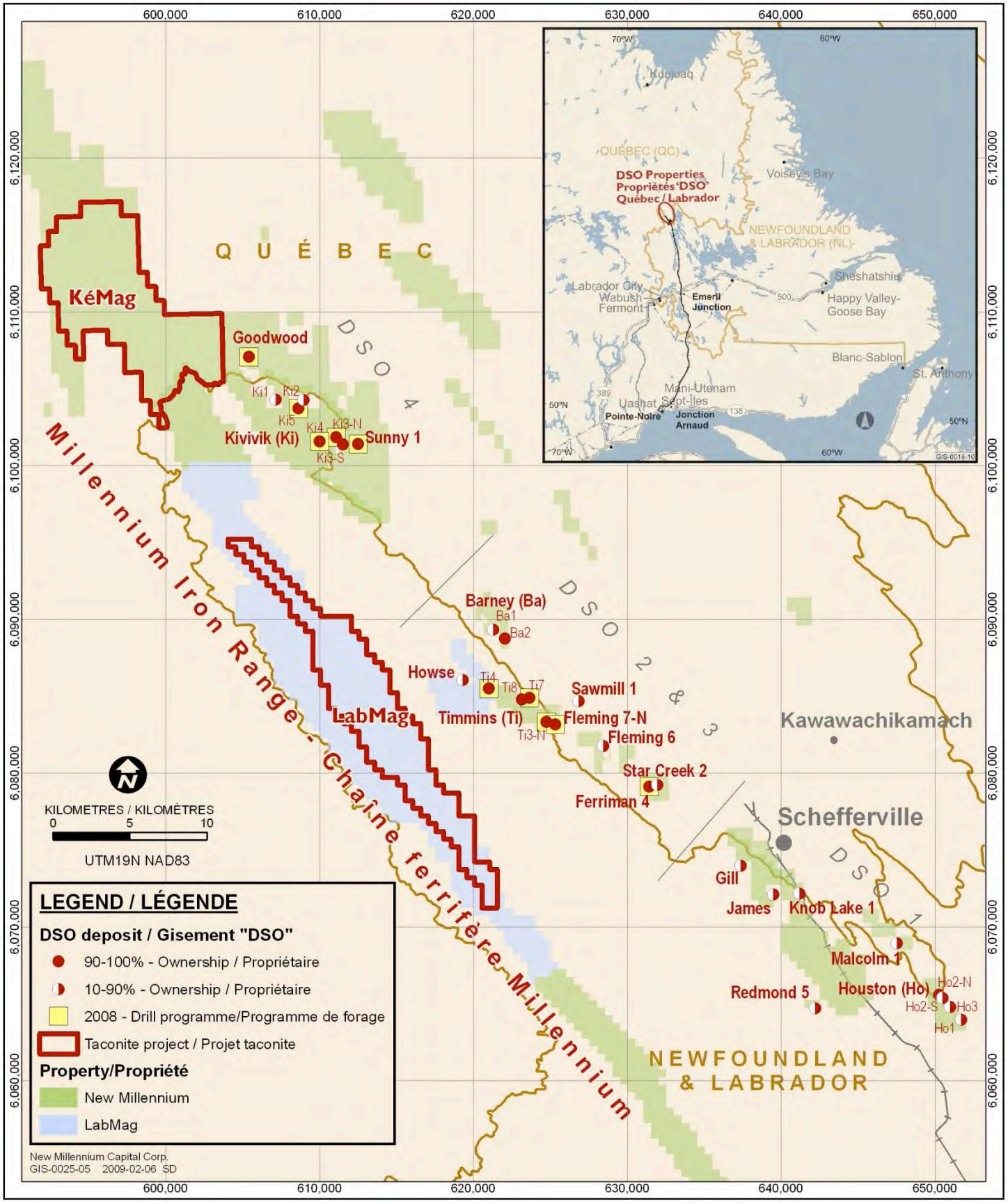

Figure 2: Property Overview

APPENDIX 10

Climate Normals for Schefferville and Churchill Falls, 1971-2000

Canadian Climate Normals 1971-2000

The minimum number of years used to calculate these Normals is indicated by a code for each element. A "+" beside an extreme date indicates that this date is the first occurrence of the extreme value. Values and dates in bold indicate all-time extremes for the location.

NOTE!! Data used in the calculation of these Normals may be subject to further quality assurance checks. This may result in minor changes to some values presented here.

CHURCHILL FALLS A
NEWFOUNDLAND

Latitude: 53° 33.000' N **Longitude**: 64° 6.000' W **Elevation**: 439.50 m
Climate ID: 8501132 **WMO ID**: **TC ID**:

Normals from January to Year View

January-June January-December+Year July-December

Back to station list Another location

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Daily Average (° C)	-22.3	-20.6	-13.6	-5	2.9	9.6	13.5	12.1	6.6	-0.4	-8.6	-19.2	-3.7	C
Standard Deviation	3.1	3.6	3.3	2.5	2	1.6	1.2	1.1	1.4	1.4	2.2	3.1	3.9	C
Daily Maximum (° C)	-16.6	-14.3	-7	0.8	8.1	15	18.7	17.1	10.7	3	-4.5	-13.9	1.4	C
Daily Minimum (° C)	-28	-26.9	-20.1	-10.7	-2.3	4.1	8.2	7.1	2.5	-3.7	-12.8	-24.3	-8.9	C
Extreme Maximum (°C)	6.9	16.6	12.4	15.6	26	**33.4**	31.1	30.3	27.1	21.7	13.1	7.2		
Date (yyyy/dd)	1986/28	1983/16	1979/24	1979/27+	1979/19	**1989/23**	1970/25	1990/05	1981/01	1970/10	1977/11	1973/18		
Extreme Minimum (°C)	-43.3	**-45.6**	-38.3	-30	-22.8	-5.4	0.6	-0.6	-7	-19.4	-31.3	-40.6		
Date (yyyy/dd)	1984/09	**1973/17**	1976/11	1969/05+	1972/01	1978/01	1992/27	1976/14+	1977/29	1972/25	1986/19	1971/27		
Precipitation:														
Rainfall (mm)	0.8	1.1	3.8	10.4	37.1	84.5	112.1	95.8	96.4	40.9	8.3	2.6	493.8	C
Snowfall (cm)	68.3	53.1	63.5	57.7	19.6	6.3	0.2	0.1	10.6	44.6	78.2	63	465.3	C
Precipitation (mm)	62.1	48.5	62.2	65.8	56.7	91.2	112.3	95.8	107.2	84.6	81	59	926.4	C
Average Snow Depth (cm)	90	111	115	107	42	1	0	0	0	4	31	70	48	C
Median Snow Depth (cm)	90	111	114	108	39	0	0	0	0	2	31	70	47	C
Snow Depth at Month-end (cm)	107	111	113	86	7	0	0	0	1	11	57	75	47	C
Extreme Daily Rainfall (mm)	6.4	11	11.8	25.9	24.9	**45.1**	39.2	38.2	39.6	26.9	21.4	18.5		
Date (yyyy/dd)	1979/28	1981/21	1979/26	1976/03	1976/19	**1978/27**	1984/12	1978/22	1969/10	1972/08	1982/24	1969/28		
Extreme Daily Snowfall (cm)	**44.7**	33	38.6	35.3	29.4	16.3	4.4	1.4	15.4	21.2	40.2	36.4		
Date (yyyy/dd)	**1978/09**	1987/11	1975/21	1971/14	1987/12	1974/05	1991/01	1986/30	1989/24	1979/25	1977/27	1990/05		
Extreme Daily Precipitation (mm)	44.7	26	37.6	35.6	32.8	**45.1**	39.2	38.2	39.6	31.8	32	32.2		
Date (yyyy/dd)	1978/09	1987/11	1975/21	1971/14	1970/27	**1978/27**	1984/12	1978/22	1969/10	1971/11	1988/24	1990/05		
Extreme Snow Depth (cm)	206	**262**	241	242	146	33	0	0	21	43	137	169		
Date (yyyy/dd)	1969/31	**1969/15**	1969/07+	1983/07	1981/01	1972/01	1969/01+	1969/01+	1978/30	1974/29	1983/27+	1983/24		
Days with Maximum Temperature:														
<= 0 °C	30.3	27.2	25.4	13.7	1.9	0	0	0	0.14	8.1	24.1	29.7	160.5	C
> 0 °C	0.74	1.1	5.6	16.3	29.1	30	31	31	29.9	22.9	5.9	1.3	204.8	C
> 10 °C	0	0.04	0.09	1.5	9.9	23.1	30.1	29.6	15.7	1.9	0.18	0	111.9	C
> 20 °C	0	0	0	0	1	6.6	12	8.8	1.2	0	0	0	29.6	C
> 30 °C	0	0	0	0	0	0.18	0.05	0.05	0	0	0	0	0.28	C
> 35 °C	0	0	0	0	0	0	0	0	0	0	0	0	0	C
Days with Minimum Temperature:														
> 0 °C	0.09	0.05	0.35	2.1	8.9	25.1	31	30.8	21.5	4.9	0.59	0.05	125.2	C
<= 2 °C	31	28.3	30.9	29.4	27.6	10.6	0.55	1.3	14.9	29.4	29.8	31	264.7	C
<= 0 °C	30.9	28.2	30.7	28	22.1	5	0	0.23	8.6	26.1	29.4	31	240.1	C
< -2 °C	30.8	28	30.2	26	15.4	1.3	0	0	2.1	19.7	28.9	30.7	213	C
< -10 °C	29.8	26.9	25.8	15.9	1.3	0	0	0	0	2.6	18.1	29.3	149.5	C
< -20 °C	25.9	22.4	16.6	3.1	0.05	0	0	0	0	0	5.3	21.8	95	C
< - 30 °C	14.7	11.1	4.4	0	0	0	0	0	0	0	0.14	9.1	39.4	C
Days with Rainfall:														
>= 0.2 mm	0.48	0.3	1.4	3.7	10.1	16.3	19.1	18.8	18.6	9.4	2.6	1.1	102	C
>= 5 mm	0.09	0.09	0.26	0.73	2.5	5.4	7.6	6.1	6.7	2.9	0.68	0.14	33.1	C
>= 10 mm	0	0.04	0.09	0.23	0.95	2.9	3.3	3.2	3	1.3	0.27	0	15.2	C
>= 25 mm	0	0	0	0.05	0	0.32	0.73	0.32	0.36	0.09	0	0	1.9	C
Days With Snowfall:														
>= 0.2 cm	17.6	15.2	15.9	13.6	7.4	2.2	0.23	0.05	4.5	15.7	19.4	19.3	131	C
>= 5 cm	4.7	3.2	4.4	4.6	1.1	0.45	0	0	0.55	3.1	5.1	3.9	30.9	C
>= 10 cm	1.8	1.3	1.6	1.8	0.27	0.23	0	0	0.14	0.73	2.1	1.5	11.4	C
>= 25 cm	0.17	0.04	0.09	0.09	0.05	0	0	0	0	0	0.23	0.09	0.76	C
Days with Precipitation:														
>= 0.2 mm	17.7	15.1	16.2	16.1	14.8	17.2	19.1	18.8	20.6	20.7	20.1	19.2	215.4	C
>= 5 mm	4.4	3.1	4.4	4.9	3.8	5.8	7.6	6.1	7.2	6.1	5.4	3.7	62.5	C
>= 10 mm	1.4	1.1	1.6	1.9	1.3	3	3.3	3.2	3.4	2.1	2.3	1.4	25.9	C
>= 25 mm	0.09	0.04	0.09	0.14	0.09	0.45	0.73	0.32	0.36	0.18	0.27	0.09	2.9	C
Days with Snow Depth:														
>= 1 cm	31	28.3	31	30	26	2.6	0	0	0.95	14.5	28.1	31	223.4	C
>= 5 cm	31	28.3	31	30	24.5	1.6	0	0	0.18	9.1	25.6	31	212.2	C

>= 10	31	28.3	31	30	22.8	1.1	0	0	0.14	5.5	23.6	30.7	204	C
>= 20	31	28.3	31	29.9	19.8	0.5	0	0	0.05	1.6	19.6	30	191.6	C
Wind:														
Speed (km/h)	14.2	15.1	16.7	16.4	14.4	13.9	12.4	12.5	13.9	14.9	14.6	14	14.4	C
Most Frequent Direction	W	W	NW	NW	NW	NW	W	W	W	W	W	W	W	C
Maximum Hourly Speed	67	65	63	65	52	48	52	63	63	56	**74**	64		
Date (yyyy/dd)	1982/18	1981/12	1978/06+	1981/15	1992/24	1969/29+	1977/15+	1991/27	1979/01	1977/13+	**1977/28**	1976/03		
Maximum Gust Speed	**113**	97	96	98	98	80	101	113	97	98	103	101		
Date (yyyy/dd)	**1982/18**	1976/03	1979/12	1981/15	1971/13	1982/04	1972/13	1991/27	1972/23	1976/30	1975/20	1972/02		
Direction of Maximum Gust	W	S	W	W	S	SW	SW	NW	NW	SW	NW	W	W	
Days with Winds >= 52 km/h	1.1	0.9	0.8	0.7	0.1	0	0.2	0.3	0.5	0.3	0.5	0.7	5.9	C
Days with Winds >= 63 km/h	0.2	0.1	0.2	0.1	0.1	0	0.1	0.1	0.2	0.1	0.1	0.2	1.4	C
Degree Days:														
Above 24 °C	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	C
Above 18 °C	0	0	0	0	0	3.4	6	2.1	0.4	0	0	0	11.8	C
Above 15 °C	0	0	0	0	0.6	11.2	25.4	14.8	1.6	0	0	0	53.6	C
Above 10 °C	0	0	0	0	4.9	52	117	83.8	13.7	0.1	0	0	271.6	C
Above 5 °C	0	0	0.2	2.3	28	147.3	264	221.7	73.3	4.5	0.4	0	741.7	C
Above 0 °C	0.3	0.4	3	20.6	110.3	287.6	418.8	376.4	199.5	42	3.7	0.3	1462.9	C
Below 0 °C	691.9	577.1	423	170	20.2	0.1	0	0	1	54.3	262.4	594.2	2794.2	C
Below 5 °C	846.6	718.1	575.2	301.6	92.9	9.8	0.2	0.3	24.8	171.8	409.1	748.9	3899.3	C
Below 10 °C	1001.6	859.5	730	449.4	224.8	64.5	8.2	17.4	115.3	322.4	558.7	903.9	5255.6	C
Below 15 °C	1156.6	1000.8	885	599.4	375.5	173.7	71.6	103.4	253.2	477.3	708.7	1058.9	6864	C
Below 18 °C	1249.6	1085.7	978	689.4	467.9	255.9	145.2	183.6	341.9	570.3	798.7	1151.9	7918	C
Evaporation:														
Lake Evaporation (mm)						3.3	3.4	2.7						C
Bright Sunshine:														
Total Hours	101.7	129.8	143.8	162.7	205.4	190.1	202.1	188.5	99.9	67.4	56.1	82.3	1629.7	C
Days with measureable	22.1	21.7	23.4	23.5	26.7	25.3	27.7	28.2	23.3	21.2	17.2	19.9	280	C
% of possible daylight hours	40.5	46.9	39.2	38.8	41.7	37.4	39.6	41.1	26.2	20.5	21.6	35	35.7	C
Extreme Daily	8.5	10	11.8	14.4	15.9	16.5	16	14.8	12.3	9.6	8.9	7.5		C
Date (yyyy/dd)	1973/28+	1971/26+	1989/30	1982/28+	1990/25	1982/25	1976/04	1989/05	1988/04	1975/19	1988/01	1978/01		
Humidex:														
Extreme Humidex	6.3	7.6	11.5	14.8	26.1	36.7	**43.2**	32.2	31.1	23.3	13.7	6.7		
Date (yyyy/dd)	1986/28	1981/12	1979/24	1979/27+	1979/19	1972/29	**1973/01**	1990/05	1981/01	1970/10	1977/11	1973/18		
Days with Humidex >= 30	0	0	0	0	0	0.5	0.9	0.2	0.1	0	0	0	1.6	C
Days with Humidex >= 35	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0.1	C
Days with Humidex >= 40	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1	C
Wind Chill:														
Extreme Wind Chill	**-59.9**	-57.5	-54.3	-40.7	-33.6	-11.5	-5.9	-5.2	-11.7	-28.1	-42.5	-54.8		
Date (yyyy/dd)	**1975/20**	1972/23	1992/01	1982/03	1972/01	1978/01	1991/01	1976/25	1978/30	1986/26	1972/25	1970/22		
Days with Wind Chill < -20	29.4	25.8	22.6	10.5	0.4	0	0	0	0	0.6	11.8	26.6	127.6	C
Days with Wind Chill < -30	24.6	20.3	12.9	1.7	0.1	0	0	0	0	0	2.1	18.7	80.4	C
Days with Wind Chill < -40	12.9	9.6	3.6	0.1	0	0	0	0	0	0	0.1	7.6	33.8	C
Humidity:														
Average Vapour Pressure (kPa)	0.1	0.1	0.2	0.4	0.5	0.8	1.1	1	0.8	0.5	0.3	0.2	0.5	C
Average Relative Humidity - 0600LST (%)	79.8	78.7	80.5	81.2	80.7	81.1	83	86.5	88	86.2	85	81.7	82.7	C
Average Relative Humidity - 1500LST (%)	75.2	72.8	69.9	66.8	58.8	56.8	58.5	59.2	67.2	74.6	79.4	77.7	68.1	C
Pressure:														
Average Station Pressure (kPa)	95.4	95.6	95.8	96.1	96.1	95.9	95.8	96	96	96	95.7	95.7	95.8	C
Average Sea Level Pressure (kPa)	101	101.2	101.3	101.5	101.5	101.2	101	101.2	101.3	101.3	101.2	101.3	101.3	C
Visibility (hours with):														
< 1 km	21.2	15.1	10.9	12	5.7	6	4.1	2.6	5.5	11.6	14.4	12.8	121.8	C
1 to 9 km	127.6	111.8	122.8	118	70	56.2	40.6	36.7	63.9	116.9	136.6	132.5	1133.4	C
> 9 km	595.1	552	610.4	590	668.4	657.9	699.3	704.8	650.6	615.6	569	598.7	7511.7	C
Cloud Amount (hours with):														
0 to 2 tenths	255.6	238.3	205.3	158.2	136.1	95.3	89.5	105.7	71.3	69.6	112.1	233.1	1770	C
3 to 7 tenths	117.6	108.6	112.7	104.1	130.4	141.1	179	180.1	126.1	103.1	98.1	108	1508.8	C
8 to 10 tenths	370.8	332	426.1	457.8	477.6	483.6	475.5	458.3	522.7	571.2	509.9	402.9	5488.1	C

Back to station list

Another location

Date Modified: 2008-11-01

Notices:

The Climate Archive Website has been updated as of January 14, 2009.

This release includes the following new items:

Entire site template modification to adhere to Treasury Board's (http://www.tbs-sct.gc.ca/clf-nsi/index-eng.asp) Common Look and Feel (CLF) version 2.0 standards.

Site display of daily excerpts from the Weather Trivia calendar for the current day.

Please note that with the exception of daily excerpts from the Weather Trivia calendar, all other content and site links will remain the same.

As of July 24, 2008 changes were made in how data are accessed at 25 stations.
Please click here for further details.

Canadian Climate Normals 1971-2000

The minimum number of years used to calculate these Normals is indicated by a code for each element. A "+" beside an extreme date indicates that this date is the first occurrence of the extreme value. Values and dates in bold indicate all-time extremes for the location.

NOTE!! Data used in the calculation of these Normals may be subject to further quality assurance checks. This may result in minor changes to some values presented here.

SCHEFFERVILLE A
QUEBEC

Latitude: 54° 48.000' N **Longitude**: 66° 49.200' W **Elevation**: 521.80 m
Climate ID: 7117825 **WMO ID**: 71828 **TC ID**: YKL

Normals from January to Year View

January-June January-December+Year July-December

Another location

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Daily Average (°C)	-24.1	-22.6	-16	-7.3	1.2	8.5	12.4	11.2	5.4	-1.7	-9.8	-20.6	-5.3	C
Standard Deviation	3	3.5	3.3	2.6	1.8	1.8	1	1.2	1.5	1.7	2.3	3	1.2	C
Daily Maximum (°C)	-19	-16.9	-9.8	-1.5	6	13.7	17.2	15.8	8.9	1.3	-6.1	-15.9	-0.5	C
Daily Minimum (°C)	-29.2	-28.1	-22.2	-13.1	-3.6	3.3	7.6	6.5	1.7	-4.6	-13.5	-25.2	-10	C
Extreme Maximum (°C)	5.1	5.1	9.4	13.1	28.3	**34.3**	31.7	28.7	26.7	20.6	9.8	5		
Date (yyyy/dd)	1986/28	1981/24	1953/25	1984/28	1950/31	**1989/24**	1970/25	1990/05	1959/10	1970/10	1977/11	1951/04+		
Extreme Minimum (°C)	-48.3	**-50.6**	-45	-36.1	-23.3	-7.8	0	-3.3	-9.4	-19.4	-35.6	-47.2		
Date (yyyy/dd)	1957/15	**1950/07**	1964/10	1950/08	1972/01	1956/08+	1951/14+	1948/30	1948/29	1974/22	1949/23	1989/27		
Precipitation:														
Rainfall (mm)	0.2	0.2	1.6	8.4	27.7	65.4	106.8	82.8	85.3	24.4	4.5	0.9	408.1	C
Snowfall (cm)	57.4	42.6	56.6	54.8	22.9	8	0.5	1.7	12.7	57.2	70.7	55.4	440.5	C
Precipitation (mm)	53.2	38.7	53.3	61.4	52.1	73.7	107.2	84.5	98.4	80.5	69.4	50.7	822.9	C
Average Snow Depth (cm)	62	70	71	69	18	0	0	0	0	7	26	49	31	C
Median Snow Depth (cm)	60	70	70	71	12	0	0	0	0	5	26	48	30	C
Snow Depth at Month-end (cm)	71	71	76	49	2	0	0	0	1	12	41	53	31	C
Extreme Daily Rainfall (mm)	24.6	2.8	10.6	23.4	29.5	51.3	**54.4**	48.5	45.2	34.3	34.8	5.8		
Date (yyyy/dd)	1958/18	1960/15	1987/31	1979/29	1958/29	1958/14	**1989/19**	1970/01	1990/16	1959/24	1966/03	1982/03		
Extreme Daily Snowfall (cm)	30.6	29	**36.4**	30.2	33.2	23.7	9	23.9	28.4	35.6	29	25.4		
Date (yyyy/dd)	1982/18	1976/02	**1982/27**	1973/06+	1992/23	1978/13	1979/04	1965/29	1960/13	1951/27	1990/11	1973/22		
Extreme Daily Precipitation (mm)	29	29	36.8	32.8	33.8	51.3	**54.4**	48.5	49	41.2	35.8	24.6		
Date (yyyy/dd)	1982/18	1976/02	1982/27	1975/19	1992/23	1958/14	**1989/19**	1970/01	1990/15	1990/19	1966/03	1962/10		
Extreme Snow Depth (cm)	163	188	**190**	163	132	38	0	18	18	53	89	115		
Date (yyyy/dd)	1977/30+	1977/28	**1977/01**	1963/08	1965/05	1970/01	1955/01+	1965/30	1969/28	1976/29+	1976/22+	1980/14+		
Days with Maximum Temperature:														
<= 0 °C	30.6	27.6	27.6	17.5	3.8	0.13	0	0	0.52	12.2	26	30.5	176.4	C
> 0 °C	0.41	0.65	3.4	12.5	27.2	29.9	31	31	29.5	18.9	4	0.55	188.9	C
> 10 °C	0	0	0	0.39	6.6	20.8	29.1	27.3	11.2	0.8	0	0	96.1	C
> 20 °C	0	0	0	0	0.39	4.6	9.2	6.5	0.43	0	0	0	21.1	C
> 30 °C	0	0	0	0	0	0.22	0	0	0	0	0	0	0.22	C
> 35 °C	0	0	0	0	0	0	0	0	0	0	0	0	0	C
Days with Minimum Temperature:														
> 0 °C	0	0	0	0.91	6.4	23	31	30.7	19.6	3.5	0.43	0.05	115.5	C
<= 2 °C	31	28.3	31	29.9	28.4	13.1	0.52	2.2	17.3	29.5	29.8	31	271.9	C
<= 0 °C	31	28.3	31	29.1	24.6	7	0	0.33	10.5	27.6	29.6	31	249.8	C
< -2 °C	31	28.1	30.6	27.2	18.9	2.1	0	0	3.6	21.7	29	30.9	222.9	C
< -10 °C	30.3	27.5	27.4	18.8	2.3	0	0	0	0	3.7	19.6	29.8	159.3	C
< -20 °C	27.3	23.9	19	6	0.04	0	0	0	0	0	5.3	22.6	104.1	C
< - 30 °C	16.1	12.8	6.4	0.22	0	0	0	0	0	0	0.29	9.6	45.3	C
Days with Rainfall:														
>= 0.2 mm	0.3	0.3	1	2.9	8.6	14.7	19	18.4	17.2	7.3	1.8	0.64	92.2	C
>= 5 mm	0	0	0.09	0.52	1.7	4.3	6.7	5.2	5.4	1.6	0.29	0.05	25.7	C
>= 10 mm	0	0	0.04	0.13	0.48	2	3.3	2.7	2.4	0.76	0.1	0	11.9	C
>= 25 mm	0	0	0	0	0	0.13	0.48	0.19	0.48	0	0	0	1.3	C
Days With Snowfall:														
>= 0.2 cm	17.4	14.3	16.6	14.6	10.3	3.4	0.17	0.33	6.4	19	21.3	19.2	142.9	C
>= 5 cm	3.8	2.4	3.2	3.3	1	0.35	0.04	0.1	0.78	3.7	4.6	3.2	26.5	C
>= 10 cm	1.4	0.91	1.4	1.4	0.39	0.13	0	0.05	0	1.1	1.9	1.4	9.9	C
>= 25 cm	0.09	0.04	0.14	0.3	0.04	0	0	0	0	0.14	0.14	0.05	0.94	C
Days with Precipitation:														
>= 0.2 mm	17.1	14.3	16.4	16.2	15.8	16.1	19	18.4	20.4	21.8	21.3	19	215.9	C
>= 5 mm	3.4	2.3	3.1	3.8	3.2	4.7	6.7	5.3	6.3	5.4	4.4	3	51.5	C

>= 10 mm	1.3	0.74	1.1	1.5	1.3	2.2	3.3	2.8	2.7	2	1.7	1.4	21.9	C
>= 25 mm	0.09	0.04	0.13	0.3	0.09	0.22	0.48	0.24	0.52	0.14	0.1	0	2.4	C
Days with Snow Depth:														
>= 1 cm	31	28.3	31	30	21.7	1.1	0	0.09	0.74	17.4	28.5	31	220.7	C
>= 5 cm	31	28.3	31	29	16.8	0.7	0	0.05	0.13	11.3	25.9	31	205.1	C
>= 10	31	28.3	31	28.5	13.8	0.52	0	0	0.04	7.6	23.5	31	195.3	C
>= 20	30.8	28.3	31	27.9	10.3	0.22	0	0	0	3.3	17.2	29.2	178.1	C
Wind:														
Speed (km/h)	16.4	16.8	17.4	16.5	16	16.2	15.1	15.6	16.9	17.8	17.3	16	16.5	A
Most Frequent Direction	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	A
Maximum Hourly Speed	85	97	83	77	66	**97**	65	61	80	89	84	80		
Date (yyyy/dd)	1990/28	1974/15	1999/09	1963/01	1963/24	**1967/23**	1993/07	1963/28	1961/06+	1956/26	1959/15+	1956/30+		
Maximum Gust Speed	134	148	148	130	101	126	103	117	137	137	142	**153**		
Date (yyyy/dd)	1975/20	1974/15	1955/08	1963/01	1959/28	1962/29	1972/21	1972/21	1958/26	1971/28	1959/15	**1960/23**		
Direction of Maximum Gust	W	W	SW	W	W	W	W	W	SW	SW	SW	SW	SW	
Days with Winds >= 52 km/h	1.7	1.4	1.9	1.1	0.9	0.4	0.6	0.4	0.8	1.1	1.8	2.1	13.9	C
Days with Winds >= 63 km/h	0.7	0.5	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.6	3.3	C
Degree Days:														
Above 24 °C	0	0	0	0	0	0.2	0	0	0	0	0	0	0.2	C
Above 18 °C	0	0	0	0	0	2.8	2.9	1.4	0.1	0	0	0	7.2	C
Above 15 °C	0	0	0	0	0	8.9	15.4	10.6	0.7	0	0	0	35.7	C
Above 10 °C	0	0	0	0	1.7	40.4	89.3	66	8.9	0	0	0	206.4	C
Above 5 °C	0	0	0	0.3	15.7	123.3	230.3	192.4	51.3	2.6	0.2	0	615.9	C
Above 0 °C	0	0.1	0.6	9.5	77.7	256.5	385.1	345.9	163.1	28.9	2.6	0.1	1270.1	C
Below 0 °C	741.7	637.9	497.1	228.5	39.5	0.7	0	0	2.7	81.5	296.3	637.6	3163.6	C
Below 5 °C	896.7	779.2	651.5	369.3	132.6	17.5	0.2	1.5	40.9	210.2	443.8	792.5	4335.8	C
Below 10 °C	1051.7	920.5	806.5	519	273.6	84.7	14.2	30.1	148.5	362.6	593.6	947.5	5752.6	C
Below 15 °C	1206.7	1061.8	961.5	669	426.9	203.1	95.3	129.7	290.4	517.6	743.6	1102.5	7408.1	C
Below 18 °C	1299.7	1146.5	1054.5	759	519.9	287	175.8	213.5	379.7	610.6	833.6	1195.5	8475.5	C
Bright Sunshine:														
Total Hours	80.4	116.3	156.4	173	187.4	179.9	188.1	173.3	91.7	61.5	47.8	58.2		C
Days with measureable	20.6	22.3	24.7	24.3	26.4	25.5	27.7	27.2	22.3	20.8	16.4	18.1		C
% of possible daylight hours	32.9	42.6	42.7	41	37.6	34.8	36.3	37.4	24	18.8	18.8	25.6		C
Extreme Daily	8	10.5	11.9	14.7	16.5	17	16.8	15.1	12.2	11.4	8.4	7.6		C
Date (yyyy/dd)	1977/30	1972/24	1984/29	1974/24+	1975/26	1975/08+	1974/06	1973/04+	1973/04	1971/19	1971/14	1971/03		
Humidex:														
Extreme Humidex	5.5	4.6	10.2	12.8	26.8	35.7	**37.3**	32	30.5	21	10.6	5		
Date (yyyy/dd)	1996/20	1981/24	1999/29	1984/28	1960/30	1989/24	**2002/01**	1953/14	1959/10	1970/10	1977/11	1957/21+		
Days with Humidex >= 30	0	0	0	0	0	0.3	0.2	0.1	0	0	0	0	0.7	A
Days with Humidex >= 35	0	0	0	0	0	0	0	0	0	0	0	0	0	A
Days with Humidex >= 40	0	0	0	0	0	0	0	0	0	0	0	0	0	A
Wind Chill:														
Extreme Wind Chill	**-66.2**	-60.2	-56.9	-43.6	-36.6	-14	-7.1	-8.1	-14.8	-31.6	-44.1	-58.5		
Date (yyyy/dd)	**1975/20**	1973/17	1972/01	1994/01	1972/01	1992/04	1964/16	1965/30	1963/30	1986/25	1978/26	1990/27		
Days with Wind Chill < -20	29.7	26.7	24.9	13.5	0.8	0	0	0	0	1	14.3	27.2	138	A
Days with Wind Chill < -30	26.6	22.6	17	3.4	0.1	0	0	0	0	0.1	2.8	19.3	92	A
Days with Wind Chill < -40	16.6	13.2	5.9	0.2	0	0	0	0	0	0	0.2	8.8	44.8	A
Humidity:														
Average Vapour Pressure (kPa)	0.1	0.1	0.2	0.3	0.5	0.8	1	1	0.7	0.5	0.3	0.1	0.5	A
Average Relative Humidity - 0600LST (%)	65.1	65.6	69	76.9	77.2	76	79.2	81	84.8	82.3	80.3	70.8	75.7	A
Average Relative Humidity - 1500LST (%)	63.7	60.3	59.8	62.2	60.3	56.6	59.2	59.4	67.7	72.7	76.2	70.2	64	A
Pressure:														
Average Station Pressure (kPa)	94.4	94.6	94.8	95.1	95.1	94.9	94.9	95	94.9	95	94.7	94.6	94.8	A
Average Sea Level Pressure (kPa)	101.1	101.3	101.4	101.6	101.5	101.2	101.1	101.3	101.2	101.4	101.2	101.3	101.3	A
Radiation:														
Extreme Global (RF1)	6.6	13.5	21.8	27.4	29.7	**33.7**	32.1	27.7	20.4	12.9	7.6	4.5		
Date (yyyy/dd)	1964/31	1964/29	1963/31	1963/27	1963/18	**1963/11**	1963/01	1964/03	1962/05	1962/06	1964/04	1963/04		
Extreme Net (RF4)	0.6	2.3	1.7	13.9	17.2	**18.2**	16	15	10.5	5.2	0.8	-0.6		
Date (yyyy/dd)	1963/01	1964/19	1965/24	1964/29	1963/16	**1963/11**	1963/01	1963/18	1963/03	1962/01	1962/02	1964/02		
Visibility (hours with):														
< 1 km	25.8	20.6	17.8	19.8	13.4	7.9	2.7	1.7	6.2	15.3	23.4	18.6		A
1 to 9 km	171.9	137.5	134.7	117.3	90.3	70.4	60.2	47.7	85.3	135.9	158.1	169.7		A
> 9 km	546.4	520.8	591.6	583	640.3	641.7	681.2	694.6	628.6	592.9	538.4	555.8		A
Cloud Amount (hours with):														
0 to 2 tenths	237.4	223.2	215.3	172.5	132	84.6	79.5	94.2	71	58.6	95.5	223.9		C
3 to 7 tenths	151.5	138.9	133	121.6	127.5	156	172.4	180.5	130.2	101.9	110.9	133.5		C
8 to 10 tenths	355.1	316.2	395.8	425.9	484.5	479.5	492	469.4	518.9	583.5	513.6	386.7		C

Another location

Date Modified: 2008-11-01

APPENDIX 2

Historical Resources by Deposit and Province

The distribution of the historical resources, which are not NI 43-101 compliant, between deposits and provinces is shown in the following table.

Historical Resources by Deposit and Province

Area	Deposit	NML Québec ('000 natural tonnes)	NML Labrador ('000 natural tonnes)
1	James Mine		**1,077**
	Gill Mine		**368**
	Knob Lake 1		**732**
	Redmond 5		**168**
	Malcolm 1	950	
	Houston 3		**116**
	Houston 2N	24	
	Houston 2S		**2,111**
	Houston 1		**2,547**
Total Area 1		**974**	**7,188**
2	Ferriman 4	6,188	
	Star Creek 2	324	
Total Area 2		**6,512**	
3	Timmins 4		**2,023**
	Timmins 7		**489**
	Timmins 8		**314**
	Timmins 3N		**2,118**
	Fleming 7N		**4,471**
	Howse (LabMag GP)		**3,105**
	Barney 1	938	
	Barney 2	359	
	Sawmill 1	1,119	
Total Area 3		**2,416**	**12,520**
4	Kivivic 1		**3,142**
	Kivivic 2		**452**
	Kivivic 3N		**2,707**
	Kivivic 3S	914	
	Kivivic 4		**9,771**
	Kivivic 5		**4,323**
	Goodwood	42,500	
	Sunny 1	7,973	
Total Area 4		**51,387**	**20,395**
Grand Total		**61,289**	**40,033**
Proportion		**60%**	**40%**

APPENDIX 3

Newfoundland and Labrador
Benefits Strategy
Strategy for Full and Fair Opportunity and First Consideration

Nota bene

Jacques Whitford Stantec Limited (March 2009) was prepared prior to the finalization of the EIS for the ELAIOM.

Where there are inconsistencies between both documents, the text in the EIS, particularly Section 3.2.2, prevails.

As noted in Section 3.2.2, the present Benefits Strategy (Jacques Whitford Stantec Limited March 2009) is under development. An updated version will be submitted.

NEW MILLENNIUM
CAPITAL CORP.

DIRECT-SHIPPING ORE PROJECT

Newfoundland and Labrador
Benefits Strategy
Strategy for Full and Fair Opportunity and First Consideration
Elross Lake Area Iron Ore Mine

BY: Jacques Whitford Stantec Limited

March, 2009

Newfoundland and Labrador Benefits Strategy
Strategy for Full and Fair Opportunity and First Consideration
Elross Lake Area Iron Ore Mine

For

New Millennium Capital Corp.
1303, Greene Avenue
Montreal, Quebec
H3Z 2A7

Prepared by

Jacques Whitford Stantec Limited
607 Torbay Road
St. John's, NL, A1A 4Y6

File No. 1049063

Date: March, 2009

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1.0 Introduction

New Millennium Capital Corp. (NML) is aware of the importance of the Elross Lake Area Iron Ore Mine (the Project) to the people of the Province of Newfoundland and Labrador and is committed to the delivery of associated employment, business and related benefits to Labrador and to the Province as a whole. In particular, NML will ensure residents of and companies based in the Province, and especially Labrador, receive Full and Fair Opportunity and First Consideration for Project employment and business respectively, where practically and commercially achievable on a competitive basis and in accordance with any Impact Benefits Agreement entered into with the Innu Nation of Labrador.

New Millennium Capital Corp. will be proactive and transparent in its approach to Newfoundland and Labrador opportunities. It will engage in an innovative, cooperative, supportive and open pursuit of opportunities for involvement of Newfoundland and Labrador residents and companies and to achieve best value for the Project.

The next section of this strategy describes the Benefits Process, including the establishment, monitoring and review of initiatives and targets. Section 3.0 focuses on Employment, including education, training and other human resources initiatives aimed at encouraging the hiring, retention and promotion of Newfoundland and Labrador residents. This includes discussion of special provisions respecting the employment of Labrador Innu and women. Section 4.0 addresses the Project's requirements for Goods and Services, and mechanisms aimed at encouraging the use of Newfoundland and Labrador, including Labrador Innu, suppliers.

2.0 Benefits Process

The provisions of this Newfoundland and Labrador Benefits Strategy apply to NML itself, and to all contractors undertaking Project construction or operations work in the Province. In support of the above benefits commitment:

- NML will continue to maintain an office in Labrador City as a source of information about the Project and its requirements for labour, goods and services.
- NML will publicize all Project labour and goods and services requirements on its website and in newspapers in the Province and especially Labrador, and require its contractors to make comparable efforts.
- NML and its contractors will include a copy of this Benefits Strategy in all Project calls for expressions of interest, requests for proposals, and contracts.
- NML will require that prospective contractors indicate in bids how they are addressing the requirements of this Strategy.

- NML will establish in the EIS initial Project benefits targets for the provincial share of Project employment and goods and services expenditures, for both mine construction and operations.
- NML will monitor Project employment and expenditures data and, on an annual basis, assess them relative to the benefits targets and, if necessary, review and revise its benefits approach, initiatives and targets. In the last case, this may include revisions in response to changes in the Project plans and in the Labrador economy and labour market.
- Upon request, NML will make the above-noted annual compilation of employment and expenditures data available to government departments and agencies.

The benefits targets will represent reasonable but ambitious levels of participation of provincial residents in Project employment and Newfoundland and Labrador companies in Project activity, based upon an assessment of provincial capabilities and performance on comparable projects.

3.0 Employment

It is estimated that the Project will employ a total of approximately 150 people in the construction phase between 2009 and 2010. The duration of the employment will be approximately 15 months. All construction activities will be contracted out; NML's role will be limited to management and oversight.

During the operation of Phase 1 of the Elross Lake Area Iron Ore Mine, between 2010 and 2025, approximately 190 people will be employed on the Project. The duration of the employment will be approximately 15 years. NML will be responsible for all mining activities at the operations stage and will itself hire the Project employees or contract out part or all of this work. From 2015 onwards, the major part of the mining will be from the Quebec deposits, with the ore being treated in the wash plant in Labrador, which will employ about 90 persons.

Some of this construction and operations labour will be provided, on a daily commute basis, from the only community close to the mine site, the Town of Schefferville. However, given the size and characteristics of the Schefferville labour force (as described in the Project Environmental Impact Statement), the great majority of both construction and operations workers, especially the higher-paid skilled employees, will commute to and from the mine site using a 'fly-in' rotation, alternating between periods of work, during which they will live in a camp at the mine site, and periods living in their home communities.

First priority, in the employment of commute workers employed in Labrador, will be given to qualified residents of Labrador. Second priority will be given to qualified residents of other parts of the Province of Newfoundland and Labrador. The commute system will be designed in response to the residential locations of the labour force, but will likely include the provision of air transportation to and from both Wabush and Goose Bay, and the use of the railway.

In order to encourage and facilitate the employment of Labradorians and Newfoundlanders, NML will also:

- Liaise with provincial, and especially Labrador, training institutions and human resources agencies, and with the Innu Nation, so that they are informed about Project employment requirements and plans.
- Work with the above institutions and agencies to help them implement training initiatives that will facilitate the availability of qualified Labradorians and Newfoundlanders, including the Innu of Labrador and women, to work on the Project.
- Implement training and other Project human resources initiatives that will facilitate the hiring, retention and promotion of Labradorian and Newfoundland employees, including the Innu of Labrador and women. These initiatives, which will also target youth through scholarship and work placement programs, will be described in detail in the Project Human Resources Plan and Women's Employment Plan.
- Establish, monitor and, as necessary, review and revise its benefits approach, initiatives and targets respecting Project employment (see Section 2.0).

4.0 Goods and Services

NML will require a wide range of goods and services during construction and operations. It is anticipated that a small number of these will be provided from the only community close to the mine site, the Town of Schefferville. However, given the small size and scope of the Schefferville business sector (as described in the Project Environmental Impact Statement), the great majority of both construction and operations goods and services will come from elsewhere.

First priority, in terms of the procurement of these other Project goods and services required for activities in Labrador, will be given to businesses located in Labrador, including Labrador Innu companies and joint ventures, while second priority will be given to those located in other parts of the Province of Newfoundland and Labrador, in both cases provided such goods and services meet the required specifications and can be acquired on a commercially reasonable and timely basis.

All Project construction activities will be contracted out, with NML's role limited to management and oversight. NML will be responsible for all mining activities at the operations stage, but may contract out some or all of the work.

NML will provide early identification of opportunities for the supply of goods and services required for the Project, work with governments, industry organizations and the Innu Nation to jointly identify potential Newfoundland and Labrador suppliers of such required goods and services, and, on request, provide feedback to unsuccessful bidders on Project contracts. NML will also:

- Ensure that the names and locations of procurement personnel are publicized.
- Ensure procurement personnel are familiar with the capacities and capabilities of Newfoundland and Labrador suppliers.
- Participate in trade shows, business conferences, and other business and supplier development events in the Province.
- Facilitate the inclusion of qualified Newfoundland and Labrador suppliers on appropriate bid lists.
- Upon request, provide government agencies and the Innu Nation with an indication of upcoming contracts, pre-qualification lists, and final bid lists.
- Liaise with provincial, and especially Labrador, business groups and economic development agencies, and with the Innu Nation, so that they are informed about goods and services requirements and plans.
- Ensure that, where practical, the size and design of bid packages are appropriate to the capabilities of Newfoundland and Labrador companies.
- Establish, monitor and, as necessary, review and revise its benefits approach, initiatives and targets respecting Project expenditures on goods and services (see Section 2.0).

APPENDIX 4

Environmental, Health, Safety and Sustainability Manual

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Policy

New Millennium Capital Corp. (NML) is committed to the mandate of protecting life, the environment and minimizing property damage. Supervisory personnel will make procedures for emergency response, care of injured workers, reporting and corrective follow-up of all injuries and serious accidents. The procedures will be thoroughly outlined and made known to all workers and enforced. The procedures will address the following items:

- Identification of locations for emergency equipment: telephones, first aid station, alarm pulls, material safety data sheets, fire extinguishers, etc.;
- Identification of the location of primary and alternate assembly areas;
- The method for reporting an emergency and sounding the alarm;
- A contact list of personnel responsible in emergency situations;
- Procedures and equipment for recovery and transport of injured workers;
- A list of phone numbers for emergency support services;
- Persons responsible for external communication;
- An evacuation and head count plan;
- A procedure for notification of family.

Emergency Notification

All injuries, accidents, fires, or other emergencies must be reported immediately to your Supervisor. The Supervisor will then, notify the emergency services through the appropriate chain of command. Emergency response generally includes:

- Accurately define the problem;
- What material is involved;
- Determine if an evacuation is necessary, and in what direction;
- Ensure hospitals and clinics have been notified, supply them with relevant medical information;
- Ensure all workers and public are controlled at a safe distance from the emergency;
- Ensure responders through their respective chain of command know plans prior to acting.

Field Sites

In the event of an emergency, NML personnel and or Contractors shall safely shut down their operations, leave the area immediately and meet at the designated assembly area. The emergency assembly area will be identified during the safety orientation or the pre-job safety meeting.

NML employees and or Contractors' who are trained in First Aid and CPR shall provide assistance in the treatment of injured workers.

Field sites that are isolated will require a set of procedures before the worker leaves for the site and commences work.

The following list of procedures should be used when preparing for isolated work sites:

- Inform your supervisor of your travel plans, destination and estimated time of return;
- Carry a cellular, mobile phone or two way radios, with additional batteries or a power cord, in the vehicle;
- Make an emergency phone list for the area that you will be working in, example is presented at the end of this document;
- Carry a survival kit containing a tool kit, flares, candles, matches, shovel, axe, blanket, rope, food and water. Other items can be added dependent upon the location and the season;
- Carry a First Aid kit, fire extinguisher and spill kit;
- Inspect vehicle. Ensure that all fluid levels are satisfactory and the fuel tank is full. It may be necessary to carry a container of gasoline, which has been safety secured, for emergency purposes.

In the event of a serious incident, injury or a fatality, the Police and/or NML's senior management will notify the next of kin. The manager will assume the responsibility of contacting the appropriate agencies, that is: Newfoundland and Labrador or Quebec's Occupational Health and Safety, Police, Insurance and Legal entities.

Emergency Steps on Field or Isolated Sites

NML employees or Contractors are to follow the following procedures in the event or an emergency:

- Ensure immediate personal safety;
- Assess the area for hazards, sound alarm if appropriate;
- If unsafe, evacuate the immediate area and proceed to the designated meeting point;
- Call the emergency contact numbers provided;

- State:
  - the nature of the emergency;
  - your name;
  - the exact location of the emergency;
  - number of people injured;
  - hazards, if present;
  - the closest designated meeting point (ensure someone is there to escort emergency vehicle to emergency scene);
  - ask what response is coming and when.

- Follow the instructions from medical personnel. Remain on the line;

- Make sure a delegated person remains at the meeting point to direct additional responding support;

- If it is safe to do so, have the senior employee(s) remain at the scene with any injured worker(s) and supply First Aid treatment until emergency service personnel arrive;

- Ensure the safety of others;

- Maintain contact with your supervisor;

- Clear non-essential personnel from the area;

- Without jeopardizing your safety or that of others, minimize loss and environmental damage;

- First Aid kits are available in the trucks and offices, note supplies used in the emergency and arranged that they can be replenished;

- If there is a hazardous atmosphere, organize a rescue plan and put on respirators, **ensure personal safety first**;

- Stop all work in the area, maintain open access and ensure right-of-way for responding emergency vehicles at all traffic locations.

Emergency at New Millennium Offices

In the event of an emergency at NML'S office:

- For medical emergencies, call **911 or site specific emergency numbers** ;

- For other emergencies (fire, gas leaks, structural collapse, toxic fumes, etc.) evacuate the building according to the evacuation plan, and then contact the building managers.

- State:
  - the nature of the emergency;
  - your name;
  - the exact location of the emergency;
  - number of people injured;
  - hazards, if present;
  - the closest designated meeting point (if possible, send someone there to escort emergency vehicle to emergency scene).

Office Evacuation Plan

- Ensure the immediate safety of yourself;

- Ensure everyone knows an evacuation is required, pull alarm if there is a fire, these are located in the hallway by each exit door;

- When alarm sounds, evacuate the building by the nearest exit in an orderly manner, taking a cell phone if immediately available;

- Close doors behind you if there is a fire, and do not attempt to extinguish it unless it is small and contained;

- If caught in smoke, drop to hands and knees, and crawl. Breathe shallowly and use a shirt or other clothes as a filter. DO NOT STAND UP, as the smoke and excessive heat is located in the upper areas of the rooms or halls;

- Proceed to the meeting point on the rear parking lot, corner of Greene and De Maisonneuve:

- Ensure everyone is accounted for, perform a head count;

- Call 911 or other emergency number from cell or next available phone; State:
  - this is an emergency;
  - your name;
  - location of the emergency (1303 Greene Ave, Westmount or other)
  - nature of the emergency.

- Do not re-enter until declared safe;

- Ensure the safety of others, attend to injuries and administer First Aid;

- Remain at the scene of the emergency with injured workers and maintain contact with the supervisor;

- Clear all non-essential personnel from the area;

- Without jeopardizing your safety or others, attempt to minimize loss;

In summary, prepare yourself in advance. Familiarize yourself with the evacuation route. Be aware of alternative exit routes in case the nearest exit is blocked by smoke or fire.

Fire Extinguishers

Personnel are responsible for knowing the location and operation of fire extinguishers throughout the worksite, including those in vehicles and offices. All NML vehicles must have a fire extinguisher. Firefighting equipment is only to be used for fire purposes.

Inspect fire extinguishers annually and when operating in a new area to ensure they operate properly. In accordance with the Fire Prevention Act, keep records stating the date of inspection, condition of equipment, repairs made, and the name of the inspector.

Personnel should be trained in the use of fire extinguishers (i.e. in house or formal fire training recommended).

Vehicle Standard Safety Equipment

NML vehicles must be equipped with the following at all times:

- Fire extinguisher
- First aid kit
- Buggy whip (when in mine operations areas)
- Emergency supplies for remote travel
- Portable spill kit

Emergency Telephone Numbers

Name	Company	Home / Office	FAX/Skype	Cell
MONTREAL OFFICE		514-935-3204		
Martin, Bob	*NML*	*514-938-5450*	*(Roadpost) +44 (0) 7793 295 514*	*514-794-5544*
Journeaux, Dean	*NML*	*514-488-6963*	*514-484-0346 / deandean34*	*613-277-5736*
Bourassa, Jean Charles	NML	514-354-7299		514-651-7076
Melainine, Moulaye	*NML*	*514-351-8088*		*514-582-8024*
Wilkinson, Paul	*PFWA*	*514-482-6887*	*514-482-0036*	*514-808-2709*
SCHEFFERVILLE OFFICE		*418-585-2065*		
Balakrishna, T.(BK)	NML	709-944-6488/944 5592	709-944-5651	Sat. 613-980-5485
O'Quinn, Donna	NML	514-658-3678	skype = donna.o.quinn	514-770-1649
LABRADOR CITY OFFICE		709-944-5592		

EXAMPLE EMERGENCY CONTACT LIST

NML SCHEFFERVILLE FIELD
EMERGENCY NUMBERS

AMBULANCE:		**----------(418) 585-2055**
POLICE:	**SCHEFFERVILLE**	**----------(418) 585-2626**
	URGENT – 24 HOURS	**---------- (418) 310-4141**
FIRE:		**----------(418) 585 -2463**
CLINIC:	**DAY**	**---------- (418) 585-2645**
	NIGHT	**---------- (418) 585-2646**
ROY LOGAN	**HOUSE**	**---------- (418) 585-2314**
	OFFICE	**---------- (418) 585-2065**
DONNA O'QUINN	**HOUSE**	**---------- (418) 585-2314**
HENRY SIMPSON	**HOUSE**	**---------- (418) 585-2339**
	OFFICE	**---------- (418) 585-2305**
CABO	**CAMP**	**----------(705) 525-7075**
HELI-BOREAL	**OFFICE**	**---------- (418) 962-2288**
NML OFFICES	**MONTREAL**	**----------(514) 935-3204**
	LABRADOR CITY	**---------- (709) 944-5592**
	SCHEFFERVILLE	**----------(418) 585-2065**

SPILL LINE (Any spills entering water frequented by fish----------1-800-563 -9089

1303 Greene Avenue, Suite 300
Montreal, Quebec, Canada
H3Z 2A7

Tel.: (514) 935-3204
Fax: (514) 935-9650

NEW MILLENNIUM
CAPITAL CORP.

NML
www.nmlresources.com

NML's Health, Environment, Safety and Sustainable Development Policy (DRAFT)

New Millennium Capital Corp. recognizes that excellence in all areas of its business is necessary and in particular in regard for the Health, Environment and Safety (HES) of its people. NML's performance in these areas is the top priority for the Company's management, employees and contractors to achieve an efficient, sustainable and successful business. NML aggressively pursues the above principles to effectively manage its work program, procedures and methodology to ensure the health and safety of all its employees and those of its contractors, and to minimize negative environmental impacts on the locations in which it operates. NML shall respect the aboriginal, the multicultural and multilingual aspects of the affected communities.

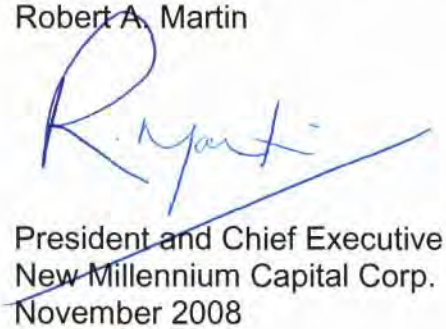
To achieve these objectives NML will:

- Implement a health and safety program as the fundamental principle for its operations and establish workplaces that consider safety first to reduce injuries and health hazards;
- Ensure that it has a system in place to identify, control, monitor and reduce HES risks arising from its operations;
- Ensure that all employees and contractors are trained and competent in the use of the HES management system and that they are aware of their responsibilities;
- Continually improve by establishing targets, delegating accountability to the responsible persons, and monitoring its operations against those targets in a disciplined manner;
- Comply with applicable HES laws, regulations and other requirements in the jurisdictions in which NML operates;
- Identify and pursue best practices to minimize negative environmental impacts, reduce waste and improve the efficiency in the use and consumption of supplies, parts, air, transport, water, fuels and power;
- Foster co-operation and trust through regular communications with employees, contractors, suppliers, communities and governments;

- Plan, design, purchase and build efficient facilities to produce quality products that obtain competitive advantage through cost effective operations.

This policy provides the fundamental principles on which NML operates. NML is committed to achieving best performance. NML Board Of Directors, through NML's management will ensure that this policy is instilled in all personnel and that the system of monitoring and discipline required will be aggressively pursued to achieve the best HES results

Robert A. Martin



President and Chief Executive Officer
New Millennium Capital Corp.
November 2008

Policy Manual Section 3311

The personal safety and health of each employee of the company are of primary importance. The prevention of occupationally induced injuries and illnesses is of such consequence that it will be given priority over operative productivity where necessary. To the greatest degree possible, management will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest standards.

We will maintain a safety and health program conforming to the best practices of organizations of this type. To be successful, such a program must start with proper attitudes toward injury and illness prevention on the part of both supervisors and employees. We are committed to cooperating with the **Occupational Health & Safety Committee/Workplace Health & Safety Designate/Worker Health & Safety Representative** in carrying out their collective responsibility for occupational health and safety. Only through such a cooperative effort can a safety program be established and preserved in the best interest.

Our objective is a health and safety program that will reduce the number of injuries and illnesses to an absolute minimum, not merely in keeping with, but surpassing, the best experience of operations similar to ours. Our goal is zero accidents and injuries.

***Our safety and health program will involve*:**

- Providing mechanical and physical safeguards to the maximum extent possible.
- Conducting a program of health and safety inspections to find and eliminate unsafe working conditions and practices, to control health hazards, and to comply fully with the health and safety standards for every job.
- Training for employees in good health and safety practices.
- Providing necessary personal protective equipment and instruction for its use and care.
- Developing and enforcing health, environment and safety rules and requiring that employees cooperate with these rules as a condition of employment.
- Investigating every accident/incident, promptly and thoroughly to find out what caused it and to correct the problem so that it won't happen again.
- We operate within the philosophy of an Internal Responsibility System and recognize that the responsibility for health and safety is shared.
- The employer accepts the responsibility for leadership of the health and safety program, for its effectiveness and improvement, and for providing the safeguards required to ensure safe conditions.

- The **Occupational Health & Safety Committee/Workplace Health & Safety Designate/Worker Health & Safety Representative** is responsible for identifying unhealthy or unsafe aspects of the workplace through participation in inspections or investigations, promoting health and safety education programs, and by developing recommendations and maintaining records.

- Supervisors are responsible for developing the proper attitudes toward health and safety in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the health and safety of all personnel involved.

- Employees are responsible for wholehearted, genuine cooperation with all aspects of the health and safety program, including compliance with all rules and regulations, and for continually practicing safety while performing their duties.

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

Date

Managers

- Provide a statement of policy relating to the safety program. The statement provides a commitment and philosophy that sets levels of expectations for safety performance throughout the corporation.
- Maintain overall control of the Safety and Loss Prevention Program direction.
- Ensure all established safety policies are administered and enforced in all areas.
- Ensure that all field operations personnel are aware of and effectively practice the policies and procedures set out in the safety program.

Occupational Health & Safety Committee/Workplace Health & Safety Designate/Worker Health & Safety Representative

- Identify aspects of the workplace that may be unhealthy or unsafe.
- Participate in workplace inspections and investigations.
- Make recommendations for the enforcement of standards to protect the health, safety and welfare of workers.
- Receive complaints regarding health and safety concerns.
- Establish and promote occupational health and safety educational programs.

Superintendents

- Ensure implementation and maintenance of the established safety policies on specific projects within their respective areas of jurisdiction.
- Ensure the maintenance of the highest standards of performance with respect to the safety program on their respective job-sites. They are also accountable for the safe performance of personnel and equipment on their projects.
- Implement a site safety program and develop a clear understanding of safety responsibilities and specific duties for each foreperson or supervisor. The Superintendent must be knowledgeable of and responsible for complying with all regulations, laws and codes.

- Hold at least one safety meeting biweekly with fore persons to review safety conditions and general safety policies. Ensure that sub trades and fore persons conduct weekly toolbox meetings. Where there are only a few employees, the Superintendent shall conduct a weekly toolbox meeting with all project personnel in attendance.

- Arrange for the recording of minutes of safety committee meetings and forward copies to the Manager.

- Make daily observations of safety activities on the project.

- Accompany Occupational Health and Safety Division Inspector(s) during project inspection. If he/she is not available, the Superintendent will assign another supervisor for the inspection.

- Be aware of the hazards that exist for the short term, temporary and a new hire worker who is new to construction activities. Ensure that new hires receive detailed safety instructions before they are allowed to start work. New employees should be assigned to work with other employees who are familiar with the project and are aware of any specific safety rules and regulations that are in force.

- Formulate a detailed hiring route for all the employees which includes a review of the project safety rules and regulations prior to starting work (New Hire Orientation).

Supervisors/Forepersons

- Provide safe working conditions for all workers under his/her supervision.

- Provide instructions to workers in safe work procedures. As part of the routine duties, the Supervisor shall require employees to use personal protective equipment as appropriate, eg. hard hats, goggles, masks, respirators, safety glasses or other items deemed necessary.

- Correct physical conditions, which are liable to cause or have caused accidents.

- Undertake the investigation of accidents, incidents or near misses to determine the underlying causes. These must be reported in detail to the Superintendent and the required report forms completed on a timely basis.

- Provide a good example for employees by always directing and performing work in a safe manner.

- Conduct regular inspection for unsafe practices and conditions and ensure prompt corrective action to eliminate causes of accidents.

- Work in cooperation with other project supervisory personnel in determining safe practices, enforcing their observance, developing procedures for dealing with violations and developing other general safety and accident prevention.

- Provide each employee with information about the hazards on the job and how to avoid them.

- Maintain a housekeeping standard and assign definite responsibilities to individuals for good housekeeping.

- Enforce all established safety regulations and work methods. Take disciplinary action as necessary to ensure compliance with the rules.

- Provide a minimum of one toolbox meeting a week with his/her crew and record minutes on the prescribed form.

- Provide a regular inspection for unsafe practices and conditions, and ensure prompt corrective action to eliminate causes of accidents.

Employees

- Carry our work in a manner that will not create a hazard to their own safety and health or the safety and health of other employees.

- Assist site supervision in the reduction and controlling of accident producing conditions and unsafe acts on the work site.

- Report any accidents, incidents, near misses and/or injuries immediately to the supervisor.

- Report any anticipated loss of work time to his/her supervisor as soon as possible after being treated by a physician following injury.

Safety Administrator

- Recommending and establishing the safety program as approved by Executive Management.

- Responsible for administration of safety program on site.

- Post all safety bulletins, safety posters and safety rules and regulations.

- Assist project Superintendent(s) in accident investigations, analysis and preparation of accident reports and summaries.

- Monitoring the safety program for compliance.
- Ensure that pertinent safety reports are submitted as required.
- Prepare descriptions of identified unsafe conditions and the steps taken to correct these conditions.
- Maintain a list of safety equipment purchased.
- Prepare a copy of inspection reports on equipment.
- Prepare a copy of field safety inspection check lists.
- Ensure that corrective action has been taken whenever deficiencies are identified.
- Assist with safety seminars or training.
- Maintain current knowledge of safety literature, regulations and codes of practice.
- Establish schedules of inspection.
- Review the accident reports to keep informed about the project and company safety performance.

First Aid Personnel

For all jobs the Superintendent will appoint adequate person(s) to provide such first aid services as may be required given the nature of the job-site and government regulations. The person(s) appointed to this position shall possess an appropriate Certificate in First Aid in accordance with the relevant regulations and must be available at all times to administer first aid.

- Administer first aid as required.
- Maintain a first aid log.
- Requisition all first aid supplies and equipment.
- Assist Safety Officer when necessary.
- Provide health education materials or instruction to all on-site employees as required.

Sub-contractors working at any **New Millennium Capital Corp.** sites shall, prior to starting work, complete a *Pre-Job Hazard Assessment*, which identifies all hazards and potential hazards and the action taken to control them.

While working on **New Millennium Capital Corp.** projects, the Sub-contractor shall participate in all *Work-Site Safety Meetings* and play an active role as a member of the *Work-Site Safety Committee.*

Sub-contractors will complete a daily Work-Site Fall Protection inspection where their work requires it.

General Inspections and Tool Box Meetings shall be carried out according to **New Millennium Capital Corp.** Safety Policies.

Sub-contractors will provide documentation to **New Millennium Capital Corp.** to verify compliance with this policy, and the Occupational Health and Safety Act and Regulations.

Acknowledged By:

_____
Sub-contractor

_____
Sub-contractor's Company Name

_____
Date

* ***The safety information in this policy does not take precedence over the Occupational Health and Safety Act. All sub-contractors should be familiar with the Occupational Health and Safety Act.***

I, ***Robert A. Martin***, President and Chief Executive Officer of ***New Millennium Capital Corp.*** am ultimately responsible for workers' occupation health and safety at the workplace. I will strive to protect workers from injury and illness related to work; and I will provide the resources necessary to keep the workplace healthy and safety. To fulfill this commitment New Millennium Capital Corp. (NML) will make every effort to provide and maintain safety and healthy workplaces by following industry standards and complying with OH & S legislation. A healthy and safe workplace will be created in consultation and cooperation with management and workers, in particular the health and safety representative / designate or committee.

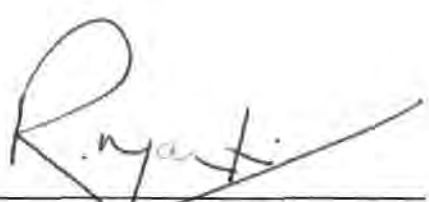
Supervisors will be held accountable for the health and safety of employees under their supervision. Responsibilities include ensuring machinery and equipment are safe and established safe work practices are followed. To protect their health and safety employees must receive and OHS orientation and specific work task training.

Every employee must protect his/her health and safety and the health and safety of other employees by following legislative requirements and safe work practices and by reporting unsafe conditions they observe.

Contractors will be required to meet legislative requirements and follow NML's policies and procedures regarding health and safety.

Health and safety is an integral part of this companies every day business. It is in the best interest of all to join together and put into practice health and safety principles in all work activities.

This OH &S policy will be reviewed on an annual basis and revised as necessary.



Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

May 27, 2009

Date

It is New Millennium Capital Corp. (NML) belief that, through education programs, investigation of problems and resolutions of these problems, the workplace will be healthy and safe for all employees. We acknowledge that the proper functioning of the health and safety committee can only be carried out where representative of both the employer and workers are committed to these responsibilities. NML adapted these guidelines in good faith and agree to promote and assist the health and safety committee whenever possible.

NML Management: _____ (print) _____ (signature)

NML Worker: _____ (print) _____ (signature)

Date: _____

Committee Name:

NML's Montreal Office Joint Occupation Health and Safety Committee (JOHS Committee).

Composition of Committee:

The JOHS Committee will consist of a minimum of four members, one management representative and three worker representatives.

Function of the Committee:

- Make recommendation for the establishment of health and safety policies and procedures;
- Identify aspects of the workplace that are unsafe and recommend corrective action;
- Help to identify and resolve the health and safety concern of workers;
- Receive and distribute health and safety information to workers and employers;
- Participate in workplace inspections; and
- Maintain records regarding the complaints received and the resolution of those complaints.

Records:

The committee will keep accurate records of all matters that come before it.

Meetings:

- The committee will meet at least once every three months.
- Special meetings, if required, will be held at the call of the Chair.
- A quorum shall consist of majority of members.

Agenda and Minutes:

- An agenda will be prepared by the chair and distributed to all members prior to the meeting.
- All items rose on the agenda and in meetings will be dealt with on the basis of consensus.
- All items will be reported in the minutes. Unresolved items will continue to be reported in the minutes and placed on the agenda until such time as they are considered.

Committee Members:

_____ (print)	_____ (signature)
_____ (print)	_____ (signature)
_____ (print)	_____ (signature)

Date: _____

NEWFOUNDLAND AND LABRADOR

WORKPLACE HEALTH, SAFETY & COMPENSATION COMMISSION

OCCUPATIONAL HEALTH AND SAFETY COMMITTEE

MINUTES REPORT FROM

INFORMATION/SAMPLES

3.3.2.3

A job hazard is any condition at work that has the potential to cause injury, illness, or loss. All jobs in which New Millennium Capital Corp. (NML) employees are involved must undergo a job safety (JHA) analysis to identify potential hazards. It is a proactive course of action designed to assist in identifying where the greatest risks to workers exist in daily activities. This process raises awareness of health and safety issues in the workplace and reduces the number and severity of incidents. It is also a tool for workers and employer alike to evaluate the adequacy of safe work procedures, training, and incident investigation.

Four basic stages in conducting a JHA are:

1. Selecting the job to be analyzed
2. Breaking the job down into a sequence of steps
3. Identifying potential hazards
4. Determining preventive measures to overcome these hazards

Selecting the Job to Analyze

- Jobs whenever equipment, raw material, processes or the environment require a JSA to be completed, reviewed by all employees involved.

Factors to consider in a Job Safety Analysis:

- Accident frequency and severity - jobs where accidents occur frequently or whey they occur infrequently but result in injuries.
- Potential for severe injuries or illnesses – the consequences of an accident
- Newly established jobs – due to lack of experience in these jobs, hazards may not be evident or anticipated
- Modified jobs – new hazards may be associated with changes in job procedures.
- Infrequently preformed jobs – workers may be at greater risk when undertaking non-routine jobs and a JHA provides a means of reviewing hazards.

Breaking the Job into "Basic Steps"

- Record each step in sequence
- Persons having experience with the job prepare this part of the analyses.
- Consider normal times and situations of the job i.e. if the job is routinely done only at night.
- When completed, the breakdown of steps are to be discussed by all the workers involved to ensure the steps are in the correct order.

Identify Potential Hazards

To help identify potential hazards, the following are examples of questions to use:

- Can any body part get caught in or between objects?
- Do tools, machines, or equipment present any hazards?
- Can the worker make harmful contact with moving objects?
- Can the work slip, trip or fall?
- Can the worker suffer strain from lifting, pushing or pulling?
- Working at heights?
- Is the worker exposed to extreme heat or cold?
- Is excessive noise or vibration a problem?
- Can the weather conditions affect safety?
- Is harmful radiation a possibility?
- Can contact be made with hot, toxic or caustic substances?
- Is there a danger of objects falling?
- Are there dusts, fumes, mists, or vapors in the air?

Preventive Measures

The final stage In a JHA is to determine ways to eliminate or control the hazards identified.

- Eliminate the hazards:
  - Choose a different process
  - Modify an existing process
  - Substitute with less hazardous substance
  - Imporve environment (ventilation)
  - Modify or change equipment or tools.
- Contain the hazard – if the hazard cannot be eliminated, contact might be prevented using enclosures, machine guards, worker booths or similar devices.
- Revise work procedures – modifying steps which are hazardous, changing the sequence of steps, or adding additional steps
- Reduce exposure – minimizing the number of times the hazards are encountered.

NEW MILLENNIUM CAPITAL CORP.

JOB HAZARD ANALYSIS (JHA)		Date	New JHA _____ Revised JHA _____
NML Division:	Contractor:		Location:
JOB TITLE:		JHA Number:	Page ____of ____
Job Performed By:	Analysis By:	Supervisor:	

Notes:

Activity/Sequence of Job Steps	Potential Hazards/ Injury sources	Safe Action or Procedure

Continued

Activity/Sequence of Job Steps	Potential Hazards/ Injury sources	Safe Action or Procedure

Reviewed By:

AERIAL PLATFORMS

General:

Protecting workers from injuries associated with use of aerial platforms

Application:

As per job description

Protective Mechanisms:

Safe work procedure
Permit system
As per manufacturer instructions

Selection and Use:

Safe work procedure
Job requirement

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements

Worker Responsibility:

1. Read and follow manufacturer operators instructions
2. Perform job site inspection and walk around inspections of platform
3. Ensure ground is firm and level
4. Be aware of power line proximity
5. Ensure correct aerial platform is utilized
6. Do not overload the machine at any time
7. No platform is to be made higher by the use of a scaffold, boxes, or ladders
8. Wear a safety harness attached to the machine when operating any aerial platform
9. Get on and off the platform when it is in lowered position

BACKFILLING

General:

Protecting workers from injuries associated

Application:

As per job requirement

Protective Mechanisms:

Safe job procedure
Permit system
PPE

Selection and Use:

As per safe job procedure

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements.

Worker Responsibility:

1. No backfilling shall commence until all workers are clear of working areas.

2. The operators of any vehicles being used in backfilling operations shall keep their swampers in sight at all times.

3. Operators/Swampers to be conversant in hand signals.

4. PPE (including high visibility vests.)

CONFINED SPACE ENTRY

General:

Protecting workers from injuries associated with working in confined spaces.

Application:
Primary function is something other than human occupancy and – has restricted entry and exit; and may contain potential or known hazards.

Protective Mechanisms:
Safe job procedure
Permit system
P.P.E
Site specific entry program

Selection and Use:
As per job requirement and site specific entry

Supervisor Responsibility:
Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements including Confined Space Entry and Emergency Egress procedures.

Worker Responsibility:

1. Worker must be competent in confined space entry to identify the work procedures required to enter the confined space.

2. Ensure that there is reasonable means of egress from all parts of the confined space.

3. Ensure that ventilation and purging is established and allows acceptable air levels to be achieved and maintained.

4. Establish method of communication to allow immediate contact with necessary personnel if rescue or assistance is required, confirm alarm system.

5. Worker must be trained in H2S Alive or equivalent.

6. Before entry, the vessel or confined space must be tested by a competent worker wearing breathing apparatus, for oxygen content, combustible gas (L.E.L.) and hydrogen sulfide.

7. Continuous monitoring may be required of the vessel or confined space atmosphere to detect changing conditions.

8. Worker must be conversant with Rescue Procedures.

DEFECTIVE TOOLS

General

Defective tools can cause serious and painful injuries. If a tool is defective in some way, **DON'T USE IT.**

Be aware of problems like:

- chisels and wedges with mushroomed heads
- split or cracked handles
- chipped or broken drill bits
- wenches with worn out jaws
- tools which are not complete, such as files without handles

To ensure safe use of hand tools, remember:

- never use a defective tool;
- double check all tools prior to use; and
- ensure defective tools are repaired

Air, gasoline or electric power tools, require skill and complete attention on the part of the user even when they are in good condition. Don't use power tools when they are defective in any way.

Watch for problems like:

- broken or inoperative guards,
- insufficient of improper grounding due to damage on double insulated tools,
- no ground wire (on plug) of cords of standard tools,
- the on/off switch not in good working order,
- tool blade is cracked,
- the wrong grinder wheel is being used, or
- the guard has been wedged back on a power saw.

ELECTRICAL APPARATUS-LIVE

General:

Protecting workers from injuries associated with working on live electrical systems.

Application:

Electrical apparatus, equipment and circuits shall be designed and operated in accordance with the Canadian Electrical Code.

Protective Mechanisms:

Safe job procedure
Permit system
P.P.E.
E.R.P. (Emergency Response Plan)

Selection and Use:

As per job requirement

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training.

Worker Responsibility:

1. When working on connections, shut off power if possible.
2. Ensure what amperage and voltage you are working on.
3. Electrical installations should be carried out by a properly trained and qualified journeyman or registered apprentices.
4. Two or more journeyman should work together on any energized circuit with a potential to 480 volts or more between conductors.
5. Remove panel covers with care, ensuring cover screws or panel space fillers are removed.
6. Ensure ladders are made of non-conductive materials.
7. Be conversant with E.R.P. (Emergency Response Plan).

ELECTRICAL SYSTEMS LOCKOUT

General:

Protecting workers from injuries associated in working with electrical systems.

Application:

Where there is or may be a danger to a worker from the inadvertent operation of electrical equipment then that equipment must be locked out and tagged prior to commencing work.

Protective Mechanisms:

Safe work procedure
Permit system
Lockout procedure
PPE
Lockout devices (padlocks, multiple lock hasps, tags)

Selection and Use:

As per safe work procedure

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training

Worker Responsibility:

1. Switch off all appropriate devices (MCC, Distribution Panel, Disconnect).
2. Lock and tag Electrical Supply devices in the “OFF” position.
3. Test to be sure the equipment cannot be operated at the STOP-START switch.
4. Test to be sure electrical equipment is de-energized.
5. After completion of task, remove padlocks and destroy tags.

EQUIPMENT ACTIVITIES NEAR OVERHEAD POWER LINES

General:

Protecting workers from injuries associated with equipment activities near overhead power lines

Application:

Do not operate heavy equipment near or under a power line until they have obtained a permit and/or crossing agreement

Protective Mechanisms:

Safe job procedure
Permit system
P.P.E
Crossing agreement
Barricades warning signs

Selection and Use:

As per job requirement and crossing agreement

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Perform worksite inspection

Worker Responsibility:

1. Maintain minimum safe clearances.
2. Install warning devices and signs.
3. Install telescopic non-conductive posts and flagging across R.O.W. at the minimum allowable clearance as allowed by regulations for the line voltage.
4. Position signs or other devices to determine the “Danger Zone”.
5. Be conversant with allowable clearances.
6. Adhere to all site-specific regulations.
7. Beware of atmospheric conditions such as temperature, humidity and wind, which may dictate more stringent safety procedures.

EXCAVATING AND TRENCHING

General:

Protecting Workers from injuries associated with excavating and trenching

Application:

No worker shall enter any trench or excavation until the walls have been adequately cut back or temporary protective structures have been installed unless said trench or excavation is shallower than the legal minimums and the soil is stable.

Protective Mechanisms:

Safe job procedures
Manufactures specifications
P.P.E.

Selection and Use:

As per job requirement

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and to pre-plan trench/excavation soil condition.

Worker Responsibility:

1. Prior to commencement of any excavation ensure that all underground and/or overhead lines being crossed have been identified, exposed and well marked/flagged.
2. Control traffic near roads or busy access ways.
3. Use traffic controllers/flag persons.
4. Set up barricades.
5. Provide ladders in immediate area for access/egress.
6. Where the cut back method is not possible, provide timber shoring, trench jacks, sheet piling, cage or other approved method.

FALL PROTECTION

General:

Protect workers from injuries associated by not utilizing proper fall arrest protection.

Application:

Fall Arrest Protection shall be utilized where there is or may be a danger to workers falling. NO person shall use fall protection devices until they have received adequate training.

Protective Mechanisms:

Permit system
ERP (Emergency response plan)
Fall protection plan
PPE
Manufacturers specifications
Safe work procedure
Barricades and warning signs

Selection and Use:

Manufacturers specification
As per safe work procedure

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Hazard analysis
Work site inspection
Determine type of equipment required

Worker Responsibility:

1. Be fully conversant with protection system.
2. Ensure you know capabilities of Fall Protection Equipment.
3. Ensure barricades, ribbons and signs identify restricted areas.
4. Ensure you understand the procedures for rescue of workers who may be unable to rescue themselves from an elevated work area.
5. Ensure you know your anchor points.
6. Ensure you do not wrap the lanyards and/or rope around beams, girders, pipes, etc.
7. Utilize buddy system and continually check each other's harness and D ring to ensure that the harness in not too loose and or the D ring has not slipped down the back.

HAZARD CONTROL SIGNAGE

General:

Protecting workers from injuries associated with improper use of warning signs

Application:

Work sites should have appropriate and adequate signage to identify site hazards in place prior to the commencement of any work process.

Protective mechanisms:

Safe work procedures
Government regulations
Local jurisdictions
Worksite traffic guidelines
PPE

Selection and Use:

As per safe work procedures

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Signage selection
Hazard analysis

Worker Responsibility:

1. Ensure signage is in good condition, clean, legible and suited to the purpose.
2. Ensure traffic control signage is to be of accepted standards.
3. Ensure signage is secured.
4. Routinely inspect signage for placement, cleanliness and physical damage.
5. Ensure road traffic control signage is covered when no activity is present.
6. Ensure you are fully trained to erect road traffic signage

OPERATION OF AIR TOOLS

General:

Protecting workers from injuries associated with operation of air tools.

Application:

Air tools are powered by compressed air supplied by rubber hoses.

Protective Mechanisms:

Safe job procedure
Permit system
P.P.E

Selection and Use:

As per job requirement

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements.

Worker Responsibility:

1. Regularly inspect tools and hoses before using
2. Obtain underground utility locates for the work area
3. Wear suitable clothing and personal protective equipment
4. Use proper shoring or slope equipment when air back tools are used in ditch
5. Get assistance before lifting or moving heavy objects
6. Practice good housekeeping
7. Keep loose fitting clothing away from rotating equipment
8. Bleed air before disconnecting hoses
9. Shut-off equipment while re-fuelling
10. Do not use an air tool for any purpose other than what it is intended for

OPERATION OF MAN LIFTS AND SCISSOR LIFTS

General:

Protecting workers form injuries associated with operation of man lifts and scissor lifts.

Application:

No person shall operate a Man lift or Scissor lift until they have received adequate training, in accordance with manufacturer's specifications.

Protective Mechanisms:

Manufacturers specifications
Permit system
ERP (Emergency Response Plan)
Safe work procedures
P.P.E
Barricades and warning signs

Selection and Use:

As per safe work procedure

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Determine type of equipment required
Inspect work site

Worker Responsibility:

1. Erect warning devices
2. Erect barricades and warning signs
3. Ensure Flagperson on site
4. Swamper to be utilized and identified
5. Ensure means of communication between operator and swamper
6. Fall protection in place

PLANNED LIFTS AND SUSPENDED LOADS

General:

Protecting workers from injuries associated with lifting operations.

Application:
Lifts involving mechanical assistance must be planned to ensure the proper use of equipment and rigging

Protective Mechanisms:
Safe work procedure
Permit system
Crane and hoisting equipment operation trade regulations
Standard crane and hoist signals
Engineered lift procedure
PPE
Barricades and warning signs

Selection and Use:
As per safe work procedures

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Determine type of equipment
Hazard analysis
Work site inspection

Worker Responsibility:

1. Ensure barricades and warning signs are in place
2. Determine the weight of the load
3. Determine the shape and the size of the load
4. Determine the maximum height and final position of the load to be raised
5. Determine the centre of gravity of the load so proper length of slings can be determined
6. Ensure that safety inspections are completed on equipment and rigging
7. Ensure potential hazards are identified within the work area
8. Communicate with all personnel involved of potential hazards
9. Ensure clear communications with equipment operators are in place
10. Ensure tag lines are utilized and constructed of non-conductive material
11. Ensure atmospheric conditions are monitored such as temperature, humidity and wind may affect the operator
12. Ensure you are conversant with proper hand signals
13. Ensure ground is firm and level

SPRAY PAINTING

General:

Protecting workers from injuries associated with spray painting operations

Application:

Spray painting is an integral part of construction work, which must be performed by trained workers

Protective Mechanisms:

Safe work procedure
Chemical hazards regulations
Occupational exposure limits
MSDS
WHMIS
Permit system
PPE

Selection and Use:

As per safe work procedure
MSDS

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Selection of equipment
Hazard analysis

Worker Responsibility:

1. Ensure you are fully trained
2. Ensure you are conversant with safe work procedures
3. Follow manufacturers recommendations
4. Ensure all sources of ignition are eliminated
5. Ensure equipment is grounded
6. Ensure area is ventilated
7. Do not smoke around spray painting operations
8. Ensure warning signs are in place
9. Practice good housekeeping

USE AND CARE OF RESPIRATORY EQUIPMENT

General:

Protecting workers from injuries associated with the improper use and care of respiratory equipment

Application:

When hazardous airborne contaminants or an oxygen deficient atmosphere exists, proper respiratory equipment must be utilized

Protective Mechanisms:

Safe work procedure
Permit system
Manufacturer specifications
Air quality monitors
PPE
ERP (Emergency Response Plan)
WHMIS

Selection and Use:

As per safe work procedure
Manufacturer specifications

Supervisor Responsibility:

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Selection of equipment
Hazards analysis
Work site inspection

Worker Responsibility:

1. Ensure you are fully trained on respiratory equipment
2. Ensure you are conversant with safe work procedures and/or site-specific procedures
3. Inspect before each use
4. Inspect after each use
5. Ensure to utilize “Buddy” system
6. Ensure work masks are cleaned and disinfected after each use
7. Ensure equipment is stored properly

No.	Scaffold Inspection Check List	YES	NO
1.	Scaffold erection coordinated by a competent worker.		
2.	Scaffold square, straight, and plumb in all directions.		
3.	All scaffold components present, tight and secure.		
4.	No tubes or members over extended and hazardous.		
5.	Base plates and screws firmly supported on all legs. -Mudsills-		
6.	Levelling adjustment screws extended less than 0.3 metres and lock nuts tightened.		
7.	Tower tied to rigid support horizontally every 1.4 metres and vertically every 4.6 metres.		
8.	Free standing tower scaffold steadied with guy wire every 9.1 metres in height.		
9.	Platform planking cleated on underside at each end with wood or angle iron.		
10.	Platform planking tied down securely.		
11.	Platform planking maximum span 2.3 metres for heavy duty and 3.1 metres for light duty.		
12.	Vertical ladder securely fastened in place.		
13.	Safety cage needed around vertical ladder if it is more than 6.5 metres in height.		
14.	Perimeter hand rail 0.9 metre to 1.07 metres high with a mid rail around all work platforms.		
15.	Separate rope or hand line in place at all platforms to raise and lower tools or material.		
16.	Warning devices/signs provided if erected over walkways or roadways (flashing lights, reflective tape streamers, or area is roped off).		
17.	Minimum clearance from overhead power lines maintained as per Occupational Health and Safety Regulations.		
18.	Rolling scaffold wheel brakes locked and outriggers extended to maintain maximum height of 3 times the smallest base dimension.		
19.	Separate ladders being used for scaffold access.		
20.	Scaffold constructed & maintained according to certified engineered drawings.		

INTRODUCTION

The human body functions most efficiently within a narrow temperature range. At 2^{o} C above or below the body's normal temperature of 37^{o} C, additional stress is placed on the body to regulate its temperature e.g. shivering to keep warm and perspiring to keep cool. Sources of heat external to the body can help0 to maintain and regain body temperature. However, preserving the heat generated internally by the body and maintains the body's ability to produce this heat is key to maintaining personal comfort and performance in the cold.

Susceptibility to cold varies from person to person. Table 1 summarizes some of the factors involved in cold stress.

ENVIRONMENTAL	PERSONAL CHARACTERISTICS	OTHER
Temperature Wind Humidity	Age Weight Fitness Impaired circulation Previous cold injury Acclimatization to cold	Clothing Physical activity Fatigue A worker use of medication(s) consumption of alcohol or use of nicotine

HEAT LOSS AND MAINTAINING HEAT BALANCE

Body heat can be lost in any of the following ways:

Immersion of body parts e.g. the hands and feet (or the entire body) in cool or cold liquids;

Direct contact with cold surfaces e.g. the ground, tools, machinery, products being handled;

Conduction of heat through wet or damp clothing, including clothing damp with perspiration;

Exposure to cold air, including inhaled and exhaled cold air;

Evaporation of sweat; and

Consumption of cold liquids or foods.

The body maintains heat balance in two main ways:

1. *Restricting blood flow*- the body automatically reduces the amount of blood circulating through the skin and cooled body part by constricting bold vessels supplying blood to those regions. By doing so, warm blood is diverted to the body's core maintaining the temperature of internal organs and the brain.

2. *Shivering* - this can temporarily raise a person's body temperature. Slight to moderate shivering is not uncomfortable and will warm a person. Severe, uncontrolled shivering occurs when body temperature falls to 36 EC (normal body temperature is 37 EC). During severe shivering, body heat production can rise to as high as 4 to 5 times normal. Severe shivering is a sign of danger and a severely shivering worker should be immediately removed from exposure to the cold.

THE EFFECTS OF COLD ON PERFORMANCE

The ability of workers to function and work normally is affected by exposure to cold conditions. The changes to human performance under such conditions are due to two factors:

1. The environmental temperature; and

2. The clothing required to function at a particular temperature.

As temperature decreases and the duration of exposure increases, the following changes can be experienced:

- reduced dexterity of the hands and feet;
- reduced tactile sensation;
- impaired ability to perceive heat, cold, and pain;
- educed joint mobility;
- reduced grip strength;
- hypothermia i.e. reduced body temperature, which in its extreme form can result in death;
- frostbite i.e. frozen tissue, or frostnip – very mild, superficial freezing of exposed skin;
- reduced coordination; and
- Reduced decision – making ability.

The clothing worn to maintain personal comfort in the cold can limit performance in the following ways:

- hats and hoods may interfere with hearing, vision and movement;
- bulky clothing layers may restrict movement;
- gloves, mittens, and over mitts may reduce dexterity and tactile "feel";
- footwear may be heavy and bulky, compromising the ability to use footholds and vehicle foot pedals; and
- The weight and bulk of clothing increases the amount of effort required when moving.

Most of these clothing limitations can be overcome by carefully selecting clothing appropriate for the tasks being performed and the temperatures at which they are performed.

PREVENTION AND CONTROL

If workers are or may be exposed to, conditions that could cause hypothermia or cold-related injury the following should be practiced;

Environmental measures

a) Temperature and wind conditions at the work locations should be know e.g. weather report on the radio, current weather office information.
b) Steps should be taken to protect workers from wind (or indoors from drafts or forced air from air handling units). The combination of low temperatures and even moderate winds can quickly create dangerous working conditions. \
c) Ensure that heated rest areas such as a truck cab, tent, or hut are available.

WORK PRACTISES

A schedule of regular rest breaks should be established to allow worker to warm up. These breaks should be not less than 10 minutes in length and should be taken in a heated area. Outer clothing should be remembered to prevent overheating and sweating when in the heated area. Returning to cold work while damp or sweaty may result in rapid chilling. The following work practice should be followed:

Under conditions of continuous work in the cold:

a) Heated warming shelters (tents, cabins, rest rooms, etc.) should be provided. Workers should be encouraged to use these at regular intervals, the frequency of use depending the severity of environmental exposure;
b) When entering the heated shelter, outer and middle clothing layer 9as necessary0 should be remove to prevent overheating and to permit dampness to evaporate, A change of dry clothing may be necessary;
c) Warm fluids should be consumed at the work site to provide energy, warmth, and replace fluids lost during work. Significant fluid loss can occur in the cold due to sensible and insensible sweating, breathing, and the extra energy requirement of working in the cold. Dehydration in the cold is a serious concern, increasing a worker's susceptibility to hypothermia; and
d) The onset of sever shivering; the felling of excessive fatigue, drowsiness, irritability or euphoria are inductions for immediate return to shelter.

The following additional precautions apply at colder temperatures.

Workers should be under constant protective observation by a buddy or supervisor;
Work rate should not be high enough to cause sweating. If heavy work must be performed, rest periods in heated shelters and the opportunity to change into dry clothing should be provided;
Work should be arranged to minimize periods of standing or sitting still; and
Weight and bulkiness of clothing should be included in estimating required work performance

Personal measures

a) Diet – workers have increased energy requirements when working the cold. Consider adding additional wholesome foods the your diet such as pasta, potatoes, rice, dairy products, nuts, meat, herring and salmon, light snacks and warm fluids should be taken during rest breaks.

b) Alcohol must not be consumed when working in the cold. Alcohol produces a deceptive feeling of warmth but may contribute to dehydration and impair judgment.

c) Dressing for the cold
    a. To stay warm in the cold;
    b. cloths must be layered to manage moisture and keep dry;
    c. insulating layers must trap air to stay warm; and
    d. The worker must be protected from the wind and weather.

To remain comfortable as weather and work conditions change, clothing layers should be added or removed, or ventilation openings in clothing opened or closed to remain comfortable. Clothing layers should be managed to remain comfortably warm.

Every effort must be made to avoid sweating and becoming damp. Clothing selections are normally made on the basis or staying warm while inactive. Consider the work to be performed and the weather conditions, then have workers dress so that layers con be shed and they can remain comfortably warm. If clothing layers do become damp and remain that way, workers should be prepared to replace them before becoming chilled and hypothermic,. \if a worker is sweating, and then their clothing is probably too warm for the conditions and tasks being performed.

The following approach of using three clothing layers – inner, middle, and outer – is applicable to all situations. However, the recommended synthetic fabrics may not be appropriate for situations requiring clothing with fire resistant or antistatic properties. Fire restraint clothing next to the skin must be made of non-melting natural fibers such as wool or silk or an acceptable fire retardant material. The general practices described below should be followed, recognizing that the fabrics selected may be limited by specific, special work applications.

Inner layer

- The first layer of clothing should manage moisture by moving perspiration away from the skin to keep the worker dry and comfortable.
- Avoid cotton, especially in long underwear and socks. Once cotton is wet, whether through perspiration, rain, or snow, it loses all insulting properties.
- For long underwear, brands made of synthetic fibers (e.g. polyester, polypropylene, etc.) silk, or wool retain body heat when wet and wick perspiration to outer clothing layers for evaporation, leaving the body dry.

Middle Layer

- The second or middle layer(s) should trap warm air escaping from the body and hold it in open spaces within the layers(s) to keep the worker warm and insulated. Workers should wear several thin layers of clothing rather than one heavy garment. Layers can be added or removed depending upon weather and activity level.
- Select lightweight clothing that provides freedom of movement. Multiple middle layers give a worker the ability to tailor their need for warmth based on environmental temperature and activity level.
- Look for middle layers that can be added or removed easily. Zippered neck openings and zippered leggings allow for ventilation.
- A down vest or jacket may be an appropriate middle layer.

Outer layer

- The outer layer should provide protection form wind, rain, sleet, snow and identified workplace hazards. It should also keep cold air and moisture from penetrating into the middle layer(s). Breathable fabrics may or may not be necessary. Windproofness is a critical feature of an outer layer used in the cold outdoors.
- Two-way zippered front openings can be used to regulate heat load and ventilate the body.
- An outer layer having armpit zippers can be helpful in providing ventilation.
- Windproof pants, fully zippered form ankle to hip, can be added or remove without footwear having to be removed.
- Cotton twill made water and windproof may be an alternative.

The extremities must also be protected. The following suggestions apply to the hands, head, and feet.

Hand wear

- Up to 50% percent of body, heat is lost through the head. A hat or other head protection must be worn in the cold.
- Avoid cotton and use synthetic fabrics or wool instead.
- Workers must use an appropriate hardhat liner to reduce heat loss when wearing a hard hat.
- Select a hat appropriate for the weather conditions and activity level. Consider thickness extent of head coverage (e.g. open-faced or full balaclava, ear coverage, ect). Need for windproofenss, effect on vision and hearing, and ability to fit into or over protective headwear, is required.

- A facemask and eye protection may be necessary under some circumstances.

Footwear

- Warm, insulated safety footwear is essential. Boot should have thick soles for insulation while standing in snow or on cold concrete. Footwear selection should be based on the work being performed, the surfaces on which the worker will work, and the weather conditions to which the worker will normally be exposed. Tight-fitting boots reduce circulation and can make feet feel cold.
- Footwear should be sized so that it will accommodate an extra layer(s) of socks. A synthetic sock liner worn beneath a synthetic blend or wool outer sock wicks moisture away from the skin, keeping feet drier and warmer.

Special precautions

- Exposure to vibration may increase a worker's susceptibility to cold injury because of the way that vibration can reduce circulation, particularly in the extremities.
- Work performed in snow – or ice-covered terrain may require tinted safety eyewear and/or sunglasses with side shields. If there is a potential for eye hazards from blowing snow or ice crystals, special safety goggles should be worn.
- Workers with health conditions that affect normal body temperature regulation or impaired circulation e.g. Reynaud's syndrome. Diabetes. Throbophlebitis, etc. should take appropriate precautions when working in the cold.
- Body parts that have sustained a frostnip or frostbite injury are sensitive to re-injury.
- If loose or bulky clothing is worn, special care should be taken when working around moving equipment or machinery to prevent clothing entrapment.

TRENCHING - means a specific form of excavation. A trench is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m). If forms or other structures are installed or constructed in an excavation to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet (4.6 m) or less (measured at the bottom of the excavation), the excavation is also considered to be a trench.

1. Employees working in trench excavations must wear reflective vest. During the excavation, eye contact must be maintained with the operator of the backhoe at all times.

2. A stairway, ladder, or ramp or other safe means of egress may be required in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees.

3. No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.

4. Employees shall be protected from excavated or other material or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such material or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

5. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by the employee for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the employee prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when associate exposure can be reasonably anticipated.

6. Where the employee finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed associates shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

7. **It is the responsibility of the employee** to assess the risk of the trenching activities and impose prudent safety measures.

Field Camps are usually the most "temporary" structures that you will build in your Geological exploration; ensure that your choice of site is well thought out and that you have designed it with safety in mind so that its operation will have the least impact on the environment.

GENERAL SAFETY RULES

1. Coordinates of camp are to be called in to office as soon as site is selected.

2. Employees are to call in once a day at 6:30pm – (418) 585-2314.

3. In case of Emergency call – (Office) ……. (418) 585- 2305
   (Office)……(418) 585- 2605
   Henry (Home)……(418) 585- 2262

4. The Emergency contact lists are to be posted in the office/kitchen, in each vehicle and each employee shall carry one on their persons.

5. A plan of each employee's workday clearly outlining location, activities, and estimated time of arrival back to camp is to be left in the office/kitchen prior to departure for the day.

6. Any incident is to be reported immediately to Main Office.

CAMP AREA

1. Make sure that your methods will minimize the adverse impacts in the area.

2. Area is to be cleared of vegetation or any material that would propose a threat in the event of a fire.

3. Propane cylinders are to be placed in an upright position; firmly on the ground and no closer than 50 meters from the tents and are to be turned off when not in use.

4. Kitchen tent is to be located 50 meters from personal tents.

5. The kitchen tent will have a wood stove, which will sit on flat rocks; plywood will be placed behind the stove protecting the canvass tent.

6. The following emergency equipment is to be kept in the kitchen tent: emergency kit, first aid kit, fire extinguisher, and satellite phone.

7. Equipment (i.e. stove) in kitchen shall never be left unattended when in use and tent is to be well ventilated.

8. All waste (i.e. food) is to be buried in a pit or well-drained area (i.e. boulder patch).

9. Camp area is to be kept free of garbage to keep wildlife away.

10. Bathing, shaving, or dishes are to be done in a steady flow of water.

11. No propane lanterns in personal tents.

12. Solar panel and satellite phone are to be charged at all times

13. No smoking in tents; dispose of cigarettes in designated area.

EQUIPMENT CHECKLIST

ITEM		ITEM		ITEM	
	12x20 Tarp		Water Jug		Sample Bags & Tags
	Tents		Thermos		Extension Cord
	Sleeping Bags		Cups		Pencils/Pens/Markers
	Picnic Table		Bowls		Ruler/Straight Edge
	Camp Chairs		Plates		Paper/Maps
	Lamps		Cutlery		Clip Board
	Coleman Stoves		Small Tubs		Note Paper
	Swedish Saw/Axe		Can Opener		Spare tire/jack
	Cups		Spatula		Extra rope and poles
	Bowls		Cup Towels		Hammer
	Coffee Percolator		Dish Cloths		Hatchet
	Toaster		Fire extinguisher		Monkey wrench
	Large Pot (no lid)		First aid kit		Shovel
	Small pot		Satellite phone/charger		Fuel for Truck
	Large Knife		Solar panel		Propane

BASE STATION

Site Requirements:

- Easy access.
- Site is remote and likely has no traffic near it.
- Site if possible should be secure.
- Should be 500 m from the Sokoman Formation (possible over Attikamagan, Denault or Menihek Formations).
- A quick check of 200-meter radius should find no high magnetic gradient.

Possible Site:

- Try between Schefferville and Squaw Lake.

Setup in the morning:

- Check batteries before leaving town.
- Place the sensor at the same height, direction and location, if possible leave set-up at site.
- Place the Magnetometer in the same place everyday.
- Connect cable and turn on Magnetometer.
- Check that it is taking readings before leaving site.

Take down at night:

- Check battery level and that the Magnetometer is still reading.
- Turn off Magnetometer and disconnect the cable. If sensor must be removed, do so. Pack Magnetometer and sensor in truck.
- Place the Magnetometer on charger on return to town.
- Download the Magnetometer and check data for disturbances during the day (large swings in magnetic readings).
- If disturbance noted, inform the day's Magnetometer Operator of this and the times of the disturbance.
- Backup data and store away from original.

SURVEY

Always when starting Magnetometer Operator:

- Remove from pockets ALL metallic items (coins, magnets, knife, etc.).
- Try to wear clothing without metal (zipper, buttons, clips, etc.).

When Taking Readings:

- ALWAYS face the same direction. Examples if you start the grid by facing south take ALL readings on that grid facing south.
- ALWAYS hold the Magnetometer and Sensor in the same way. If you hold the sensor one foot away from the right side of your body always do the readings that way.
- The senor should be fixed 2 to 3 meters above the ground on a pole. The height should stay the same for the full survey. In higher magnetic gradients, place as high as possible. Always point the sensor the same direction for the grid.

Survey Method:

- Crew of three people.
- First member is to have start and end points of line in a GPS and walk the line (Navigator). They should note either 50 or 25 meters (depending on Grid) for Magnetometer reading. Not to stand beside Magnetometer Operator when they are taking a reading.
- Second member carries Magnetometer and takes readings (Magnetometer Operator). Magnetometer Operator needs to note signal strength and if reading appears to be low quality take two additional readings at station. Also, note that the ready is going with the correct station point data.
- Third member will survey area for rock types to note which geological unit they are in and make notes (Geologist). Any rocks, which show economic potential, should be sampled in at least one place per grid for assay. In addition, a representative sample of all rocks note on the grid should be collected. Any odd geological feature needs to be noted.

At Night:

- Put Magnetometer on charger.
- Download data.
- Backup data and store away from original.
- Plan lines for next day and put line end points in the GPS.
- If informed of magnetic disturbances during the day make plans to redo the lines that were done during the indicated times.
- Enter geological points and rock samples in spreadsheet for placing on map later.

Grid:
All grids should be planned to cover the Sokoman Formation and if possible at least 100 m past the contacts. The lines should be set to run perpendicular to the strike of the Sokoman Formation.

In Taconite Areas:
Lines should be spaced 1,000 m apart with readings every 50 m.

In DSO Areas:
Line should be spaced 250 m apart with readings every 25 m.

WATER DEPTH SOUNDINGS

Equipment needed:

- Boat with sufficient life jackets for everyone
- Motor, fuel and paddle
- Fish depth sounder
- GPS, note book, pencil, maps

*NOTE: When ever personnel in boat, life jacket must be zipped and clipped

METHOD

Pre-survey

- Get topographic map of lake and mark with lines approximately 1 km spaced across length
- Find line shore points in UTM from the top sheet
- Pre-load end points in GPS

Survey

- Start either at the end of the lake and go to shore near one of the GPS end points
- Pick the end point of the line on the opposite shore and start the fish finder and boat to the other shore recording the depth
- Repeat with each line selected

Post-survey

- Down load the fish finder data to computer
- Plot the data

LOADING AND UNLOADING ATV INTO A PICK-UP

Loading

1) When loading ATV whether on hill or level ground, ensure someone is bracing ATV against it rolling forward into rear window or back off bed of truck.
2) Once ATV is loaded, brace wheels with wooden blocks to limit movement of ATV.
3) Strap down ATV with ratchet straps at appropriate locations on ATV and truck previously informed by supervisor. (If you do not know how to operate straps, ASK!)
4) Until ATV is secured by all four straps, have one person holding ATV to limit movement.
5) Ensure straps are tight by putting weight on front and rear of ATV, which should have little or no movement.
6) If required, place board of plywood in between the ATV and rear window of truck.
7) Do not drive recklessly over dirt roads and if you have driven for an extended period of time, frequently check the tightness of straps and security of ATV.
8) All other materials and equipment should be handled with the same caution and appropriately secured before transport. If you are unsure of the load, ASK your supervisor.

Unloading

1) As described above have blocks in place and have someone brace ATV against moving forward or back while undoing straps.
2) Once ATV is free, safely and slowly unload off rear of bed with assistance of others.
3) All other materials and equipment should be unloaded with the same caution. Once again, if you are unsure, ASK your supervisor.

DISCIPLINARY PROCEDURES FOR VIOLATION OF NEW MILLENNIUM CAPITAL CORP. RULES

Te following are the minimum disciplinary procedures that will be adhered to. Penalties could be more severe for the first and second violations if it is determined that the Company's safety procedures were knowingly ignored.

First Violation:	Verbal Warning
Second Violation:	Written Warning
Third Violation:	Suspension or Dismissal

If an employee who has committee a safety violation goes one year without committing any further violations, the violations then standing against the employee will be deleted from his/her file.

Grounds for Dismissal

1. Possession or consumption of alcohol or illegal drugs on the job after reporting for duty.
2. Arriving for work or remaining at work when ability to perform the job safety is impaired.
3. Possession of firearms.
4. Fighting, horseplay, and practical jokes.
5. Theft and vandalism.
6. Damaging, disabling or interfering with safety, fire fighting, or first aid equipment.

MILLENNIUM CAPITAL CORP.
GENERAL SAFETY RULES

We each have the right and duty to stop any unsafe activity:

- We are expected to refuse to work in dangerous conditions;
- We must immediately report unsafe conditions or acts to our supervisor;
- We are responsible for each other's safety!

Use the right tool for the job!

- Use only the proper equipment designed for the job at hand;

Always use the safety equipment required for the job:

- Personal Protection Equipment (PPE) required for the job must be worn all the time;
- Check PPE daily and replace any faulty items.

Act on all accidents immediately:

- **Make the area safe: remove the danger!**
- **Get first aid and proper medical care;**
- **Accurate reporting of the facts to Supervisor must be done;**

Beware of heavy objects:

- When lifting, use the right equipment, and do not overload it;
- Get enough, qualified help when lifting or moving heavy things;
- In manual lifting, learn the right way to lift;
- Avoid being where things can fall on you!

Beware of rotating machinery:

- Make sure that rotating tools are guarded with shields or barriers;
- When that is not possible, use great caution never to come into contact with a rotating part;
- Before working on a part that rotates or moves, make sure that it is safely locked out and cannot be started accidentally.

Tread with Care! Avoid Slips and Falls:

- Always use watch your footing when walking in field;
- On steps and stairs, use handrails;
- Beware or ice or slippery surfaces;
- Walk, don't run!

Eyes need Special Protection!

- Use glasses with side shields where there is any risk at all;
- Use fully enclosed goggles when grinding iron and steel, and where there is a risk of grease or fluids damaging the eye;

Housekeeping:

- All garbage must be picked up;
- When leaving a site, take out what you have brought in.

Alcohol/Drugs:

- No alcohol or drugs at work

Horseplay:

- Don't horseplay and avoid distracting others.

Hunting/Fishing:

- No hunting or fishing neither on Company Property, nor in the project area while on the job and/or living in a company camp.

I HAVE REVIEWED NML CAPITAL CORP'S "GENERAL SAFETY RULES". I UNDERSTAND THESE RULES AND MY RESPONSIBILITIES TO ENSURE SAFE WORK PRACTICES ANY EMPLOYEE/CONTRACTOR/CONSULTANT WHO DOES NOT UNDERSTAND THESE RULES SHOULD CONTACT HIS OR HER SUPERVISOR.

NAME
(PLEASE PRINT)_____

COMPANY _____

SIGNATURE_____ DATE_____

NEW MILLENNIUM CAPITAL CORP.

ATTENDANCE RULES

To all personnel:

We are running a business, which requires results to succeed. As a consequence we need to have personnel available as scheduled. For the safety and respect of all we need to know your whereabouts regarding work schedules.

Hours of Work are from 8:00 am to 4:30 pm, Monday through Friday, unless otherwise specified.

If at the last minute, you are going to be late or not available for work, you are expected to call the office at (418) 585-2065 or (418) 585-2305 to leave a message for your Supervisor.

If you need time off for personal reasons, please ask your Supervisor at least 2 days in advance to allow for rescheduling of work. Reasonable requests for time off, with sufficient notice will be considered.

Failure to request time off in advance, notify lateness, or do not report inability to come to work will result in:

FIRST TIME – VERBAL WARNING

SECOND TIME – WRITTEN WARNING

THIRD TIME – SUSPENSION OR TERMINATION

FOURTH TIME –TERMINATION

Or

Failure to request time off in advance, notify lateness or do not report inability to come to work for two or more consecutive days will result in:

SUSPENSION OR TERMINATION

This policy explained and discussed by Supervisor: _____

I HAVE REVIEWED AND UNDERSTAND THE ABOVE

NAME
(PLEASE PRINT) _____

SIGNATURE_____ DATE_____

NOTICE OF DISCIPLINE

1. Verbal Warning (Notation to employee file)
2. Written Warning
3. Possible Suspension
4. Dismissal

Employee's Name: _____

Date: _____

Time: _____ AM/PM

Violation: _____
_____
_____
_____

Employee's Comments _____
_____
_____
_____

Date Signed: _____ Time Signed: _____

Signature of NML Supervisor: _____

All New Millennium Capital Corp. employees shall wear the proper personal protective equipment to eliminate or reduce potential injuries for hazards that cannot be eliminated from the environment.

Responsibilities

Senior management is responsible for implementing, and verifying the use of PPE within the work site.

Health, Safety, and Environmental Coordinator

Physical inspections to verify the use of PPE shall be conducted by the Safety Coordinator.

Performance Standards

This standard applies to the use of personal protective equipment with all work sites for all employees, contract personnel and visitors.

Personal Protective Equipment includes both:

- Individual PPE; owned and worn by one person, and
- Common PPE; that may be worn by more than one person.

This standard describes the basic requirements and responsibilities for using:

- Respirators
- Hair
- Clothing
- Head Protection
- Eye Protection
- Glove Protection
- Foot Protection
- Body Protection – Fall Arrest
- Hearing Protection

Respirators

Workers are to use respirators as a last line of control whenever there is risk of exposure to airborne contaminants such as dust, fumes, mists, and gases or in oxygen deficient environments. Engineering or administrative controls are the preferred method of controlling respiratory hazards. Detailed procedures for selecting and operating respiratory equipment are available in the Appendices of this manual. CSA standard Z94.4-02 applies to the selection, use and care of respirators.

Hair

Workers must meet regulations regarding hair of Occupational Health and Safety and of prime contractors. This is to ensure proper operation and facial seal of breathing apparatus and mechanical resuscitation devices, prevent entanglement of hair in moving parts of equipment, minimize danger of fire from sparks or flame, minimize absorption of airborne hazardous materials by hair.

Clothing

Clothing must be appropriate for the work being done and weather conditions. Employees who are working on high or medium hazard sites, as defined in the First Aid Regulation should comply with these general rules:

- Do not wear rings, continuous band watches, loose/torn clothing on or around machinery or equipment;
- Shirts are to have a 10 cm sleeve, and a long sleeve shirt will often be required. Shorts are not acceptable;
- High visibility vests should be worn when working around machinery or in darkness. Life vests are to be worn at all items when there is a potential drowning hazard;
- Wear protective clothing (e.g. chemical splash suit, full-face shields, goggles, respirator, etc.) when handling hazardous or corrosive materials, as indicated on WHMIS supplier labels. For additional information, refer to Material Safety Data Sheets;
- Clothing should be selected to suit the temperature, weather conditions, the level, and duration of activity and job design. Clothing should be worn in multiple layers, which provides better protection and allows the option to remove or add a layer to accommodate variable or extreme weather conditions. Workers are advised to be aware of weather forecasts and bring extra clothes;
- For work in wet conditions, the outer layer of clothing should be waterproof.

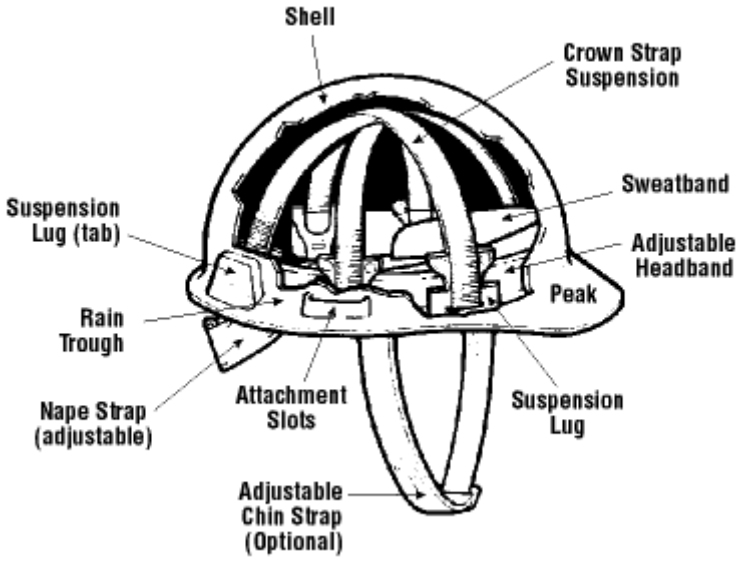
Head Protection

Head safety protection (hardhat) is designed to provide protection from falling objects, low head clearances, overhead spills or leaks, and contact with electrical wires or equipment. Where a worker is at risk of a head injury, or in designated areas, they must wear the appropriate type of headwear, as specified in CSA Standard Z94.1 (M1977 or –92).

The Class B hardhat is the recommended type of head protection to be used by NML employees.

Hard hats consist of a shell and suspension system, both require regular maintenance and should be fit tested and inspected prior to each use. The headband should be adjusted so that the hat does not fall off when the wearer bends over or leave a mark on the forehead.

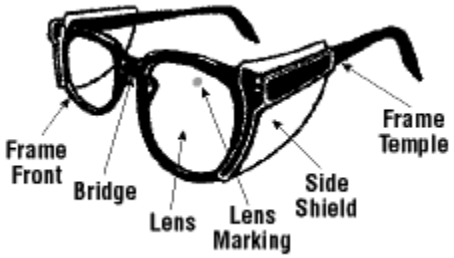
Hard hats should be replaced if they show signs of wear such as pitting, cracks or if they have been drilled into, painted or subjected to a strong blow. Replace the suspension if there are cracked or torn adjustment slots, frayed material or torn threads. Check the suspension lugs.



Clean the suspension and shell regularly according to manufacturer's instructions. Do not transport hard hats in the rear window of vehicles, put anything between the suspension and shell, or wear them backwards.

Eye Protection

Eye protection is designed to provide protection from flying objects or particles and chemical splashes. Where a worker is at risk of an eye injury, or in designated areas, they must wear the appropriate type of safety glasses or goggles, as specified in CSA Standard Z94.3 –92.
CSA certified safety glasses have plastic or polycarbonate lenses that are impact-resistant. Safety frames are stronger, designed to prevent lenses from being pushed into the eyes and may be heat resistant. The manufacturer or supplier logo is marked on all safety lenses, frames, and removable side shields of glasses or goggles.



Safety glasses must be individually assigned and fitted and are available with a prescription. The temples should fit comfortably over the ears and the frame is as close to the face as possible and supported by the bridge of the nose.
Daily cleaning and inspection of safety glasses or goggles should be performed when they are in use.

- Follow the manufacturer's instructions;
- Avoid rough handling that can scratch lenses;
- Store safety glasses in a clean, dry case;
- Replace scratched, pitted, broken, bent, or poor-fitting glasses. Damaged glasses interfere with vision and do not provide protection;
- Replace damaged parts only with identical parts from the manufacturer.

Glove Protection

A few suggestions when using glove protection are:

- Inspect gloves for defects, cracking or pin holes before using;
- Use the appropriate glove and ensure that it fits properly;
- Wash all chemicals and liquids off gloves before removing, if possible;
- Gloves wear out at different times, and are dependent upon the type of chemical that has been used and the type of glove material. If you notice a leak, discard the gloves immediately and wash your hands.

Foot Protection

Foot safety protection is designed to provide protection from impact, compression and puncture injuries. Where a worker is at risk of a foot injury, or in designated areas, they must wear the appropriate type of footwear, as specified in CSA Standard Z195-M92.

Ensure that the footwear has the proper rating for the hazard, and the proper sole for the working conditions. Grade I with a puncture resistant sole is the recommended type of foot protection to be used by NML employees.

Footwear should be properly fitted, maintained, and inspected regularly:

- Boots should have ample toe room;
- Allow for extra socks or arch supports;
- Boots should fit snugly around the heel and ankle;
- Lace up boots fully to provide support for ankles;
- Use a water-resistant coating;
- Repair or replace worn footwear;
- Electric shock resistance is greatly reduced by wet conditions and wear.

Grade I will withstand 125 joules, or 93 ft. lbs.; a 50 lb weight dropped from a height of 22 in. Construction Mining Paper Mills Lumbering	Grade II will withstand 90 joules, or 65 ft. lbs; a 50 lb. weight dropped from a height of 16 in. Warehousing Machine shops Auto industries Aircraft Industries	Grade III will withstand 60 joules, or 45 ft. lbs.; a 50 lb. weight dropped from a height of 10.5 in. Light manufacturing Supervisors Office staff Service stations

	
This marking tag designates Electric Shock Resistant Footwear. It will withstand (under dry conditions) a test potential of 18 kV, 60 Hz for a period of one minute, without discharge to ground of more than 1 mA. *Use where there is danger of high voltage	This triangle designates a puncture resistant sole able to withstand 135 kg of pressure without being punctured by a 5 cm nail. A Green triangle is Grade I; Yellow is Grade II; Red is Grade III. ** Use where there is danger of punctures.

Body Protection - Fire Resistant Clothing

NML employees will be required to wear flame resistant clothing when working at oil and gas facilities or other job sites where there is a risk of a flash fire or explosion. Flame resistant clothing is designed to protect a worker from serious burn injuries to the arms, legs, and body in the event of an explosion or flash fire.

There are different brands and types of flame resistant clothing on the market such as Nomex III, Kevlar, Aramid and Proban. There are fire resistant shirts, pants, coveralls, jackets, parkas, balaclavas, hardhat liners and even socks that can be purchased from safety suppliers. Polyester, nylons, rayon's, and other fusible commercial blends are inappropriate for use around areas where flash fires or explosions can occur. If flame resistant coveralls are worn, cotton and denim clothing can be worn underneath the coveralls. Nylon or rayon will melt under flame resistant coveralls. Therefore, they should never be worn at any site with the potential for flash fires or explosions.

Flame resistant coveralls that are weathered, ripped, hydrocarbon stained are not acceptable and should be replaced.

Body Protection - Fall Arrest Systems

Fall protection devices such as safety harnesses, safety belts, lanyards, winches, and tripods and a lifeline with an anchor point make up a fall arrest system. Fall arrest systems should be used for:

- Heights where the potential fall would cause serious injury or death;
- For confines spaces entered from the top of a tank, vessel or vault; or
- Fixed ladders higher than 6.5 metres with no ladder cage or platform.

Safety belts should be worn to protect a worker from walking off a platform with no railings, and should not be used for fall arrest. Tripods and winches are to be used for the descent or retrieval of workers to and from a confined space that is entered from the top of the tank, vessel, or vault. Alternately, fixed ladders that are higher than 6.5 metres with no ladder cage or platforms may be employed.

Check all equipment for wear, burns, rot, mildew, distortion, and breakage. Make sure no straps are cut, broken, frayed, broken fibers, pulled stitches, discoloration, torn or scraped, check for damage from fire, acid or other corrosives. Hardware should be free of cracks, sharp edges, worn areas, or burrs. Snap hooks should close and lock tightly, buckles and snaps should work properly. Ensure all anchors and mountings are solid and not damaged or loose. If any item on the fall protection system is defective or damage, immediately remove it from service. It should be destroyed or marked as unusable.

Hearing Protection

NML employees may require hearing protection when working where there is a risk of exposure to excessive noise levels. The Occupational Exposure Limit (OEL) for continuous noise is expressed as the maximum duration of exposure permitted for a given noise level, this limit depends on two factors, the criterion level and the exchange rate. The criterion level (Lc) is the noise level permitted for a full 8-hour work shift. This is 85dB(A) (decibels – “A” weighted). The exchange rate is used to calculate the maximum exposure time permitted if the sound level is increased or decreased. For impulse or impact noise levels, the maximum number of impacts is 100 for the maximum peak pressure level of 140 dB (peak).

Noise Exposure Limit

(Criterion Level=85 dB (A), Exchange Rate=5dB)

Maximum Permitted Daily Duration (hours)	**5 dB(A) Exchange Rate Allowable Level dB(A)**
8	85
4	90
2	95
1	100
0.5	105
0.25	110

Any areas that exceed this noise exposure level should be designated as noise hazard areas, with signs indicating that hearing protection is required.

Hearing protection comes in a variety of forms to suit different individuals and environments; however, they are all less effective if it is not fit properly or worn continuously. The CSA standard Z94.2-02 refers to the performance, selection, use and care of hearing protection devices. The types of hearing protection suggested for NML employees are disposable or reusable earplugs and earmuffs.

Personal Protective Equipment Compliance Checklist

Date:_____ **Location:**_____

Auditor:_____ **Phone #:** _____

	YES	NO	Comments/ Completion Date
I. EYE AND FACE			
A. General Requirements.			
1. Appropriate eye and face protection must be provided when exposed to:			
a) Flying particles.			
b) Molten metal.			
c) Liquid chemicals.			
d) Acids or caustic liquids.			
e) Chemical gases.			
f) Vapors.			
g) Potential injurious light radiation.			
2. Side shields required – flying objects.			
3. Prescription safety glasses or safety glasses over prescription lenses.			
4. Marked with the identification of the manufacturer.			
5. Injurious light radiation – filter lenses with the shade number appropriate for the work.			
B. Criteria for protective eye and face devices.			
1. Protective eye/face devices purchased **after** 7/5/94 must comply with ANSI Z87.1 /1989.			
2. Protective eye and face devices purchased **before** 7/5/94 must comply with ANSI Z87.1 – 1968.			
I. HEAD PROTECTION			
A. General Requirements.			
1. Helmets are worn when working in areas where there is a potential for injury from falling objects.			
2. Helmets designed to reduce electrical shock hazards (Class A or B) when near exposed electrical conductors.			
B. Criteria for protective helmets.			
1. Helmets purchased **after** July 5, 1994 comply with ANSI Z89.1 – 1986.			
2. Helmets purchased **before** July 5, 1994 comply with ANSI Z89.1 – 1969.			
II. FOOT PROTECTION			

A. General Requirements.			
1. Protective footwear must be worn in areas where:			
a) Falling and rolling objects.			
b) Objects piercing the sole.			
c) Where exposed to electrical hazards.			
B. Criteria for Protective Footwear.			
1. Protective footwear purchased **after** July 5, 1994 comply with ANSI Z41 – 1991.			
2. Protective footwear purchased **before** July 5, 1994 comply with ANSI Z41 – 1967.			
III. HAND PROTECTION			
A. General Requirements.			
1. Select and require employees to use appropriate hand protection when exposed to the following:			
a) Skin absorption of harmful substances.			
b) Severe cuts/lacerations.			
c) Severe abrasions.			
d) Punctures.			
e) Thermal & chemical burns.			
f) Temperature extremes.			
B. Selection.			
1. Selection of the appropriate hand protection is based on an evaluation of the performance characteristics of the hand relative to the following:			
a) The task being performed.			
b) Conditions present.			
c) Duration of use.			
d) Hazards and potential hazards identified.			
2. MSDS consulted for chemicals.			
IV. HAZARD ASSESSMENT			
A. Review Injury and Accident Data.			
1. OSHA Form 200 Log.			
2. Worker's Compensation Claims.			
B. Inform employees and supervisors of the process.			
1. Involve the employees and supervisors from each work area being assessed.			
2. Review job procedures.			
3. Potential hazards.			
4. PPE currently in use.			
C. Conducted a Walk-Through Survey observing the following:			
1. Layout of the workplace.			
2. Location of the workers.			
3. Work operations.			

4. Hazards and places where PPE is currently used including the reason for use.			
D. Consider the following hazard categories:			
1. Impact (falling/flying objects).			
2. Penetration (sharp objects piercing foot/hand).			
3. Compression -rollover/ pinching			
4. Chemical exposure (inhalation, ingestion, skin contact, eye contact or injection).			
5. Heat.			
6. Dust.			
7. Light (optical) radiation (welding, brazing, cutting, furnaces, etc.).			
8. Extreme cold.			
9. Water (potential for drowning or fungal infections caused by wetness).			
10. Vibration.			
11. Electrical.			
E. Organize Data.			
1. Prepare data for analysis of the hazards in the environment to enable proper selection of PPE. (This could be by job, function or department).			
F. Analyze Data.			
1. Estimate the potential for injuries and illnesses.			
2. Review and determine each basic hazard as to:			
a) Type.			
b) Level of risk.			
c) Seriousness of potential injury from each of the hazards.			
3. Possibility of exposure to several hazards simultaneously.			
G. Selection Guidelines.			
1. Become familiar with the potential hazards, what PPE is available and what PPE can do to prevent injuries and illnesses.			
2. Compare the hazards associated with the work environment and the capabilities of the available PPE.			
3. Select the PPE that ensures a level of protection greater than the minimum required to protect employees.			
H. Fitting the Device.			
1. Selected the right size.			
2. Adjusted for comfortable fit while maintaining the PPE in proper position.			
I. Reassessment of the hazards.			

1. Assess the workplace as necessary by identifying and evaluating:			
a) New equipment and processes.			
b) Review of accident records.			
c) Re-evaluate the suitability of previously selected PPE.			
V. TRAINING			
A. Each employee who is required to use/wear PPE must be trained to know the following:			
1. What PPE is necessary.			
2. When PPE is necessary.			
3. How to properly don, doff, adjust and wear PPE.			
4. Limitations of the PPE.			
5. Proper care, maintenance, useful life and disposal of PPE.			
B. Employee must demonstrate an understanding of the training elements taught and the ability to use PPE properly before being allowed to perform work requiring PPE.			
C. Retraining must be done in the following situations:			
1. Changes in the workplace.			
2. Changes in the type(s) of PPE used.			
3. Inadequacies in the employee's knowledge and use of the assigned PPE.			
D. Written certification that employees have received and understand the required training must include:			
1. Name of employees trained.			
2. Training topic(s)			
3. Dates of training.			

*** Source:** This compliance checklist was developed by Joyce Hinds, Department of Corrections. This resource was adapted for use by public and private employers by the Bureau of State Risk Management.

It is the policy of this New Millennium Capital Corp. to maintain all tools and equipment in a condition that will maximize the safety of all personnel.

To accomplish this, a "Maintenance Program" shall be maintained" and shall include the following

- Adherence to applicable regulation, standards, and manufacturers specifications;
- Services of appropriately qualified maintenance personnel; and
- Scheduling and documentation of all maintenance work.

The supervisor shall be responsible for the application of the program in his/her area of responsibility.

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

May 27 2009

Date

NEW MILLENNIUM CAPITAL CORP.

WEEKLY VEHICLE INSPECPTION

PLEASE use check-marks to indicate a pass, If a problem PLEASE Circle and add note at bottom of page.

Date: _____ **Operator:** _____ **Truck #** _____

Present Odometer Reading: _____

TIRES
Front: ☐ **Back:** ☐ **Spare:** ☐

LIGHTS
Front ☐ **Back** ☐ **Brake** ☐ **Cab Light** ☐

FLUID LEVELS
Transmission Fluid: ☐
Oil: ☐

WINDOWS
Windshield Drivers Side: ☐ Passengers Side: ☐ Rear Window: ☐
Mirrors Drivers Side: ☐ Passengers Side: ☐

BODY
Drivers Side Panel: _____ **Front:** _____
Passengers Side Panel: _____ **Tail Gate** _____
Rear Side Panels: _____ **Box Interior:** _____
Fire Extinguisher: ☐ **First Aid Kit:** ☐

HOUSE-KEEPING

Exterior Body		Clean: ☐	Needs Washing: ☐
Box		Clean: ☐	Needs Cleaning: ☐
Interior		Clean: ☐	Needs Cleaning: ☐
Windows	(Interior)	Clean: ☐	Needs Washing: ☐
	(Exterior)	Clean: ☐	Needs Cleaning: ☐

NOTE OF CONCERN; _____

Inspector: _____ _____
Print Signature

SEMI-ANNUAL EQUIPMENT CHECK

Maintenance Record Sheet

Completed by: _____ Date: _____

#	Tool/Equipment Description	Defect Noted	Date Repaired
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

Purpose

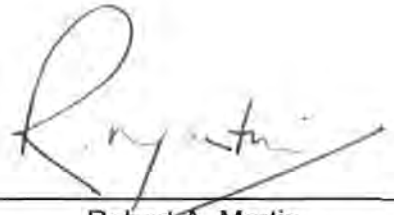
The purpose of this policy is to provide for general specialized safety and related training throughout all levels of the organization.

Policy

New Millennium Capital Corp. will provide, and employees will participate in all safety and related training that is necessary to minimize losses of human and physical resources of the company.

This training will include, but not be limited to:

- New hire safety orientations;
- Job-specific training;
- Safety training for supervisors and management;
- Task and trade-specific training and certification;
- Specialized safety and related training.



Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

May 27, 2004

Date

EMPLOYEE ORIENTATION

Date: _____ **Employee:** _____

		Yes	No
1.	Company Health and Safety Policy		
2.	Return-to-Work Policy/Program (right to know, participate and refuse)		
3.	Workers' Three Basic Rights		
4.	Identification of the Worker Health and Safety Representative/Designate		
5.	Responsibilities of workers, forepersons (supervisors), OH&SC/WH&SR/WH&SD		
6.	Emergency Procedures, First Aid		
7.	Injury Reporting Procedure		
8.	NML Safety Rules		
9.	Personal Protective Equipment		
10.	Workplace Inspection Requirements		
11.	Hazard Identification and Reporting		
12.	Safe Work Practices		
13.	Safe Job Procedures		
14.	Safety Meetings		
15.	Harassment Policy		
16.	Special Requirements		
17.	Environmental Policy		
18.	Other:		

Remarks:

_____

_____

This will certify that I have been given New Millennium Capital Corps. orientation briefing on the above noted subjects as indicated by me with an "X" and that I have fully reviewed and understood its contents.

Signature: _____Date: _____

NML Rep.: _____Date: _____

Position: _____

NEW MILLENNIUM CAPITAL CORP.

Tool Box Meeting

Date: _____ Location: _____

Meeting was conducted by: _____

Meeting was attended by :

Name Print	Signature

Topic:

_____

_____

_____

_____

Comments or Concerns:

_____

_____

_____

_____

NEW MILLENNIUM CAPITAL CORP.
Attendance Record for Training

Date: _____ **Time Start:** _____

Location: _____

Meeting Objective: _____

Attendance

Participants Name (please print)	***Participants Name*** (signature)	***Participants Name*** (please print)	***Participants Name*** (signature)
1.		11.	
2.		12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		18.	
8.		19.	
9.		20.	
10.		21.	

_____ _____

Training Leader (please print) **Training Leader** (signature)

Purpose

The purpose of this policy is to control losses of human and material resources by identifying and correcting unsafe acts and conditions.

Policy

New Millennium Capital Corp. will maintain a comprehensive program of safety inspections at all facilities and job-sites.

Responsibilities

The manager is responsible for the overall operation of the program.

Superintendents are responsible for directing formal inspections on job-sites that they control and for involving workers in such inspections.

Supervisors are responsible for conducting ongoing informal inspections of areas where their crews are working.

Workers are responsible for participating in and contributing to the inspection program.

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

Date

RIGS SAFETY INSPECTION FORM

DATE: _____ **LOCATION:** _____

RIG #: _____ **HOLE#:** _____

		Yes	N/A	No
1.	Travel/walk way to drill site clear and safe			
2.	Adequate entrance to drill shack			
3.	Work area and emergency doorway free of obstacles			
4.	Helper's platform in good order, including guardrail			
5.	Rods and miscellaneous equipment stored properly			
6.	Drill floor clear from debris, grease etc.			
7.	Ladder well maintained, secured and free of obstacles			
8.	Dual fall arrest systems installed			
9.	Fuel tank stored a minimum (4 m) from drill shack			
10.	Check for fuel leaks and oil leaks (are there any?)			
11.	Emergency stop button			
12.	Small hand tools properly stored			
13.	Light bulb protectors installed			

FIRE FIGHTING EQUIPMENT

1.	Fire extinguisher at drill shack			
2.	1 pack pump			
3.	1 shovel			
4.	1 axe			
5.	1 pail			

EMERGENCY EQUIPMENT

1.	First aid kit			
2.	WHIMS book			
3.	Communications system (radio/phone)			
4.	Spill kit (matting, booms etc.)			

Personal Protective Equipment

1.	Approved hard hat			
2.	Hearing protection			
3.	Safety boots			
4.	Safety glasses			
5.	Gloves			
6.	Reflective outer clothing			

WATER PUMPING SYSTEM

1.	Screen free of tears			
2.	100 meters from water source			
3.	Fuel /oil leaks			
4.	Hose obstructing the water flow			
5.	Area free of debris/trash			

COMMENTS:

_____

_____

_____

_____

_____

_____

INSPECTED BY: _____ **DATE:** _____
(print)

_____
(signature)

New Millennium Capital Corp.
Drill Site Inspection

Region: _____ Project Name: _____

Contractor: _____ Dates Drilled: _____

UTM Coordinates: _____

Safety/Environmental Coordinator responsible for site inspection: _____

HOLE No: _____

Was site accessed by water crossing yes ☐ no ☐
If yes, please see attached Stream Crossing Inspection

Overall appearance of the drill site clean ☐ unclean ☐

Drill Site

Casing pulled	yes ☐	no ☐
Hole cemented	yes ☐	no ☐
Capped	yes ☐	no ☐
Making water	yes ☐	no ☐
Casing damaged	yes ☐	no ☐
Picket with aluminium tag affixed	yes ☐	no ☐
Drill cuttings	yes ☐	no ☐
Were drilling additives used?	yes ☐	no ☐
If yes, specify additives used		
Was matting used (absorbent carpeting)?	yes ☐	no ☐
Environmental damage	yes ☐	no ☐

If yes, specify

_____
_____

Debris left (specify/check)

☐ Metal, wire, rods, cans, cable	comments _____
☐ Fuel drums	comments _____
☐ Containers for oil/grease	comments _____
☐ Tools, machine parts	comments _____
☐ Hose	comments _____
☐ Leaning trees	comments _____

Other comments: _____

New Millennium Capital Corp.

Drill Site Inspection
Form 3.3.9.3

Spills (amount/area/severity etc.)

Oil	yes ☐	no ☐	comments _____
Fuel	yes ☐	no ☐	comments_____
Grease	yes ☐	no ☐	comments _____
Mud	yes ☐	no ☐	comments _____

All reportable spills

Authorities notified?

MOE/Dept. of Environment (or equivalent)	yes ☐	no ☐
MNR/Dept. of Natural Resources (or equivalent)	yes ☐	no ☐
Company (which one?)_____	yes ☐	no ☐

IS FURTHER CLEANUP OF COLLAR AREA REQUIRED?

No ☐ Yes ☐ By contractor ☐

Comments: _____

_____

I, _____certify that I inspected the drill site and access road on _____, after the drill had been removed, and that to the best of my knowledge all company and government permit standards have been met.

_____ _____
Safety/Environmental Coordinator Date

_____ _____
Project Manager Date

Attachments (Photos of collar and stream crossing - described, initialled and dated):
Photos: ☐ Field Notes: ☐ Maps: ☐ Other: ☐

Stream Crossing Inspection

Project Name & Number: _____ Contractor: _____

Dates Crossing in use: _____

Type of Crossing: _____
(Ford, Bridge, Ice, etc.)

Location of Crossing:_____

Has the water crossing been approved in the original work permit? Yes ☐ No ☐

Has a supplemental crossing permit been issued? Yes ☐ No ☐

If verbal permission has been given to use a water crossing,

By Whom:_____

Ministry: _____

Date: _____

Are others using this crossing? Yes ☐ No ☐

If yes, details

_____

What equipment has used the water crossing and with what frequency?

_____

Watercourse diverted	yes ☐	no ☐
Debris/Trash	yes ☐	no ☐
Containment residue	yes ☐	no ☐
Falling trees etc. restricting water flow	yes ☐	no ☐

COMMENTS:_____

_____

_____

Purpose

To investigate incidents so that causes can be determined and corrective action can be implemented to prevent recurrence.

Policy

At New Millennium Capital Corp., all incidents that result in injury or property damage, or that could have resulted in injury or property damage, will be thoroughly investigated.

Responsibilities

1. All employees shall report all incidents to their immediate superior.
2. Supervisors shall conduct initial investigations and submit their reports to their superintendent promptly.
3. Superintendents shall determine the need for and, if necessary, direct detailed investigations. They shall also determine causes, recommend corrective action, and report to the manager.
4. The manager shall review all superintendents' reports, determine corrective action to be taken, and ensure that such action is implemented.

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

Apr 27, 2009
Date

Incident Investigation Report

Report Date: _____
Report Time: _____

Project: _____ Location: _____

Date of Accident: _____ Time: _____
Name of Person in Charge: _____

Person(s) Involved:

Name **Address** **Phone**

_____
_____
_____
_____
_____
_____

Accident Reported by: _____ Reported to: _____

Date Reported: _____ Time Reported: _____

Conditions at time of accident (weather, status of job, housekeeping, etc.)

_____
_____
_____
_____
_____
_____

Description of accident (What equipment, tools, materials, etc. were involved?
What was the job being done? What happened?)

_____
_____
_____
_____
_____
_____

Diagram of Scene:

What were the causes of the incident?

Immediate? _____

Underlying? _____

Recommended action(s) to prevent reoccurrence?

Immediate: _____

Long-term? _____

Person(s) responsible for implementing corrective action(s)? _____

Witnesses:

Name	**Employer**	**Phone**

Injuries - Person Injured

Name: _____ Date of Birth: _____

Address: _____

_____

Was first aid given? Yes_____ No_____ By whom?_____

Was injured transported to medical aid? Yes_____ No_____

By whom? _____ Where to? _____

Name of Doctor: _____

Signatures:

Supervisor: _____ Superintendent:_____

Accident/ Incident / Procedures

The site supervisor, as well as the Safety Coordinator, is responsible for ensuring that all accidents, incidents, and near misses within their area of control are documented and investigated. The Safety Coordinator will complete and sign the incident investigation report and forward it to the site supervisor and senior management. The report will be reviewed by senior management. Senior management will close the report by signing when all required actions have been completed.

Accident/ Incident Investigation Form

NML will investigate the following types of accidents and incidents:

- That result in a medical aid, lost time accident, serious injury, disability or fatalities;
- The cause of equipment damage or loss or cause a loss of production exceeding $1000.00 in value;
- Near misses that have the potential of causing medical aid, greater injuries or equipment / process losses in excess of $1000.00

Conducting an Accident / Incident Investigation

- The accident/incident is called in to the appropriate site supervisor. If the site supervisor is absent or not available, a replacement will be made available. The nature of the incident is to be noted during the first call i.e., personal injury, equipment damage, etc.;
- Institute as necessary contact with the appropriate emergency services i.e., ambulance, fire department, or police etc;
- The employee is to “freeze” the scene;
- Site supervisor informs NML’s Safety Coordinator of the incident;
- The site supervisor contacts a second person to accompany them to the site of the accident / incident, this would normally be the Safety Coordinator or , another member of NML’s management team;
- An investigator will be assigned to complete all the necessary investigation reports, ensuring that copies are sent to NML’s senior management for review.

- These reports will normally include but not be limited to NML' investigation report, WCB employer and employee reports,

- If the employee visits the hospital, is not able to return to work the following day ore is put on modified duties, WCB paper work must be completed and submitted to WCB and NML no more than three days after the incident;

- If the accident results in a death or the employee or serious injury to a person the NML shall immediately notify the assistant deputy minister of the accident as per section 54 of the Newfoundland and Labrador occupation Health and Safety Act;

- All NML senior managers will be informed of the incident on the next possible working day i.e. the next morning if the accident has happened in the middle of the night;

- The incident is then reviewed at the next round of Safety Meetings.

Accident / Incident Investigation Report

Report Date: _____
Report Time: _____

Project: _____ Location: _____

Date of Accident: _____ Time: _____

Name of Person in Charge: _____

Person(s) Involved:

Name	**Address**	**Phone**

Accident Reported by: _____ Reported to: _____

Date Reported: _____ Time Reported: _____

Conditions at time of accident (weather, status of job, housekeeping, etc.)

_____
_____
_____
_____
_____
_____

Description of accident (What equipment, tools, materials, etc. were involved? What was the job being done? What happened?)

_____
_____
_____
_____
_____
_____

Diagram of Scene:

What were the causes of the incident?

Immediate? _____

Underlying? _____

Recommended action(s) to prevent reoccurrence?

Immediate: _____

Long-term? _____

Person(s) responsible for implementing corrective action(s)? _____

Witnesses:

Name	**Employer**	**Phone**

Injuries - Person Injured

Name: _____ Date of Birth: _____

Address: _____

_____

Was first aid given? Yes_____ No_____ By whom?_____

Was injured transported to medical aid? Yes_____ No_____

By whom? _____ Where to? _____

Name of Doctor: _____

Signatures:

Supervisor: _____ Superintendent:_____

Policy

New Millennium Capital Corp. (NML) is committed to the mandate of protecting life, the environment and minimizing property damage. Supervisory personnel will make procedures for emergency response, care of injured workers, reporting and corrective follow-up of all injuries and serious accidents. The procedures will be thoroughly outlined and made known to all workers and enforced. The procedures will address the following items:

- Identification of locations for emergency equipment: telephones, first aid station, alarm pulls, material safety data sheets, fire extinguishers, etc.;
- Identification of the location of primary and alternate assembly areas;
- The method for reporting an emergency and sounding the alarm;
- A contact list of personnel responsible in emergency situations;
- Procedures and equipment for recovery and transport of injured workers;
- A list of phone numbers for emergency support services;
- Persons responsible for external communication;
- An evacuation and head count plan;
- A procedure for notification of family.

Emergency Notification

All injuries, accidents, fires, or other emergencies must be reported immediately to your Supervisor. The Supervisor will then, notify the emergency services through the appropriate chain of command. Emergency response generally includes:

- Accurately define the problem;
- What material is involved;
- Determine if an evacuation is necessary, and in what direction;
- Ensure hospitals and clinics have been notified, supply them with relevant medical information;
- Ensure all workers and public are controlled at a safe distance from the emergency;
- Ensure responders through their respective chain of command know plans prior to acting.

Field Sites

In the event of an emergency, NML personnel and or Contractors shall safely shut down their operations, leave the area immediately, and meet at the designated assembly area. The emergency assembly area will be identified during the safety orientation or the pre-job safety meeting.

NML employees and or Contractors' who are trained in First Aid and CPR shall provide assistance in the treatment of injured workers.

Field sites that are isolated will require a set of procedures before the worker leaves for the site and commences work.

The following list of procedures should be used when preparing for isolated work sites:

- Inform your supervisor of your travel plans, destination and estimated time of return;
- Carry a cellular, mobile phone or two way radios, with additional batteries or a power cord, in the vehicle;
- Make an emergency phone list for the area that you will be working in, example is presented at the end of this document;
- Carry a survival kit containing a tool kit, flares, candles, matches, shovel, axe, blanket, rope, food, and water. Other items can be added dependent upon the location and the season;
- Carry a First Aid kit, fire extinguisher and spill kit;
- Inspect vehicle. Ensure that all fluid levels are satisfactory and the fuel tank is full. It may be necessary to carry a container of gasoline, which has been safety secured, for emergency purposes.

In the event of a serious incident, injury or a fatality, the Police and/or NML's senior management will notify the next of kin. The manager will assume the responsibility of contacting the appropriate agencies, that is: Newfoundland and Labrador or Quebec's Occupational Health and Safety, Police, Insurance, and Legal entities.

Emergency Steps on Field or Isolated Sites

NML employees or Contractors are to follow the following procedures in the event or an emergency:

- Ensure immediate personal safety;
- Assess the area for hazards, sound alarm if appropriate;
- If unsafe, evacuate the immediate area and proceed to the designated meeting point;

- Call the emergency contact numbers provided;

- State:
  - the nature of the emergency;
  - your name;
  - the exact location of the emergency;
  - number of people injured;
  - hazards, if present;
  - the closest designated meeting point (ensure someone is there to escort emergency vehicle to emergency scene);
  - Ask what response is coming and when.

- Follow the instructions from medical personnel. Remain on the line;

- Make sure a delegated person remains at the meeting point to direct additional responding support;

- If it is safe to do so, have the senior employee(s) remain at the scene with any injured worker(s) and supply First Aid treatment until emergency service personnel arrive;

- Ensure the safety of others;

- Maintain contact with your supervisor;

- Clear non-essential personnel from the area;

- Without jeopardizing your safety or that of others, minimize loss and environmental damage;

- First Aid kits are available in the trucks and offices, note supplies used in the emergency and arranged that they can be replenished;

- If there is a hazardous atmosphere, organize a rescue plan and put on respirators, **ensure personal safety first**;

- Stop all work in the area, maintain open access, and ensure right-of-way for responding emergency vehicles at all traffic locations.

Emergency at New Millennium Offices

In the event of an emergency at NML'S office:

- For medical emergencies, call **911 or site specific emergency numbers** ;

- For other emergencies (fire, gas leaks, structural collapse, toxic fumes, etc.) evacuate the building according to the evacuation plan, and then contact the building managers.

- State:
  - the nature of the emergency;
  - your name;
  - the exact location of the emergency;
  - number of people injured;
  - hazards, if present;
  - The closest designated meeting point (if possible, send someone there to escort emergency vehicle to emergency scene).

Office Evacuation Plan

- Ensure the immediate safety of yourself;
- Ensure everyone knows an evacuation is required, pull alarm if there is a fire, these are located in the hallway by each exit door;
- When alarm sounds, evacuate the building by the nearest exit in an orderly manner, taking a cell phone if immediately available;
- Close doors behind you if there is a fire, and do not attempt to extinguish it unless it is small and contained;
- If caught in smoke, drop to hands and knees, and crawl. Breathe shallowly and use a shirt or other clothes as a filter. DO NOT STAND UP, as the smoke and excessive heat is located in the upper areas of the rooms or halls;
- Proceed to the meeting point on the rear parking lot, corner of Greene and De Maisonneuve:
- Ensure everyone is accounted for, perform a head count;
- Call 911 or other emergency number from cell or next available phone; State:
  - this is an emergency;
  - your name;
  - location of the emergency (1303 Greene Ave, Westmount or other)
  - Nature of the emergency.
- Do not re-enter until declared safe;
- Ensure the safety of others, attend to injuries and administer First Aid;
- Remain at the scene of the emergency with injured workers and maintain contact with the supervisor;
- Clear all non-essential personnel from the area;
- Without jeopardizing your safety or others, attempt to minimize loss;

In summary, prepare yourself in advance. Familiarize yourself with the evacuation route. Be aware of alternative exit routes in case the nearest exit is blocked by smoke or fire.

Fire Extinguishers

Personnel are responsible for knowing the location and operation of fire extinguishers throughout the worksite, including those in vehicles and offices. All NML vehicles must have a fire extinguisher. Firefighting equipment is only to be used for fire purposes.

Inspect fire extinguishers annually and when operating in a new area to ensure they operate properly. In accordance with the Fire Prevention Act, keep records stating the date of inspection, condition of equipment, repairs made, and the name of the inspector.

Personnel should be trained in the use of fire extinguishers (i.e. in house or formal fire training recommended).

Vehicle Standard Safety Equipment

NML vehicles must be equipped with the following at all times:

- Fire extinguisher
- First aid kit
- Buggy whip (when in mine operations areas)
- Emergency supplies for remote travel
- Portable spill kit

Emergency Telephone Numbers

Name	Company	Home / Office	FAX/Skype	Cell
MONTREAL OFFICE		**514-935-3204**		
Martin, Bob	***NML***	***514-938-5450***	***(Roadpost) +44 (0) 7793 295 514***	***514-794-5544***
Journeaux, Dean	***NML***	***514-488-6963***	***514-484-0346 / deandean34***	***613-277-5736***
Bourassa, Jean Charles	**NML**	**514-354-7299**		**514-651-7076**
Melainine, Moulaye	***NML***	***514-351-8088***		***514-582-8024***
Wilkinson, Paul	***PFWA***	***514-482-6887***	***514-482-0036***	***514-808-2709***
SCHEFFERVILLE OFFICE		***418-585-2065***		
Balakrishna, T.(BK)	**NML**	**709-944-6488/944 5592**	**709-944-5651**	**Sat. 613-980-5485**
O'Quinn, Donna	NML	**514-658-3678**	**skype = donna.o.quinn**	**514-770-1649**
LABRADOR CITY OFFICE		**709-944-5592**		

EXAMPLE EMERGENCY CONTACT LIST

NML SCHEFFERVILLE FIELD
EMERGENCY NUMBERS

AMBULANCE:		**----------(418) 585-2055**
POLICE:	**SCHEFFERVILLE**	**----------(418) 585-2626**
	URGENT – 24 HOURS	**---------- (418) 310-4141**
FIRE:		**----------(418) 585 -2463**
CLINIC:	**DAY**	**---------- (418) 585-2645**
	NIGHT	**---------- (418) 585-2646**
ROY LOGAN	**HOUSE**	**---------- (418) 585-2314**
	OFFICE	**---------- (418) 585-2065**
DONNA O'QUINN	**HOUSE**	**---------- (418) 585-2314**
HENRY SIMPSON	**HOUSE**	**---------- (418) 585-2339**
	OFFICE	**---------- (418) 585-2305**
CABO	**CAMP**	**----------(705) 525-7075**
HELI-BOREAL	**OFFICE**	**---------- (418) 962-2288**
NML OFFICES	**MONTREAL**	**----------(514) 935-3204**
	LABRADOR CITY	**---------- (709) 944-5592**
	SCHEFFERVILLE	**----------(418) 585-2065**

SPILL LINE (Any spills entering water frequented by fish----------1-800-563 -9089

RECORDS AND STATISTICS

New Millennium Capital Corp. will maintain records and statistics relating to health and safety to enable management to monitor and evaluate health and safety performance to identify common factors or trends in accidents and incidents, and to monitor and evaluate the effectiveness of corrective actions.

Appropriate records and statistics that will be maintained include:

- Accident and incident investigation reports;
- Near Miss/ Hazardous Conditions records;
- Inspections records;
- Disciplinary action records;
- First aid treatment records;
- Health and safety meeting records;
- Right to refuse unsafe work occurrence records;
- Orientation records:
- Records of management meetings (health and safety component);
- Health and safety program review records;
- Health and safey program audits;
- Individual safety training records / certificates.

NML Monthly Safety Summary

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
No. Workers Hired:												
No. Completed Orientations:												
No. Tool Box Meetings Scheduled:												
No. Tool Box Meetings Conducted:												
Percentage Attendance:												
No. Formal Inspections Scheduled:												
No. Completed:												
No. Unsafe Conditions/Acts Identified:												
No. Corrected:												
No. Outstanding:												
No. Incidents:												
Damage only:												
Injury only:												
Injury and Damage:												
Near Miss:												
No. Investigations completed												
Outstanding:												
No. Recommendations made												
Complete:												
Outstanding												
Managers Initials:												

Managers Signature:_____ Year:_____

New Millennium Capital Corp.

Monthly Safety Recordable Statistics Form 3.3.12.3

NEW MILLENIUM CAPITAL CORP

MONTHLY RECORDABLE SAFETY STATISTICS

Month	NML Hours	Contractor Hours	First Aid	First Aid Frequency Rate	First Aid Cumulative Frequency	Medical Aids	Disabling Injuries (Lost Time)	Injury Frequency Rate	Lost Time injuries	Medical Aid +LTI	Recordable Injury Frequency	Lost Time Injury Frequency	Severity	Cumulative Med Aid + Dis Inj	Cumulative Frequency (Total)
January															
February															
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															

RIF = (#MA+#LTA) x 200,000 / Exposed hours

LTIF = LTI x 200,000 / Exposed hours

Severity = LTI Days X 200,000 / Exposed Hours

YEAR: _____

NML Rev0000

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NEW MILLENIUM CAPITAL CORP

FIVE YEAR CUMMULATIVE RECORDABLE SAFETY STATISTICS

Year	Workforce Hours	First Aid	First Aid Frequency Rate	First Aid Cumulative Frequency	Medical Aids	Disabling Injuries (Lost Time)	Injury Frequency Rate	Lost Time injuries	Medical Aid +LTI	Recordable Injury Frequency	Lost Time Injury Frequency	Severity	Cumulative Med Aid + Dis Inj	Cumulative Frequency (Total)

RIF = (#MA+#LTA) x 200,000 / Exposed hours

LTIF = LTI x 200,000 / Exposed hours

Severity = LTI Days X 200,000 / Exposed Hours

PURPOSE

New Millennium Capital Corp. (NML) is committed to providing and maintaining a work environment that is free of discrimination and harassment, and that protects the health, safety and dignity of every employee.

This Policy confirms NML's commitment to compliance with applicable human rights and labour legislation in the countries where NML conducts business.

This Policy also underlines NML's commitment to taking the appropriate measures, in its work environment, to prevent acts and behaviours that are discriminatory or harassing, to promptly resolving any related matters that might occur from time to time, to raising the awareness of all of its employees of the importance of a discrimination- and harassment-free workplace and to educating them accordingly. This Policy is designed to create an environment in which individuals can feel free to come forward with complaints of discrimination and/or harassment without fear of reprisal or of inappropriate disclosure of information regarding the incident or any complaint.

SCOPE

This Policy is applicable to all employees of NML in Canada and abroad in their dealings with each other and those with whom NML does business, including clients, sub-contractors and suppliers.

All employees are expected to contribute to maintaining a work environment free of discrimination and harassment and are responsible for familiarizing themselves with this Policy and for complying with it at all times.

Anyone who has been subjected to or has witnessed an incident of discrimination or harassment in any NML workplace or at a NML work-related function or event is strongly encouraged to report such incident, as described in Section 5 of this Policy.

This Policy does not limit the normal exercise of supervisory and management rights and responsibilities, including, among others, coaching, performance reviews, work evaluation and disciplinary action, all of which do NOT constitute harassment.

POLICY

Discrimination and harassment of any nature in the NML workplace or at any NML work-related function or event are unacceptable and will not be tolerated.

NML shall promote this Policy by taking all reasonable steps to (i) make all employees aware of its existence and contents, (ii) provide information sessions for management, (iii) train those individuals responsible for receiving or investigating complaints and for deciding upon corrective measures, (iv) conduct an objective and timely investigation when a complaint is filed and (v) take timely corrective measures as and if required.

Employees who are determined to have engaged in discrimination and/or harassment or who fail to respect this Policy or any related legislation shall be subject to measures of varying degrees of severity, including but not necessarily limited to:

- the obligation to give the victim a formal verbal or written apology;
- the obligation to undergo counselling and/or education through a duly recognized institution or professional organization;
- verbal and/or written reprimands by NML;
- suspension without pay;
- termination of employment; and/or
- Criminal and/or civil prosecution.

DEFINITIONS

For the purposes of this Policy, the terms in italics are defined as follows:

Discrimination - Discrimination is the differential treatment of an individual or group based on one or more of the prohibited grounds.

Employee - Employee means all regular, temporary, casual, and contractual employees of NML.

Harassment - Harassment means any act or behaviour that has the purpose or effect of (i) creating an intimidating, hostile or offensive work environment, (ii) unreasonably interfering with or otherwise adversely affecting an individual's work performance, or (iii) adversely affecting an individual's employment and/or advancement opportunities.

Any incident or any series of incidents of objectionable physical, visual or verbal conduct, comment or display, whether intended or unintended, that is disrespectful, insulting, humiliating or degrading to another person, or creates an intimidating; hostile or offensive environment that a reasonable person should have known would be unwelcome constitutes harassment. Harassment also includes misuses of power such as intimidation, threats, blackmail, or coercion.

Furthermore, included within the meaning of harassment is sexual harassment, which means any unwanted conduct, comment, gesture or contact of a sexual nature, whether on a one-time basis or in a continuous series of incidents. Examples of sexual harassment include, but are not limited to, making remarks, jokes, innuendoes or other comments regarding someone's body, appearance, physical or sexual characteristics or clothing; displaying sexually offensive or derogatory pictures, cartoons or other material; inappropriate or unwelcome touching; and persistent unwelcome or uninvited invitations or requests. Sexual harassment can be perpetrated by males against females, females against males, among males or among females.

Human Resources Designated Person - Human Resources designated person means the Health, Safety and Environmental Coordinator or such other representative as may be specifically mandated by NML to deal with discrimination and harassment cases within any NML workplace.

Prohibited Grounds -Prohibited grounds are the grounds prohibited by the applicable legislation in each province and include, among others, race; color; national or ethnic origin; place of origin; religion; age; sex; disability.

NML - NML means New Millennium Capital Corp. and its subsidiaries and affiliates.

Workplace - Workplace means any place over which NML exerts administrative responsibility and that an employee of NML attends by reason or in the course of his employment.

PROBLEM RESOLUTION

In matters of discrimination or harassment, NML favors resolving any situation or conflict as soon as possible, in a manner that is fair to and respectful of all parties involved, without having to resort to a formal complaint procedure, with the assistance of a Human Resources designated person, if desired by the victim. Coaching, counseling and facilitation can, in many instances, resolve an issue and prevent a situation from escalating to the point where filing a formal complaint is necessary.

A person who believes that he is or has been the subject of discrimination or harassment is encouraged to make it known immediately to the alleged discriminator or harasser that his behavior is unwelcome, offensive and contrary to this Policy. If that person is unable to confront the alleged discriminator or harasser or, if after confronting the alleged discriminator or harasser the discrimination or harassment continues, that person should seek the advice of a Human Resources manager or of an immediate superior or member of management, who will in turn refer the matter to a Human Resources designated person.

Such Human Resources designated person may commence an investigation into the matter. In addition, an employee while actively employed with NML may, at any point in time within ninety (90) days of the most recent instance of the alleged discrimination or harassment, file a formal written complaint with such Human Resources designated person.

If the Human Resources designated person commences an investigation, as a result of a complaint, he/she will take the necessary measures and make the reasonable arrangements to ensure the investigation is conducted in a thorough and unbiased manner, and in as timely and confidential manner as possible. Such Human Resources designated person shall also inform the Human Resources manager of the division, in which the alleged discriminator or harasser works, of any allegation, the contents of any filed complaint and of his/her conclusion. This manager will study the matter and determine the appropriate preventive, corrective, and/or disciplinary measures to be taken, if any.

RETALIATION

Any form of retaliation (e.g., demotion, unwelcome transfer, diminished promotional opportunities); against those who, in good faith, bring forward complaints or allegations, or who participate in an investigation of discrimination and/or harassment, is strictly prohibited.

Corrective measures of various degrees of severity, including discharge, can be taken against the person who is determined to have engaged in any retaliatory act.

FALSE OR FRIVOLOUS COMPLAINTS

False accusations can have serious repercussions on innocent individuals. Any complaint or allegation that is found to be false, frivolous or made in bad faith will not be tolerated. Corrective measures of various degrees of severity, including discharge, can be taken against the person who is determined to have made a false or frivolous complaint.

DOCUMENTATION

No record of a complaint or allegation regarding discrimination and/or harassment will be placed in the Human Resources file of an employee making such complaint or allegation, or in the file, if applicable, of any witnesses involved. Instead, these records shall be kept in a separate and confidential file.

A record of any non-disciplinary and/or disciplinary measure taken against an employee determined to have acted in violation of this Policy will, however, be placed in the Human Resources file of such employee.

CONFIDENTIALITY

Complainants, respondents, witnesses, Human Resources officers and other NML representatives involved in a discrimination and/or harassment matter are responsible for conducting themselves at all times with appropriate discretion so as to maintain confidentiality regarding any incident or complaint procedure.

Confidentiality is the general rule, and NML is bound to comply with the provisions of any applicable legislation and regulations regarding the protection of personal information. Nevertheless, NML respects the need of an alleged discriminator or harasser to know the allegations being made against him. Furthermore, any arbitration, administrative or court proceedings arising out of a complaint may compel NML to disclose information about such a complaint, even though any such disclosure will be permitted only to the extent required by law or as necessary for the proper investigation and resolution of the complaint.

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

May 27, 2009

Date

New Millennium Capital Corp. is committed to assisting workers who have been injured on the job to return to work in a timely and safe manner.

The company will fulfill this commitment by contacting the worker as soon as possible after the injury and offering employment that is consistent with the workers' functional abilities. Job options will be identified and offered using the Workplace Health, Safety and Compensation Commission's Hierarchy of Return-to-Work as identified in WHSC Policy RE-18 and in accordance with Section 89 and 89.1 of the *Workplace Health, Safety and Compensation Act.*

All members of the organization including supervisors, co-workers, and the union are responsible for actively participating and cooperating in the return-to-work process when required. Where necessary the company will seek input and advice from other parties involved in the RTW process including the Workplace Health Safety and Compensation Commission and external health care providers.

Any personal information received or collected that can lead to the identification of an injured worker will be held in the strictest confidence. Information of a personal nature will be released only if required by law with the approval of the worker who will specify the nature of the information to be released and to whom it can be released.

This statement will be reviewed at least annually and may be updated or changed as required.

R. Martin

May 27, 2009

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

Date

IN CASE OF AN INJURY AT WORK REQUIRING MEDICAL ATTENTION

Here is what to do

INJURED WORKERS:

1. Get first aid if necessary.
2. Report the injury before leaving the workplace to your Supervisor.
3. Seek timely medical treatment and advise the doctor you were hurt on the job.
4. Bring the ***Doctor's Report of Injury*** (Form 8/10) back to your employer as soon as possible (the next working day).
5. Complete the ***Worker's Report of Injury*** (Form 6) and submit to the Workplace Health, Safety and Compensation Commission (the Commission) as soon as possible by faxing toll free 1-800-276-5257 or (709) 778-1302

NEW MILLENNIUM CAPITAL CORP:

1. Transport the injured worker to appropriate medical care.
2. Complete the ***Employer's Report of Injury*** (Form 7) and submit to the Commission (within three days).
3. Complete NML incident report
4. Determine the cause of injury and take action to prevent future injuries.
5. Assist the injured worker to develop, Early, and Safe Return –to-work plan and submit to the commission within five days of receiving the Doctor's Report of Injury – Form 8/10.

Refer to samples of forms 7, 6 and 8/10 at the end of this section

SAFE RETURN TO WORK SAMPLES 3.3.14.3

New Millennium Capital Corps. primary concerns are environmental awareness, conservation of plant and wildlife and human health.

The company recognizes that exploration can have a direct impact on the environment. During exploration disturbance to the environment can occur when accessing site, camps set-ups, drilling, and other associated tasks. Therefore, NML undertakes to conduct its operations responsibly to minimize and eliminate where possible these impacts on the environment.

All employees, including contractors, shall follow safe and efficient practices to control environmental damage above, below, or at the surface during all operations as outlined in the Prospector & Developers Association of Canada's, Environment Excellence in Exploration.

Responsibilities

Senior management is responsible for implementing and ensuring adherence to the environmental policy.

Health, Safety, and Environmental Coordinator

Ensuring there are periodic reviews, inspections, recording and documentation for compliance to the environmental policies.

Performance Standards

NML is commitment to the environment by ensuring:

Employees including contractors will be made aware of the Company's commitment to environmental policies.

Disposal and safe handling of all hazardous material

Safe and efficient fuel handling and storage

Access to sites, particularly streams will be done in such a manner as to minimize impact to the surrounding environment

Waste Disposal

All wastes shall be disposed of in such a manner that no soil, surface water or underground source of water is, or may be polluted.

Waste is to be collected and then taken to approved landfill sites for disposal. The following materials are not permitted in municipal landfill sites:

- Waste lube oils, un-drained oil filters
- Hazardous materials or materials such as batteries, containers of paint, methanol, acids, etc. and
- Un-rinsed empty containers used to hold hazardous substances.

Fuel/Chemical Storage Handling

Of all the hazardous substances that exploration programs consume, the, most common are fuels and other petroleum products.

All petroleum products present obvious fire hazards. Additionally, all have the potential to degrade the environment through contamination of water and soils thereby placing local plant and animal life at risk.

Storage areas will be located at least 100 meters from:

- A flood area or high water line
- Power lines
- Public roads
- The recharge area of a water well

In the event of a spill, fire or medical emergency the following are to be kept at the fuel storage area:

- Fire extinguishers not more than 10 meters and no further than 25 meters from the containment area.
- Spill kits
- First aid kits

Robert A. Martin
President and Chief Executive Officer
New Millennium Capital Corp.

May 27, 2009
Date

Please Check all items, which have been reviewed.				
No.	**Topic or Item**	**YES**	**NO**	**N/A**
A. GENERAL CONTRACT CONSIDERATIONS:				
1.	Does the contract clearly identify the regulatory requirements: If yes, do they coincide with our company's interpretation of regulatory requirements? If no, have we clarified requirements with the client?	⌊	⌊	⌊
2.	Has and Environmental Consultant's report been included with the contract? ➢ Is the date of the report acceptable? (information may be outdated) ➢ Was the scope clearly identified? ➢ Is there an executive summary? ➢ Are there clearly defined recommendations?	⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊
3.	Are there any clauses addressing unanticipated environmental occurrences? If yes, check the following items: ➢ Is work to be stopped? ➢ Has the responsibility for dealing with this problem been clearly defined? ➢ Is there adequate and equitable adjustment available for suspension of work? ➢ Will change orders be issued for remedial work? ➢ Will approvals be timely to facilitate schedule requirements?	⌊ ⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊ ⌊

No.	Topic or Item	YES	NO	N/A
4.	Have any contaminants, pollutants or hazardous waste been identified in the contract?	⌊	⌊	⌊
5.	Have any groundwater, soil or other samples been taken and analyzed which are not part of any consultants report?	⌊	⌊	⌊
6.	Will we be responsible for dealing with any contaminants? If yes, check the following areas of responsibility: ➢ Handling? ➢ Removal? ➢ Storage? ➢ Transportation? ➢ Disposal? ➢ Monitoring and Sampling? ➢ Laboratory Analysis? ➢ Quality Control/Assurance Procedures?	⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊ ⌊
7.	Who is responsible for providing the hazardous waste generator permit? ➢ The owner? ➢ The client? ➢ Our company?	⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊	⌊ ⌊ ⌊ ⌊
8.	Is there sufficient time to obtain permits?	⌊	⌊	⌊
9.	Are there provisions for Environmental Liability Release and Indemnity for our company?	⌊	⌊	⌊
10.	Has a dewatering plan assessment been completed?	⌊	⌊	⌊
11.	Environmental Insurance Required?	⌊	⌊	⌊

B. SPECIAL CONSIDERATIONS				
No.	**Topic or Item**	**YES**	**NO**	**N/A**
1.	Are there any historical or archaeological concerns on or near the site?	☐	☐	☐
2.	Has a Phase I Historic Resources Assessment been done?	☐	☐	☐
3.	Are there any threatened or endangered species in the area?	☐	☐	☐
4.	Have any environmental enforcement or clean-up actions been initiated by the DOE at or near the proposed site?	☐	☐	☐
5.	Has a Phase I Environmental site Assessment of the site been done?	☐	☐	☐
6.	Did the Phase I assessment include: ➢ Low potential for contamination ➢ Recommend a Phase II ESA	☐ ☐	☐ ☐	☐ ☐
7.	Has the Phase I been accepted by a regulatory agency?	☐	☐	☐
8.	Has the Phase II been accepted by a regulatory agency?	☐	☐	☐
Comments:				

New Millennium Capital Corp. will comply the the Workplace Hazardous Materials Information System (WHMIS) Regulations as detailed in the Occupational Health and safety Act and Regulations. The regulations require information about the hazardous material from suppliers and importers to employers and in turn to employees who use those materials in the workplace. The key elements of the WHMIS are cautionary labeling of controlled product by way of the Material Safety Data Sheet (MSDS) and worker education programs.

The company will:

Identify all controlled products used in the worksite.

- Obtain a current MSDS for each product prior to its use.
- Ensure all product used have suitable WHMIS labeling.
- Implement safe work procedures and proper control systems for all hazardous products at the worksite.
- Educate employees about the WHMIS program, labeling requirements, MSDS's and safe handling procedures.

Employees are responsible to for when working with hazardous materials:

- Recognize and use WHMIS information.
- Wear the necessary protective clothing.
- Make yourself aware of the hazardous materials present. Read and understand the MSDS on the products.
- Isolate the hazardous materials from the direct work area.
- Ensure the area is well ventilated.

New Millennium Capital Corp.

Controlled Product Inventory
Form 3.3.16.2

Controlled Product	Location	MSDS Yes/No	MSDS Review Date	PPE Required

Section 3.3.17

Leadership Matters
The Elimination of Fatalities

ICMM
International Council on Mining & Metals

Leadership Matters

The elimination of fatalities

Leadership Matters
The elimination of fatalities

The Senior Leader is ultimately responsible for providing the leadership, systems and processes for the prevention of fatalities.

The actions of Senior Leaders are fundamental to the elimination of fatalities. Strong and consistent leadership that demonstrates – every day – a continuous commitment to safe and fatality free production will drive us to zero fatalities.

Investigations of fatal incidents around the world have demonstrated that in order to achieve safe and fatality free production the following elements are essential:

- Maintaining a sense of vulnerability – complacency built on past success blinds us to warning signs
- Ensuring continuous improvement in environment, equipment, strategy and systems
- Applying the hierarchy of controls[1] – eliminate the risk and reduce the chance of human error
- Increasing the focus on high potential near fatal events
- Recognizing the personal – fatal accidents are not just statistics
- Maintaining operating disciplines – combating the gradual shift to unsafe behaviours
- Maintaining alertness to increased and unexpected risks during abnormal operating conditions
- Addressing culture and leadership through objective assessment and, where required, improvement plans
- Providing courageous leadership in leading change and holding each individual in the business accountable for safe and fatality free production.

This document provides a guide for Senior Leaders in their relentless drive to prevent fatalities; both through their personal actions and the processes and activities they should ensure are in place.

[1] See back page

Live the vision of Zero Fatalities

What do I do?

- ☑
- ☐ Create and communicate a deliverable vision for fatality elimination
- ☐ Challenge your own knowledge and that of others on the causes and prevention of fatalities; seek out expertise and share learnings from others
- ☐ Set an example for others to follow that shows you genuinely care, and that is consistent, unambiguous and relentless in approach
- ☐ Consistently demonstrate that fatalities are unacceptable and hold people at all levels accountable for prevention
- ☐ Talk about fatalities as people and make clear your personal commitment to prevention
- ☐ Be credible; follow through and do what you say you will do
- ☐ Engage in inspections and safety discussions at all levels; focus on fatal risks

What should I ensure is in place?

- ☑
- ☐ Strategies and plans that specifically encompass the prevention of fatalities
- ☐ Measurable indicators of fatality prevention that are regularly reviewed
- ☐ A system for providing ongoing education about fatality prevention
- ☐ A mechanism to identify and learn from mistakes that regularly and openly shares the lessons learnt
- ☐ Defined, measurable fatality prevention actions for all senior levels that are communicated to the workforce
- ☐ A mechanism for all levels of the organization to be engaged in the identification of hazards and the elimination, control and mitigation of fatal risk
- ☐ Business initiatives that include an assessment of the contribution to fatality prevention

Focus on the 'High Potential' events

What do I do?

☑

- ☐ Personally understand the fatal risk profile of your business and engage in discussions around potential fatal occurrences
- ☐ Focus on operational details; during site visits and operational discussions question and verify whether the critical controls to prevent fatalities are in place
- ☐ Participate in high potential incident investigations and reviews and lead discussion of high potential events at your meetings
- ☐ Question whether the focus of behavioural observation processes also addresses fatality prevention
- ☐ Ensure that "root causes" of all high potential events are truly understood, and that they are fully addressed
- ☐ Respond to potential fatal events as you would an actual fatal event

What should I ensure is in place?

☑

- ☐ A shifted focus – at all levels of the organization - from low consequence injuries to high potential events
- ☐ Comprehensive fatal risk assessment procedures, including the identification of critical controls and performance standards
- ☐ A system that encourages full and accurate reporting without fear of consequence
- ☐ Leading practice for Management of Change processes
- ☐ Systems that capture and classify events that have high potential, even if there is no injury or damage
- ☐ Quality investigation, analysis and communication about the causal factors and control of actual and high potential events
- ☐ A mechanism for those who report directly to you to demonstrate their continuous commitment to reducing the exposure to fatal risk
- ☐ Transparent criteria and processes for determining the consequences of non-compliance with fatal risk critical controls

Recognise fallibility

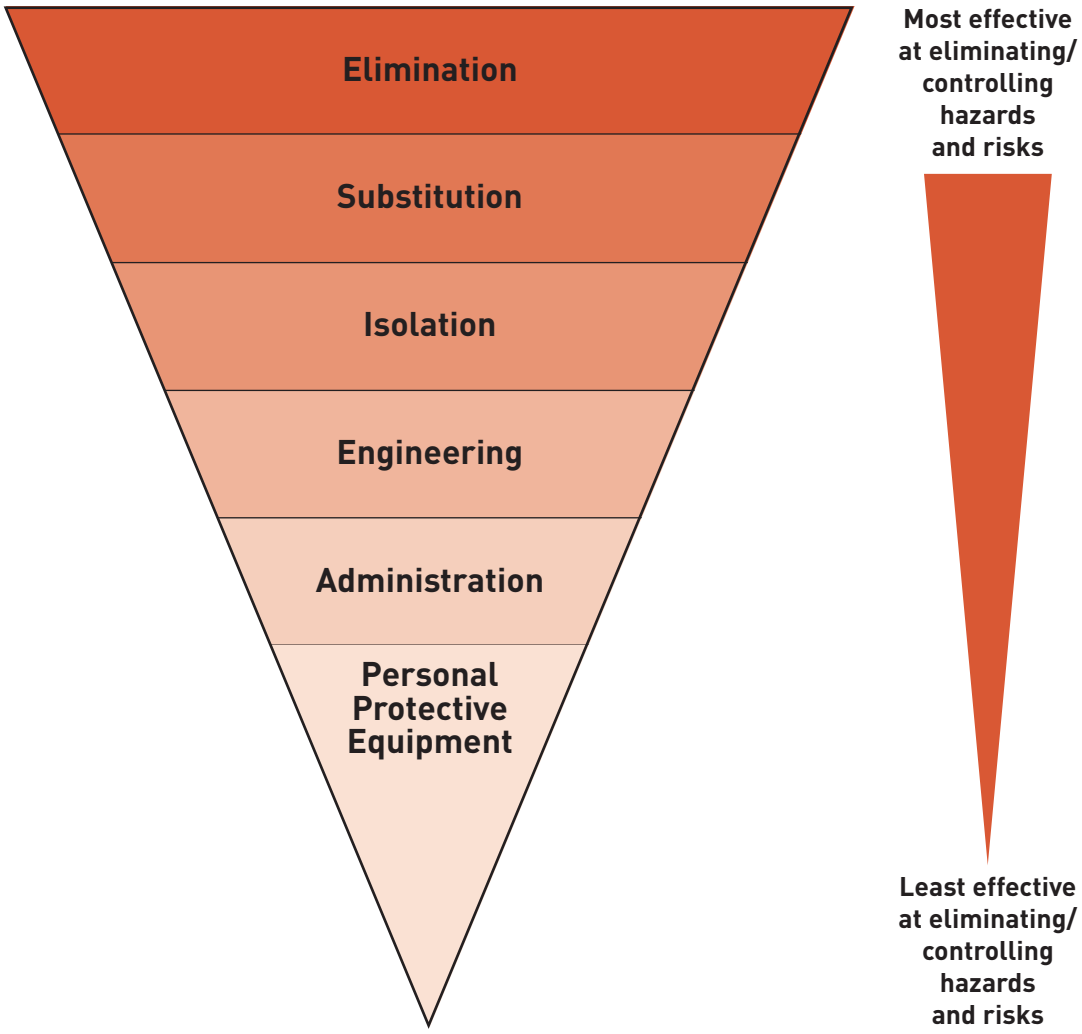
What do I do?

- ☑
- ☐ Maintain a sense of constant vulnerability; never assume fatalities will not occur
- ☐ Challenge the assumptions of others around their understanding and management of fatal risks
- ☐ Make no assumptions on critical issues; conduct ad-hoc tests on critical controls and seek expert advice
- ☐ Accept no excuses for departure from the operating disciplines associated with fatal risks
- ☐ Explore the preparedness of operations to respond to abnormal conditions
- ☐ Consider the consequences of strategic decisions on the probability of fatalities

What should I ensure is in place?

- ☑
- ☐ A system for ongoing education of all leaders in the origins of human error, and ways to reduce its occurrence and impact
- ☐ The right people, especially leaders, are in the right jobs – with the competencies, intellect, passion and experience for leading fatality prevention
- ☐ Multi-layer barriers to fatal events
- ☐ Use of the hierarchy of controls; a continuous process to increase systematic fatal risk controls
- ☐ A verification process to validate that critical controls exist and are providing the intended benefit to our employees

Hierarchy of controls



ICMM
35/38 Portman Square,
London W1H 6LR
United Kingdom

Tel: +44 (0) 20 7467 5070
Fax: +44 (0) 20 7467 5071
Email: info@icmm.com

APPENDIX 5

Standard Mitigation Measures

INTRODUCTION

The present appendix presents a comprehensive list of standard mitigation measures. It gives a brief description of each measure and lists the principal components of the environment to which each is applicable.

Most of the mitigation measures are referred to in Section 8.0, but some are not. That is because the measures include some that are not relevant to the ELAIOM, but that may be relevant to other Assessment Groups (see Table 1.0). It also offers the regulator the opportunity to request that other numbered standard mitigation measures be applied.

Appendix 8.3 explains certain time constraints on defined activities that also act as mitigation measures.

1 Tree-cutting and Management of Wood (TW)

Table A5.1: Summary of the Mitigation Measures Related to Tree-cutting and the Management of Wood

Code	Description	Component Involved
TW1	Observance of the *Forest Act* and its regulations, in particular the *Regulation respecting standards of forest management for forests in the domain of the State* and the *Forest Protection Regulation*. Take the necessary measures to ensure that tree-cutting respects the tree-cutting requirements stipulated in them.	Caribou / Harvested mammals / Avifauna
TW2	Before carrying out tree-cutting work, ensure that the person in charge possesses a permit for activity on public lands or an authorization for activity on private lands.	Water quality / Surficial deposits / Caribou / Harvested mammals / Avifauna / Fish
TW3	Do no cut trees in the riparian buffer strip for a watercourse or in a wetland without authorization.	Water quality / Avifauna / Fish
TW4	Use the services of a forestry technician to perform tree-cutting, and obtain authorization from the supervisor before starting to fell trees.	Avifauna
TW5	Pay special attention to wetlands and protected areas.	Wetlands / Fish
TW6	Before any tree-cutting, clearly identify the boundaries of the work areas (right-of-way, storage area, *etc*.) as well as those of the trimming to be done around these areas (interfering branches to be pruned) so that they can be efficiently checked during the work.	Wetlands
TW7	For markers, use sturdy material that is weather-resistant and tear-resistant and of a colour that is very visible at a distance. Preferably use short lengths of biodegradable ribbon.	Wetlands
TW8	Carry out tree-cutting in a way that does not damage the vegetation around the boundaries of the work areas. To do this, ensure that trees do not fall outside the boundaries and into watercourses. If that does occur, remove them carefully so as not to disturb the environment unnecessarily. Do not uproot trees mechanically close to the boundaries of the work areas.	Wetlands /Avifauna
TW9	Maintain a 3-m wide transition zone along the boundaries, in which trees are cut but not uprooted and in which the shrub layer is preserved.	Caribou / Harvested mammals / Avifauna
TW10	Ensure that the cut areas that are left bare and exposed to the elements are limited to the strict minimum.	Water quality / Avifauna
TW11	When a tree on the bank of a watercourse must be cut down, preserve its root structure in order to maintain the stability of the bank.	Water quality / Wetlands / Fish
TW12	Cut no more than a 5-m opening if the trees are along a watercourse or lake.	Water quality / Wetlands / Fish
TW13	During line- or survey-cutting, cut a maximum width of 1 meter.	Caribou / Harvested mammals / Avifauna

Code	Description	Component Involved
TW14	Use only hand tools for line-cutting, and avoid using a bulldozer.	Surficial deposits
TW15	Do not pile the organic matter produced by stripping the ground surface or the debris from commercial cutting and logging within 20 m of a lake or watercourse, in a wetland or in the water.	Surficial deposits / Water quality / Wetlands / Fish
TW16	Identify the most appropriate way of processing debris from commercial cutting and logging (*e.g*. in windrows, chipped, burned, disposed of in an authorized site, *etc*.).	Socio-economic
TW17	Chip and spread cutting debris as mulch on work areas at a distance of at least 60 m from a watercourse. Do not let the debris interfere with the flow of run-off.	Water quality / Wetlands / Fish
TW18	When the wood waste and debris is chipped, reuse it where required for the temporary stabilization and enhancement of the soil.	Surficial deposits
TW19	Prior to the burning of wood, take all necessary precautions to avoid uncontrolled fires and obtain any required permits and authorizations.	Air quality / Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
TW20	Gather the wood to be burned in piles or rows not exceeding 2.5 m in height. They must be separated from the forest by a minimum distance of 12 m. Never burn less than 60 m from a watercourse. Carry out burning under constant supervision and remove the ashes.	Wetlands / Avifauna / Fish

2 Erosion and Sedimentation (ES)

Table A5.2: Summary of the Mitigation Measures Related to Erosion and Sedimentation Control

Code	Description	Component Involved
ES1	Using maps of surficial deposits and slope classes, define zones sensitive to erosion and, if possible, avoid carrying out work there.	Water quality / Surficial deposits / Wetlands / Fish
ES2	In order to respect the natural topography of the site and prevent erosion, limit to the strict minimum stripping, clearing, excavating, filling and grading.	Water quality / Water budget / Surficial deposits / Wetlands / Fish
ES3	Excavation and reprofiling must be done from the top of the slope and be closely supervised to detect any possibility of land slides. Adjust work techniques if necessary.	Water quality / Water budget / Surficial deposits / Wetlands / Fish
ES4	Maintain the natural drainage of the site and take all appropriate measures to allow the normal flow of water.	Water quality / Water budget / Wetlands / Fish
ES5	Follow the plans and specifications regarding the surface area, the excavated volume and the location of the work.	Water quality / Water budget / Surficial deposits / Wetlands / Fish
ES6	Transport heavy material on multi-axle trailers to better distribute the load.	Surficial deposits / Wetlands
ES7	Do not throw debris from the cutting of vegetation or stripping of land into watercourses and lakes.	Water quality / Fish
ES8	Avoid removing vegetation from slopes along roads or close to watercourses. Retain shrub vegetation within 20 m of road construction or improvement that crosses a watercourse.	Water quality / Surficial deposits / Wetlands / Fish
ES9	Preserve 10 to 15 m buffers along watercourses or wetlands. No ditches should be dug in the buffer on either side of a watercourse. Beyond the buffer, the water in ditches must be diverted towards a vegetation zone located outside the right-of-way. If necessary, create a sedimentation basin outside the riparian buffer to catch run-off and sediment. The basin size will be determined according to the flow to be received and evacuated.	Water quality / Wetlands / Fish
ES10	Dig trenches on sloping land so that they are tiered or terraced. Slopes adjacent to roads and access routes must be built to ensure maximum stability.	Surficial deposits / Wetlands
ES11	On sloping ground, use methods such as building drainage outlets, retaining embankments or diversion ditches perpendicular to the slope.	Surficial deposits / Wetlands
ES12	No road should be built within 60 m of a lake or watercourse with permanent flow or within 30 m of a water course with intermittent flow. If such a road is necessary, an authorization must be obtained. The slopes of retaining embankments must be reduced for all roads built within 60 m of a lake or watercourse with permanent flow or within 30 m of a watercourse with intermittent flow.	Water quality / Surficial deposits / Wetlands

Code	Description	Component Involved
ES13	Install an anti-erosion barrier to prevent earth, rocks or other materials from falling into a watercourse by driving wooden stakes into the ground every one to two meters. At the base of the anti-erosion barrier, dig a trench approximately 10 cm deep and 10 cm wide. Attach filter cloth to the stakes taking care to keep 20 cm of filter cloth that will be placed in the trench at a right angle. Fill the trench over the filter cloth and compact the ground. Check the integrity of the barrier every six months.	Water quality / Surficial deposits / Wetlands / Fish
ES14	Along steep slopes bordering the right-of-way, use sediment barriers at the foot of the slopes or install protective measures (straw, woodchips, drainage blankets) directly on the slope in order to reduce the volume of sediments transported.	Water quality / Surficial deposits / Wetlands / Fish
ES15	Avoid storing excavated material on steep slopes and compact it adequately. In order to ensure thorough compaction of fill more than 60 cm thick, it is preferable to place it in several thin layers rather than in a single layer. In zones without transverse slopes, the height and depth of backfill should be limited to three meters.	Air quality / Water quality / Surficial deposits / Wetlands / Fish
ES16	Stabilize slopes produced by excavation or made from fill using native plants anywhere where erosion is likely to cause an influx of sediments into a watercourse.	Water quality / Surficial deposits / Wetlands / Fish
ES17	Store excavated material more than 20 m away from a watercourse.	Water quality / Surficial deposits / Wetlands / Fish
ES18	Control the quality of run-off or of water pumped out of excavations by filtering, decanting, treating or using any other method. Do not release directly into a waterbody.	Water quality / Wetlands / Fish
ES19	Limit the disposal area for drilling mud and take the necessary measures to ensure that the run-off from it soaks into the soil or is filtered before reaching a drainage feature.	Water quality / Wetlands / Fish
ES20	After excavating a trench, place the topsoil, the subsoil and the rock debris in separate piles, to a maximum height of 1-2 m. That will make it possible to backfill the trenches.	Surficial deposits
ES21	Backfill trenches as soon as possible. Backfill in reverse order from excavation, starting with mineral soil and finishing with topsoil.	Surficial deposits
ES22	If there is not enough topsoil, use it preferentially in places where erosion could cause the most damage.	Water quality / Water budget / Surficial deposits / Wetlands / Fish
ES23	Do not reuse topsoil in a place saturated with water. Ideally, reuse it within 12 months.	Water quality / Wetlands / Fish
ES24	Avoid stripping ground during snow clearance.	Surficial deposits

3 Watercourse Crossings (SC)

Table A5.3: Summary of Mitigation Measures Related to Watercourse Crossings

Code	Description	Component Involved
SC1	Check whether a permit or an authorization is needed to construct watercourse crossings.	Wetlands / Fish
SC2	Reduce to a minimum the number of watercourse crossings.	Wetlands / Fish
SC3	Reduce to a minimum the scope and duration of work in water and perform it when the flow is at a minimum (low-water periods).	Fish
SC4	Ensure the free movement of fish at all times and avoid working during critical periods for the fish (spawning, incubation, fry rearing, *etc*.).	Fish
SC5	Build bridges or culverts on narrow, straight sections. Avoid reducing stream width. Ensure sufficient load-bearing capacity of the soil and gentle slopes. Build as far as possible from the mouth or confluences of watercourses.	Wetlands / Fish
SC6	Wood or pipe culverts are more suitable for major watercourses. Accurately evaluate the high-water flow of the watercourse so as to select the appropriate pipe diameter.	Wetlands / Fish
SC7	Choose the culvert type (arched, round, elliptical, *etc*.) according to the characteristics of the site.	Wetlands / Fish
SC8	For more information on the various suggested structures (bridge and culvert, corrugated metal, ice bridge and snow fill) see the *Guide d'aménagement de ponts et ponceaux dans le milieu forestier* of the MRNF.	Wetlands / Fish
SC9	Build crossings perpendicular to watercourses.	Wetlands / Fish
SC10	Where possible, use existing roads, cleared strips or trails to avoid disturbing riparian vegetation.	Wetlands / Fish
SC11	Limit the felling of trees along stream banks and mark the trees to be preserved.	Wetlands / Fish
SC12	Preserve the plant cover and stumps in the right-of-way of a road.	Wetlands / Fish
SC13	Preserve the organic matter and soils for restoration of the site.	Surficial deposits / Wetlands / Fish
SC14	Limit the size of the work area before starting work to avoid releasing sediments in water and ensure that the work techniques and the materials used do not generate excessive turbidity.	Water quality / Surficial deposits / Wetlands / Fish
SC15	Where a winter road must cross a watercourse, build bridging or an ice bridge.	Water quality / Wetlands / Fish
SC16	During construction of bridges or culverts, do not reduce the width of the watercourse by more than 20% (calculated on the basis of the normal high water	Wetlands / Fish

Code	Description	Component Involved
	line).	
SC17	Ensure that culverts have a minimum diameter of 45 cm.	Wetlands / Fish
SC18	The depth of water should be no more than 85% of the culvert's vertical clearance.	Wetlands / Fish
SC19	Ensure the stability of the soils, banks, slopes, fill and structures throughout the construction of crossings (geomembrane and riprap on slopes and bed of the watercourse, *etc*.).	Water quality / Surficial deposits / Wetlands / Fish
SC20	Install drainage ditches with a minimum depth of 30 cm and a minimum width of 60 cm parallel to roads, and transversal drains to intercept the flow of water on the roads. The transversal drains should be about every 30 m and should be 60 cm wide and 30 cm deep.	Wetlands / Fish
SC21	Do not impede the water flow, and maintain the slope, the natural soil drainage and the orientation of the watercourse during installation of a culvert.	Wetlands / Fish
SC22	Backfill culverts and stabilize the fill around them. The end of the culvert should extend at least 30 cm beyond the backfill.	Water quality / Surficial deposits / Wetlands / Fish
SC23	The base of a culvert should be buried under the natural bed of the watercourse, to a depth equivalent to 10% of its height. Its maximum burial depth should not, however, exceed 30 cm. If it does, use an arched culvert with an open invert.	Wetlands / Fish
SC24	Culverts must not have more than two parallel pipes, with at least one meter between them.	Wetlands / Fish
SC25	Any temporary structure should be stabilized upstream and downstream and then demolished upon completion of the work.	Wetlands / Fish
SC26	When work is completed, restore the bed of the watercourse to its natural profile, stabilize the banks and revegetate if necessary with native species.	Wetlands / Fish
SC27	Carry out periodic monitoring of the condition of culverts and bridges, especially in spring and after heavy rains. Pay particular attention to signs of erosion, poor reestablishment of vegetation, blockages impeding flow and the integrity of the structures.	Water quality / Surficial deposits / Wetlands / Fish
SC28	Where applicable, schedule work according to the life cycles of the species present in the aquatic environment (Faubert *et al*. 1992).	Wetlands / Fish

4 Transmission Line Rights-of-Way (TR)

Table A5.4: Summary of the Mitigation Measures Related to the Management of Transmission Line Rights-of-way

Code	Description	Component Involved
TR1	Establish a cutting plan to mark the limits of the right-of-way to be cleared. Identify dangerous trees. Delineate riparian buffer strips where applicable.	Wetlands / Fish
TR2	Manual work (tree-cutting, brush-cutting) remains the preferred method. If the use of machinery is necessary, use it only on firm ground (beyond the high-water line) to limit disturbances to the banks of the watercourse.	Wetlands / Avifauna / Fish
TR3	Ensure that machinery is clean and has no leaks when it arrives at the site and that it is maintained in this condition.	Water quality / Wetlands / Fish
TR4	When machinery is used, a single (return) crossing of a watercourse is permitted in order to carry out the work on the other side, but only if it is impossible to use an existing crossing.	Water quality / Wetlands / Fish
TR5	Preserve the low vegetation layer (bushes, *etc*.) on erodable soils and ensure that they are stabilized.	Surficial deposits
TR6	If a watercourse crosses or runs along the right-of-way, selective cutting is required in the riparian buffer strip.	Water quality / Wetlands / Fish
TR7	During any given year, maintenance activities should not affect more than one third of the woody vegetation (trees and shrubs) in the portion of the right-of-way located less than 30 meters from the high-water line.	Wetlands / Avifauna / Fish
TR8	Avoid installing poles that are poorly dried and over-saturated with preservatives.	Water quality / Surficial deposits / Wetlands / Avifauna / Fish
TR9	In accordance with Section 39 of the *Water Resources Act* of Newfoundland and Labrador, no activity in a protected water supply area that could impair the quality of the water should take place, including the use of chemically treated poles. The guidelines in the Canadian policy on the treatment of utility poles in water supply areas indicate that during the design of any new transmission line or the installation of new poles, three options are applicable, in descending order of preference: Option 1 - Avoid crossing the protected water supply area; Option 2 - Use untreated wooden poles or steel or concrete poles; Option 3 - Use poles pressure-treated with, for example, chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA) or copper naphthenate (CuNap). If this option is chosen, the poles must respect a specified buffer zone, depending on the waterbody. The buffer zones are the following: ponds and lakes (150 m), rivers (150 m upstream, 100 m downstream), feeding channels (75 m), tributaries, including lakes and ponds (50 m) and small waterbodies (30 m). In this case, untreated poles or steel or concrete poles must be used. The *Water Resources Act* and the Canadian policy on the treatment of utility poles in water supply areas also apply to the anchoring of the boxes used to stabilize the poles or the guy wires.	Water quality / Wetlands / Avifauna / Fish

Code	Description	Component Involved
TR10	In wetlands and less than 15 m from a watercourse, use untreated poles such as cedar poles.	Water quality / Wetlands / Avifauna / Fish

5 Solid-Waste Management (SW)

Table A5.5: Summary of the Mitigation Measures Related to the Management of Solid Wastes

Code	Description	Component Involved
SW1	Before beginning exploration, estimate if possible the quantity of waste that might be generated using data such as the number of participants in the project, the presence of a camp on the site and the duration of the project.	Not component-specific
SW2	Employ, in descending order: reduction at source; reuse; recycling; and reclamation of solid waste. Replace products with less harmful substances, if possible. In order to reduce at source, it is possible, among other things, to use up products completely, to buy in bulk and to evaluate accurately the quantities of products required.	Not component-specific
SW3	Do not throw any wastes into the aquatic environment, including the debris from cutting vegetation or stripping land. All waste introduced accidentally into the aquatic environment must be removed as soon as possible.	Harvested mammals / Wetlands / Fish
SW4	Send any recyclable domestic and construction waste to designated sites according to type.	Water quality / Air quality / Wetlands
SW5	If the quantities are small, dry materials (concrete, asphalt, *etc*.) may be used as fill and buried directly behind protective works. Wood and vegetal waste may be buried in embankments immediately above the works.	Water quality / Air quality / Wetlands
SW6	Plan a storage area to be used before and after handling large quantities of materials, such as plastic, that are difficult to extinguish if they catch fire.	Air quality / Wetlands
SW7	Observe the prohibition against burning solid waste in accordance with applicable regulations.	Air quality / Wetlands
SW8	Store waste temporarily in a single place, to which wildlife, employees and community members do not have access.	Harvested mammals / Fish

6 Management of Hazardous Material (HM)

Table A5.6: Summary of the Mitigation Measures Related to the Management of Hazardous Material

Code	Description	Component Involved
HM1	Implement the Hazardous Material Management Plan in case of spills of fuel or other hazardous substances.	Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
HM2	Comply with laws and regulations respecting the transportation of hazardous material.	Not component-specific
HM3	Petroleum products and hazardous material emergency reclamation kits must be available at all time on the work sites.	Water quality / Surficial deposits / Wetlands / Avifauna / Fish
HM4	Each vehicle and machine on the work site must be provided with enough absorbent to ensure rapid response in case of a spill. The supervisor must approve a list of spill clean-up materials and devices.	Water quality / Surficial deposits / Wetlands / Avifauna / Fish
HM5	All accidental spills must be immediately reported to the person in charge of the Emergency Plan, which will be developed and approved prior to the beginning of the work.	Water quality / Surficial deposits / Wetlands / Avifauna / Fish
HM6	In the event of a spill of a harmful substance, the responsible authority must be contacted.	Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
HM7	It is prohibited for an employee to release any hazardous material into the environment or a sewer system. This includes waste or volatile substances such as solvents and oil or paint thinner.	Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
HM8	If a spill occurs while refueling a vehicle, the spilled fuel must be cleaned up before restarting the motor.	Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
HM9	In the event of a spill of a hazardous material, the contaminated area must be marked and the surface soil removed for elimination in accordance with the regulations in force so as to limit the contamination of any waterbody through run-off. Such areas must be stabilized for revegetation.	Water quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
HM10	Hazardous materials, including fuel, must be stored no less than 100 m from any waterbody or surface drainage channel.	Water quality / Wetlands / Avifauna / Fish

Code	Description	Component Involved
HM11	Hazardous material must be managed and stored in accordance with regulations.	Not component-specific
HM12	At the time of decommissioning, all tires must be collected and properly disposed of.	Water quality / Wetlands / Avifauna / Fish
HM13	Installation or use of a stationary above-ground or underground reservoir requires a permit and compliance with the applicable regulations.	Not component-specific
HM14	For above-ground reservoirs with a capacity of 5000 L or more, a leak-proof dike forming a retaining basin must be constructed. Where there is only one reservoir, the retaining basin must be capable of holding at least 10% more than the reservoir's capacity. Where there is more than one reservoir, the retaining basin must be capable of holding the largest reservoir's capacity plus 10% of the total capacity of all other reservoirs or the capacity of the largest reservoir plus 10%.	Not component-specific
HM15	All Class 1 and Class 2 petroleum products (as defined in the Code de construction of Québec) and all substances impregnated with such products must be stored in leak-free containers or rooms.	Not component-specific

7 DRILLING AND BLASTING (DD)

Table A5.7: Summary of the Mitigation Measures Related to Drilling and Blasting

Code	Description	Component Involved
DD1	An explosive material management programme must be developed to ensure that minimum quantities of ammonia and nitrates enter into the natural environment.	Wetlands
DD2	All explosives must be used in compliance with applicable laws and regulations.	Not component-specific
DD3	Only properly trained and qualified staff are responsible for the handling and detonation of explosives in accordance with the manufacturer's instructions and laws and regulations.	Not component-specific
DD4	To ensure safe, environmentally-sound blasting procedures, the manufacturer's instructions must be followed.	Caribou / Wetlands / Fish
DD5	The Department of Fisheries and Oceans *Guidelines for the Use of Explosives in or near Canadian Fisheries Waters* (Wright and Hopky 1998, Internet site) must be complied with for on-land blasting.	Fish
DD6	Detonations producing an instantaneous pressure change of more than 100 kPa in fish air bladder are prohibited in or close to a fish habitat.	Fish
DD7	Detonations producing or likely to produce a peak particle velocity of more than 13 mm/s are prohibited in rearing habitats at egg incubation time.	Fish
DD8	Shortly before a main detonation close to a watercourse, small "scare charges" must be detonated to scare off fish.	Fish
DD9	No explosives shall be used in or near water.	Wetlands / Fish
DD10	Blasting must be suspended under certain circumstances to avoid excessive disturbance of wildlife.	Caribou / Harvested mammals
DD11	To prevent spills of explosive material, trained staff must ensure that all bins, tanks, storage trailers and loading equipment are regularly maintained.	Not component-specific
DD12	Blasted rock may be used as fill.	Soil
DD13	Not used.	
DD14	Depending on blasting conditions, the type of explosive used can have a dramatic effect on overall explosives losses; the proper type of explosive must be chosen.	Wetlands / Fish
DD15	Recovered explosives remnants must be recovered and disposed of appropriately after each detonation.	Wetlands / Fish
DD16	Use multiple in-hole delay primers as recommended by explosives manufacturer	Wetlands / Fish

Code	Description	Component Involved
	and optimize drill hole patterns to minimize misfires.	
DD17	Minimum open collar lengths must be established for all charges, depending on geological conditions and application to control explosives losses.	Wetlands / Fish
DD18	Prevent cut-offs by setting time-delayed blasting cycles as recommended by explosives manufacturer.	Wetlands / Fish
DD19	Use reliable blast initiation systems, which allow for accurate firing of the explosives.	Wetlands / Fish
DD20	Use blasting mats when required to prevent excessive flyrock.	Air quality / Water quality
DD21	Take the necessary precautions to control dust emissions from blasting.	Air quality / Water quality
DD22	Fill bore hole collars with clean crushed stone to help suppress dust and gases during blasting.	Air quality / Water quality
DD23	Use explosives in a manner that will minimize the scattering of blasted material beyond the limits of the area.	Air quality / Water quality
DD24	Blasting will be carried out in such a way as to ensure that air pressure at the receptors (habitations) is lower than 128 dB.	Noise

8 CONSTRUCTION EQUIPMENT (CE)

Table A5.8: Summary of the Mitigation Measures Related to Construction Equipment

Code	Description	Component Involved
CE1	Store all equipment and machinery in specifically designated areas, such as parking, washing and maintenance areas. Such areas must be located no less than 60 m from any watercourse.	Wetlands / Fish
CE2	Washing of equipment in an aquatic environment is prohibited.	Wetlands / Fish
CE3	Only qualified staff shall perform refueling and equipment maintenance.	Not component-specific
CE4	Construction equipment must be delivered to the worksite in good operating order, free of leaks and with all appropriate emission filters to comply with environmental emission regulations and reduce noise disturbance. The equipment must be regularly inspected for leaks and mechanical failures that could lead to spills of fuel, lubricating oil or hazardous material.	Wetlands / Fish
CE5	Fuel storage, transportation and handling must be conducted in accordance with appropriate standards and guidelines. Refueling of equipment within 15 m of a waterbody is prohibited.	Wetlands / Fish
CE6	Unless provided for in the regulations, no machinery should be allowed in the riparian buffer zone.	Wetlands / Fish
CE7	Equipment and vehicles must yield to wildlife.	Harvested mammals / Caribou
CE8	Establish appropriate road signage and enforce speed limits to minimize environmental disturbance and accidents.	Harvested mammals / Caribou
CE9	Equip all pumps and generators located near a waterbody with drip pans.	Wetlands / Fish
CE10	Inspect equipment routinely for leaks and drips. Such leaks must be repaired and reported immediately to the field supervisor.	Wetlands / Fish
CE11	All staff operating company vehicles must hold a valid driver's license. All staff must attend an employee orientation and safety training course, and be briefed on the handling of wildlife-vehicle collisions.	Not component-specific
CE12	Not used.	-
CE13	Respect speed limits and all traffic regulations. Post signs cautioning drivers about the presence of wildlife along the Project roads and railway.	Harvested mammals / Caribou
CE14	Use on roads of a dust control agent approved by BNQ 2410-300 standard.	Air quality / Water quality

9 MINING OPERATIONS (MO)

Table A5.9: Summary of the Mitigation Measures Related to Mining Operations

Code	Description	Component Involved
MO1	Crushers, dryers, screens, conveyors, elevators and hoppers installed in a quarry or at any loading or unloading stations shall not generate dust visible in the atmosphere more than 2 m from the emission source.	Air quality
MO2	Mining operations shall not exceed a maximum level of continuous noise.	Noise
MO3	Reports required by governments shall be submitted within the applicable delay.	Water quality / Fish / Soil

10 MANAGEMENT OF ORE, WASTE ROCK PILES, TAILINGS, MINE WASTE AND OVERBURDEN (OR)

Table A5.10: Summary of the Mitigation Measures Related to the Management of Ore, Waste Rock Piles, Tailings, Mine Waste and Overburden

Code	Description	Component Involved
OR1	Take the necessary measures to prevent the tailings from being wind eroded and tumbling down around the waste rock piles.	Water quality / Fish
OR2	Locate waste rock piles more than 60 m from the high-water line. If not feasible, justify the location and keep a distance of at least 30 m from the high-water line.	Water quality / Fish
OR3	Only tailings shall be disposed of in the stockpile areas.	Water quality / Fish
OR4	Prepare scenarios for the use of mine waste, including tailings. For example, tailings could be used in road and railway bed construction.	Soil
OR5	The ore and tailings must be described.	Water quality / Fish
OR6	Control dust emissions from aggregate storage and handling.	Air quality

11 WATER MANAGEMENT (WM)

Table A5.11: Summary of the Mitigation Measures Related to Water Management

Code	Description	Component Involved
WM1	Freshwater supply lines may be equipped with a water meter.	Water budget / Drying up
WM2	Recycling process water will be encouraged.	Water budget / Drying up
WM3	At-risk installations (processing complex, tailings stockpile areas, petroleum and chemical substance storage areas, *etc*.) shall be built and managed in such a way as to avoid any significant degradation of groundwater before and during mining operations.	Water quality / Fish
WM4	The quality of groundwater shall be monitored through the sampling of observation wells around at-risk installations (processing complex, tailings stockpile areas, petroleum and chemical substance storage areas, *etc*.).	Water quality / Fish
WM5	Following the mining operations, but prior to the restoration work, a surface and groundwater monitoring programme must be established and approved by the concerned authority, and the required sampling must be carried out.	Water quality / Fish
WM6	Following the restoration work, the surface and groundwater monitoring programme must be implemented.	Water quality / Fish

12 PROCESS WATER AND EFFLUENT (PE)

Table A5.12: Summary of the Mitigation Measures Related to Process Water and Effluent

Code	Description	Component Involved
PE1	In Newfoundland and Labrador, ensure that any disposal of process water and effluent in watercourses complies with the *Environmental Control Water and Sewage Regulations*, 2003, N.L.R. 65/03.	Water quality / Fish
PE2	In Québec, ensure that the disposal of process water and effluent complies with applicable laws and regulations.	Water quality / Fish

13 AIR QUALITY (AQ)

Table A5.13: Summary of the Mitigation Measures Related to Air Quality

Code	Description	Component Involved
AQ1	Baghouses will be used to control dust emissions at coarse ore stockpile reclaim tunnel, at secondary crusher and at dryer stack.	Air quality
AQ2	Handle dust collected from baghouses in such a way as to avoid dust emissions.	Air quality
AQ3	Use a water spray system at conveyor transfer and drop points.	Air quality
AQ4	Mix water with the ore in the scrubber.	Air quality

14 RESTORATION (R)

Table A5.14: Summary of the Mitigation Measures Related to Restoration

Code	Description	Component Involved
R1	The best practices presented in the Restoration Plan shall be implemented.	Water quality / Air quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
R2	A Restoration Plan shall be prepared.	Water quality / Air quality / Surficial deposits / Caribou / Harvested mammals / Wetlands / Avifauna / Fish
R3	Post operations and restoration, follow-up reports shall be produced.	Water quality / Fish / Wildlife

APPENDIX 6

Overview of Employment by National Occupational Classification (NOC-2006) and Period of Employment

Table A6.1 provides the codes under the 2006 National Occupational Classification for the categories of on-site employment that will be created during preparation/construction.

Table A6.1: Employment by National Occupational Classification for Preparation/Construction Phase

Occupation	Number	Code
Superintendent	1	071
Supervisor	3	721x
Foreman	6	721x
Executive Secretary	1	1241
Machinery Operator	6	7421
Engineer	5	2131
Technician	20	225x
Chemist	1	2211
Plant Worker	10	7611
Plant Labour	18	7612
Electrician	6	7242
Plant Mechanic	20	733x
Welder	4	7265
Millwright	4	7311
Clerk	2	1231
Secretary	2	1241
Health and Safety Officer	1	2263
Carpenter	20	7271
Steel Erector	15	7264 / 7611
Plumber	5	7251
Blasting*	-	7372
Cooking and Restauration*	-	6242 / 6243
Ambulance/First-aid*	-	3234
TOTAL	**150**	

*will be subcontracted

Table A6.2 provides the codes under the 2006 National Occupational Classification for the categories of on-site employment that will be created during operations.

Table A6.2 Employment by National Occupational Classification for Operations Phase[1]

1. MINE			2. ENGINEERING			3. PROCESSING PLANT		
Staff	**Number**	**Code**	**Staff**	**Number**	**Code**	**Staff**	**Number**	**Code**
Operations Superintendent	1	0721	Engineering Superintendent	1	0211	Plant Superintendent	1	0721
Pit Supervisor	1	8221	Engineering Supervisor	1	0811	Plant Supervisor	1	9211
Pit Foreman	2	8221	Development Supervisor	1	0811	Metallurgist Engineer	1	2142
Train Coordinator	2	7361	Pit Engineer	2	2143	Metallurgist Technician	2	2212
Operations Executive Secretary	1	1241	Planning Engineer	1	2143	Chief Chemist	1	0212
			Ore Grading Engineer	1	2143	Maintenance Foreman	2	7211
			Dewatering Engineer	1	2143	Maintenance Planner	1	2232
			Chief Geologist	1	0811	Trainer/SST Coordinator	1	4131
HOURLY			Mine and Development Geologist	3	2143	Plant Executive Secretary	1	1241
Loader Operator	4	7421	Environmental Engineer	1	2131			
Truck Operator	12	7411	Engineering Executive Secretary	1	1241	HOURLY		
Grader Operator	3	7421				Team Leader	4	9211
Tracked Dozer Operator	4	7421	HOURLY			Ore Sizing Station Operator	4	9411
Wheeled Dozer Operator	2	7421	Pit Technician	2	2212	Plant Operator	8	9411
Drill Operator	4	7372	Planning Technician	2	2212	Operator Helper/Labour	4	9611
Labour (Service Truck, etc.)	4	7612	Development Technician	2	2212	Electrician	2	7241
Dispatcher	2	146x	Model Designer	2	2253	Instrumentation Technician	2	7241
Blasting*		7372				Plant Mechanic	10	7312
						Sample Preparation Technician	6	8614
						Assay Technician	6	2211
TOTAL	**42**		**TOTAL**	**22**		**TOTAL**	**57**	

4. MAINTENANCE			5. ADMINISTRATION		
Staff	**Number**	**Code**	**Staff**	**Number**	**Code**
Maintenance Superintendent	1	0721	Administration Superintendent	1	1221
Maintenance Supervisor	1	7211	Budget and Accounting Supervisor	1	0121
Maintenance Foreman	2	7211	Camp Supervisor	1	0631/ 0632
Maintenance Executive Secretary	1	1241	Security Officer	1	6651
HOURLY			HOURLY		
Welder	4	7265	Budget and Accounting Technician	4	141x
Millwright	4	7311	Health and Safety Personal	2	2263
Mechanic (6+6; 2+2)	16	733x	Payroll Clerk	2	1432
Electrician (lineman, substation, etc.)	8	7242	Training Technician	2	4213/ 4216
Repair Shop	4	7312	Janitor and Maintenance	4	6663
Warehouse Clerk	4	1472	Secretary	1	1241
Secretary	1	1241	Cooking & Restauration*		6242/ 6243
			Ambulance/First-aid*		3234
TOTAL	**46**		**TOTAL**	**19**	

[1] Figures not updated to correspond to Table 3.1. Table 3.1 prevails.

*will be subcontracted

APPENDIX 7

Technical Specifications of Chemicals that May be Used

Material Safety Data Sheet
The Dow Chemical Company

Product Name: LIQUIDOW* Technical Grade Calcium Chloride Solution

Issue Date: 2008.05.06

Print Date: 07 May 2008

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

LIQUIDOW* Technical Grade Calcium Chloride Solution

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

For MSDS updates and Product Information: 800-258-2436

Prepared By: Prepared for use in Canada by EH&S, Product Regulatory Management Department.
450-652-1029
Revision 2008.05.06
Print Date: 5/7/2008

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 519-339-3711

2. Hazards Identification

Emergency Overview

Color: Clear
Physical State: Liquid
Odor: Odorless
Hazards of product:

WARNING! Causes eye irritation. May cause skin irritation. May be harmful if swallowed. Slipping hazard. Isolate area.

Potential Health Effects

Eye Contact: May cause severe eye irritation. May cause slight corneal injury. Effects may be slow to heal.
Skin Contact: Brief contact is essentially nonirritating to skin. May cause more severe response if skin is abraded (scratched or cut). May cause more severe response on covered skin (under clothing, gloves). Prolonged contact may cause skin irritation, even a burn.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Inhalation: Mist may cause irritation of upper respiratory tract (nose and throat).
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation.

3. Composition/information on ingredients

Component	CAS #	Amount W/W
Calcium chloride	10043-52-4	28.0 - 42.0 %
Potassium chloride	7447-40-7	0.0 - 3.0 %
Sodium chloride	7647-14-5	0.0 - 2.0 %
Water	7732-18-5	53.0 - 72.0 %

Amounts are presented as percentages by weight.

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
Skin Contact: Wash skin with plenty of water.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Unusual Fire and Explosion Hazards: Not applicable.
Hazardous Combustion Products: Not applicable

See Section 9 for related Physical Properties

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Small and large spills: Contain spilled material if possible. Absorb with materials such as: Sand. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Spilled material may cause a slipping hazard. Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling
General Handling: Product shipped/handled hot can cause thermal burns. Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage
Keep container closed. Protect from atmospheric moisture. Product may become a solid at temperatures below 0°C (32°F) (concentrations above 36% calcium chloride).

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Calcium chloride	Dow IHG	TWA	10 mg/m3
	CAD ON OEL	TWA	5 mg/m3
Sodium chloride	Dow IHG	TWA	10 mg/m3

Consult local authorities for recommended exposure limits.

Personal Protection
Eye/Face Protection: Use chemical goggles.
Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty

atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls
Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Odorless
Flash Point - Closed Cup	Not applicable
Flammable Limits In Air	**Lower**: Not applicable **Upper**: Not applicable
Autoignition Temperature	Not applicable
Vapor Pressure	9 - 15 mmHg @ 25 °C *Literature*
Boiling Point (760 mmHg)	110 - 122 °C *Literature* .
Vapor Density (air = 1)	*Literature* Same as water
Specific Gravity (H2O = 1)	1.275 - 1.439 *Literature*
Freezing Point	Varies
Melting Point	Not applicable
Solubility in Water (by weight)	*Literature* completely miscible with water
pH	9 *Estimated* (undiluted)
Kinematic Viscosity	2.6 cSt @ 25 °C *Estimated*

10. Stability and Reactivity

Stability/Instability
Stable.
Conditions to Avoid: None known.

Incompatible Materials: Avoid contact with: Sulfuric acid. Corrosive to some metals. Avoid contact with metals such as: Brass. Ferrous metals. Mild steel. Flammable hydrogen may be generated from contact with metals such as: Zinc. Sodium. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromate.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Does not decompose.

11. Toxicological Information

Acute Toxicity
Ingestion
For the major component(s): LD50, Rat 900 - 2,100 mg/kg
Skin Absorption

For the major component(s): LD50, Rabbit > 5,000 mg/kg

Genetic Toxicology

The data presented are for the following material: Calcium chloride or CaCl2. In vitro genetic toxicity studies were negative. The data presented are for the following material Potassium chloride. In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: **Calcium chloride**

Movement & Partitioning

No bioconcentration is expected because of the relatively high water solubility. Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

Data for Component: **Potassium chloride**

Movement & Partitioning

No bioconcentration is expected because of the relatively high water solubility. Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

Data for Component: **Sodium chloride**

Movement & Partitioning

No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (Koc between 0 and 50). Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

ECOTOXICITY

Data for Component: **Calcium chloride**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, bluegill (Lepomis macrochirus): 8,350 - 10,650 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea Daphnia magna: 759 - 3,005 mg/l

Toxicity to Micro-organisms

EC50; activated sludge, respiration inhibition: > 1,000 mg/l

Data for Component: **Potassium chloride**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (Oncorhynchus mykiss), 96 h: 4,236 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea Daphnia magna, 24 h, immobilization: 590 mg/l

LC50, water flea Ceriodaphnia dubia, 96 h: 3,470 mg/l

Data for Component: **Sodium chloride**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, fathead minnow (Pimephales promelas): 10,610 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna: 4,571 mg/l
Toxicity to Micro-organisms
IC50, OECD 209 Test; activated sludge, respiration inhibition: > 1,000 mg/l

13. Disposal Considerations

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Reclaimer. Waste water treatment system. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. Transport Information

TDG Small container
NOT REGULATED

TDG Large container
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

15. Regulatory Information

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30
CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.
Hazardous Products Act Information: CPR Compliance
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

D2B	Eye or Skin Irritant

Hazardous Products Act Information: Hazardous Ingredients
This product contains the following ingredients which are Controlled Products and/or are on the Ingredient Disclosure List (Canadian HPA Section 13 and 14).

Component	**CAS #**	**Amount W/W**
Calcium chloride	10043-52-4	28.0 - 42.0 %

16. Other Information

Recommended Uses and Restrictions
A calcium chloride product - Dust Control De-icing fluid. For industrial use. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision
Identification Number: 81498 / 0000 / Issue Date 2008.05.06 / Version: 5.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Material Safety Data Sheet

Version 2.0 MSDS Number 300000021316
Revision Date 06/02/2008 Print Date 05/31/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	TOMAMINE ™ DA-16 SURFACTANT
Product Use Description	:	Surfactant
Manufacturer/Importer/Distributor	:	Air Products and Chemicals, Inc 7201 Hamilton Blvd. Allentown, PA 18195-1501 GST No. 123600835 RT0001 QST No. 102753981 TQ0001
Telephone	:	1-610-481-4911 Corporate 1-800-345-3148 Chemicals Cust Serv 1-800-752-1597 Gases/Electronics Cust Serv
Emergency telephone number (24h)	:	800-523-9374 USA 01-610-481-7711 International

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
1,3-Propanediamine, N-[3-(C11-14-isoalkyloxy)propyl] derivs., C13-rich	151789-07-0	90% - 95 %
1-Propanamine, 3-(C11-14-isoalkyloxy) derivs., C13-rich	151789-06-9	< 5 %
Alcohols, C11-14-iso-, C13-rich	68526-86-3	< 2 %

CHEMICAL FAMILY: Ether Amine

3. HAZARDS IDENTIFICATION

Emergency Overview

Corrosive
Harmful if swallowed.

Potential Health Effects

Inhalation	:	Can cause severe eye, skin and respiratory tract burns. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract.
Eye contact	:	Causes eye burns. May cause blindness.
Skin contact	:	Causes skin burns.
Ingestion	:	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Harmful if swallowed.

Chronic Health Hazard : This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

Exposure Guidelines

Target Organs : Skin.
Eyes.
Respiratory system.

Aggravated Medical Condition

Eye disease Skin disorders and Allergies. Asthma.

4. FIRST AID MEASURES

General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Eye contact : Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

Skin contact : Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.

Ingestion : Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

Inhalation : If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam.
Carbon dioxide (CO2).
Dry chemical.
Dry sand.
Limestone powder.

Specific hazards : Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.

Special protective equipment for fire-fighters : Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if

necessary.

Further information : Do not allow run-off from fire fighting to enter drains or water courses., Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.

Environmental precautions : Construct a dike to prevent spreading.

Methods for cleaning up : Contact Air Products' Emergency Response Center for advice. Approach suspected leak areas with caution. Place in appropriate chemical waste container.

Additional advice : Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Temperature : 32 - 130 ℉ (0 - 54.44 ℃)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Neoprene gloves.
Impervious gloves.
The breakthrough time of the selected glove(s) must be greater than the intended use period.

Eye protection : Full face shield with goggles underneath.

Skin and body protection	:	Impervious clothing. Full rubber suit (rain gear). Rubber or plastic boots. Slicker Suit.
Environmental exposure controls	:	Construct a dike to prevent spreading.
Special instructions for protection and hygiene	:	Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid.
Color	:	Light yellow.
Odor	:	Ammoniacal.
Relative density	:	0.88
Boiling point/range	:	> 219 °F (> 104 °C)
Flash point	:	> 93.33 °C
Water solubility	:	Insoluble.
Viscosity	:	34 mPa.s at 68 °F (20 °C)

10. STABILITY AND REACTIVITY

Stability	:	Stable under normal conditions.
Materials to avoid	:	Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.
Hazardous decomposition products	:	Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Ammonia Aldehydes

Flammable hydrocarbon fragments.

11. TOXICOLOGICAL INFORMATION

Acute Health Hazard

Ingestion	:	LD50 : > 500 - 2,000 mg/kg Species : Rat.
Inhalation	:	No data is available on the product itself.
Skin.	:	No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity	:	(96 h) : 0.1 mg/l Species : Fathead minnow (Pimephales promelas). LC50 (48 h) : 0.1 mg/l Species : Daphnia magna.
Toxicity to other organisms	:	No data available.

Persistence and degradability

Biodegradability	:	Inherently biodegradable.
Mobility	:	No data available.
Bioaccumulation	:	No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products	:	Contact supplier if guidance is required.
Contaminated packaging	:	Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	:	Amines, liquid, corrosive, n.o.s.(Long Chain Aliphatic Diamines)
Class	:	8
UN/ID No.	:	UN2735
Packing group	:	II

IATA

Proper shipping name	:	Amines, liquid, corrosive, n.o.s.(Long Chain Aliphatic Diamines)
Class	:	8
UN/ID No.	:	UN2735
Packing group	:	II

IMDG

Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S.(Long Chain Aliphatic Diamines)
Class	:	8
UN/ID No.	:	UN2735
Packing group	:	II

TDG

Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Long Chain Aliphatic Diamines)
Class	:	8
UN/ID No.	:	UN2735
Packing group	:	II

Further Information
The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact an Air Products customer service representative.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard (29 CFR 1910.1 200) Hazard Class(es)
Corrosive.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Not on Inventory. Notifications have been submitted to Environment Canada.
Australia	AICS	Not on Inventory.
Japan	ENCS	Not on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Not on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

WHMIS Hazard Classification
Combustible Liquid, Toxic Material Causing Immediate and Serious Toxi c Effects, Corrosive Material

16. OTHER INFORMATION

HMIS Rating

Health	:	3
Flammability	:	1
Physical hazard	:	0

Prepared by : Air Products and Chemicals, Inc. Global EH&S Product Safety Department

For additional information, please visit our Product Stewardship web site at
http://www.airproducts.com/productstewardship/

Safety data sheet

BASF Safety data sheet according to Regulation (EC) No.1907/2006
Date / Revised: 18.10.2007 Version: 1.0
Product: **SEDIPUR* TF2-TR**

(30050809/SDS_GEN_EU/EN)
Date of print 04.02.2008

1. Substance/preparation and company identification

SEDIPUR* TF2-TR

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Telephone: +49 621 60-0
E-mail address: global.info@basf.com

Emergency information:
Telephone: +49 180 2273-112
Telefax number: +49 621 60-92664

2. Hazard identification

No particular hazards known.

3. Composition/information on ingredients

Chemical nature

polyacrylamide, anionic modified

4. First-aid measures

General advice:
Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:
Rinse mouth and then drink plenty of water.

Note to physician:
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-fighting measures

Suitable extinguishing media:
water, dry extinguishing media, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Specific hazards:
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions:
Use personal protective clothing.

Environmental precautions:
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:
For large amounts: Contain with dust binding material and dispose of.

7. Handling and storage

Handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.
Protect against moisture.

Protection against fire and explosion:
Take precautionary measures against static discharges. The product is capable of dust explosion.

Storage

Further information on storage conditions: Keep container tightly closed and in a cool place.

8. Exposure controls and personal protection

Components with workplace control parameters

79-06-1: acrylamide (Content (W/W): <= 0.025 %)

Personal protective equipment

Respiratory protection:
Respiratory protection not required.

Hand protection:
Chemical resistant protective gloves (EN 374)

Eye protection:
Eye protection not required., Safety glasses

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Form:	powder	
Colour:	white	
Odour:	product specific	
pH value:	4 - 9 (5 g/l, 20 °C)	
Flash point:	> 100 °C	(DIN 51758)
Ignition temperature:	> 200 °C	(DIN 51794)
Bulk density:	800 kg/m3	

Solubility in water:
10 g/l
(20 °C)
Solubility (qualitative) solvent(s): polar solvents
soluble

10. Stability and reactivity

Hazardous reactions:
No hazardous reactions when stored and handled according to instructions.

Hazardous decomposition products:

11. Toxicological information

Acute toxicity

LD50 rat (oral): > 2,000 mg/kg

Irritation

Primary skin irritation rabbit: non-irritant

Primary irritations of the mucous membrane rabbit: non-irritant

12. Ecological information

Ecotoxicity

Toxicity to fish:
LC50 (96 h) > 100 mg/l, Leuciscus idus

13. Disposal considerations

Must be dumped or incinerated in accordance with local regulations.

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport information

Land transport

ADR

Not classified as a dangerous good under transport regulations

RID

Not classified as a dangerous good under transport regulations

Inland waterway transport
ADNR

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

The product does not require a hazard warning label in accordance with EC Directives.

Other regulations

16. Other information

Recommended use: flocculation agent

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Product name	Methyl isobutyl carbinol		NA/EN
MSDS number	80063	**Revision Date**	Oct.12.2004
Revision Number	0	**Issuing date**	Jun.11.2009

1. Product and company identification

Product name
Methyl isobutyl carbinol

Celanese Ltd.
1601 W. LBJ Freeway
P.O. Box 819005
Dallas, TX 75381-9005
United States
Phone: 972 443 4000
Internet: www.celanese.com

Transportation emergency phone numbers:
In USA, call 800 424 9300
Outside USA, call 703 527 3887, collect calls accepted

2. Hazards identification

Emergency Overview

WARNING!
Flammable liquid and vapor.
Causes respiratory tract, skin and eye irritation.
Material creates a special hazard because it floats on water.

Product Description

Appearance

Form	liquid
Odor	mild
Colour	colourless

Potential health effects

Routes of exposure
Skin, eyes, inhalation, ingestion.

Immediate effects

Inhalation	Symptoms of exposure may include: Nasal discharge, hoarseness, coughing, chest pain and breathing difficulty Central nervous system depression with nausea, dizziness, headache, stupor, uncoordinated or strange behavior or unconsciousness.
Skin	Causes skin irritation. Symptoms of exposure may include: Redness or discoloration, swelling, itching, burning or blistering of skin.

Eyes	Exposure to vapors and liquid may cause eye irritation Symptoms of exposure may include: Eye irritation, burning sensation, pain, watering, and/or change of vision. Eye injury which may persist for several days.
Ingestion	Symptoms of exposure may include: Nausea, vomiting, loss of appetite, gastrointestinal irritation and/or diarrhea. Central nervous system depression with nausea, dizziness, headache, stupor, uncoordinated or strange behavior, or unconsciousness.

Target organ effects
Irritation of the respiratory tract
Local irritation at the site of exposure

Medical conditions which may be aggravated by exposure:
Medical conditions which may be aggravated by exposure: Skin
Eyes
Respiratory Tract

3. Composition/information on ingredients

Components	CAS-No	Percent %
4-Methylpentan-2-ol	108-11-2	99

4. First aid measures

General Information
Remove contaminated, soaked clothing immediately and dispose of safely.

Inhalation
Keep at rest. Aerate with fresh air. If symptoms persist, call a physician.

Skin
Wash off immediately with plenty of water. If symptoms persist, call a physician.

Eyes
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion
Call a physician immediately. Do not induce vomiting without medical advice.

5. Fire-fighting measures

5. Fire-fighting measures

NFPA: **Health:** 2 **Flammability:** 2 **Instability:** 0

Suitable extinguishing media
foam, Dry chemical, carbon dioxide (CO2)

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Under conditions giving incomplete combustion, hazardous gases produced may consist of
carbon monoxide
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons

Special protective equipment for fire-fighters
self-contained breathing apparatus (EN 133).

Environmental precautions
Water runoff can cause environmental damage Dike and collect water used to fight fire

Other Information
Cool containers / tanks with water spray

6. Accidental release measures

Personal precautions
Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. Provide adequate ventilation.

Environmental precautions
Prevent further leakage or spillage. Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning Up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of in accordance with local regulations.

7. Handling and storage

Handling

Advice on safe handling
Provide sufficient air exchange and/or exhaust in work rooms.

Protection - fire and explosion:
Keep away from sources of ignition - No smoking Take necessary action to avoid static electricity discharge In case of fire, emergency cooling with water spray should be available

Storage

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place Handle and open container with care

8. Exposure controls / personal protection

OSHA Exposure Limits

Components	TWA
4-Methylpentan-2-ol	25 PPM

Components	TWA
4-Methylpentan-2-ol	25 PPM

Components	STEL
4-Methylpentan-2-ol	40 PPM

Components	2005 NIOSH IDLH
4-Methylpentan-2-ol	2000 PPM

Mexico National Exposure Limits

Components	LMPE - PPT
4-Methylpentan-2-ol	25 ppm (100 mg/m^3)

Components	STEL	
4-Methylpentan-2-ol	40 ppm (165 mg/m^3)	Skin Designation

Exposure controls

Engineering measures
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Protective Equipment
A safety shower and eyebath should be readily available.

General advice
Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Use only in an area equipped with a safety shower. Hold eye wash fountain available.

Respiratory protection
Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH. The following is the minimum recommended equipment for an occupational exposure level. To estimate an occupational exposure level see Section 8 and Section 11.

For concentrations > 1 and < 10 times the occupational exposure level: Use air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s). The air purifying element must have an end of service life indicator, or a documented change out schedule must be established. Otherwise, use supplied air.

For concentrations more than 10 times the occupational exposure level and less than the lower of either 100 times the occupational exposure level or the IDLH: Use Type C full facepiece supplied-air respirator operated in positive-pressure or continuous-flow mode.

For concentrations > 100 times the occupational exposure level or greater than the IDLH level or unknown concentrations (such as in emergencies): Use self-contained breathing apparatus with full facepiece in positive-pressure mode or Type C positive-pressure full facepiece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus escape system.

Skin protection:
Wear impervious clothing and gloves when there is a reasonable chance for skin contact.

Eye/face protection:
In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face..

9. Physical and chemical properties

Appearance	
Form	liquid
Colour	colourless
Odor	mild
Molecular Weight	102.18
Flash point	42°C(107.6°F)
Method	SETA
Ignition temperature	335°C (635°F)
Method	DIN 51794
Lower explosion limit	1 Vol. %
Upper explosion limit	5.5 Vol. %
Melting point/range	-90°C (-130°F)
Boiling point/range	130 - 132 °C @ 1013 hPa (266 - 269.6°F)
Density	0.81 g/ml @ 20°C
vapor pressure	3.7 hPa @ 20°C
	34 hPa @ 50°C
vapor density	3.52 (Air=1)
Evaporation Rate	0.26 (n-Butyl acetate = 1)
Water solubility	16 g/l @ 20°C

Partition coefficient (n-octanol/water) 1.43 (measured)

10. Stability and reactivity

Stability
Stable under normal conditions of handling, use and transportation.

Conditions to avoid
Avoid any source of ignition. Avoid contact with heat, sparks, open flame, and static discharge.

Hazardous Combustion or Decomposition Products:
Thermal decomposition products may include oxides of carbon.

11. Toxicological information

4-Methylpentan-2-ol

Oral	LD50: 2260-2970 mg/kg, rat
Dermal	LD50: 2870 mg/kg, rabbit
Inhalation	LC50: > 16 mg/l, rat, 4h
Skin irritation	irritating.
Species	rabbit
Method	OECD 404
Skin Sensitization	negative
Species	guinea pig
Method	Maximization OECD 406
Eye Irritation	irritant
Species	rabbit eye
Method	OECD 405
in vitro Mutagenicity	Ames test - negative with and without metabolic activation Rat hepatocyte chromosome aberration - negative

12. Ecological information

4-Methylpentan-2-ol

Toxicity to fish	LC50: > 92.4 mg/l (96h)
Species	Pimephales promelas (Fathead minnow)
Method	OECD 203
Toxicity to daphnia	EC50: 337 mg/l (48h)
Species	Daphnia magna
Method	OECD 202
Toxicity to algae	EC50: 139 mg/l (72h)
Species	Pseudokirchneriella subcapitata

4-Methylpentan-2-ol

Method	OECD 201
Toxicity to bacteria	EC50: > 100 mg/l (3h)
Species	in activated sludge
Method	OECD 209
Biodegradation	85 % (28d)
Method	OECD 301 F

13. Disposal considerations

Disposal Considerations:
Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. Landfill in accordance with federal, state and local regulations

14. Transport information

US Department of Transportation

UN/NA Number:	UN 2053
Proper Shipping Name	Methyl isobutyl carbinol
Hazard class	3
Packing Group	III
Emergency Resp. Guide	129

TDG

UN/NA Number:	UN 2053
Proper Shipping Name	METHYL ISOBUTYL CARBINOL
Class:	3
Packing Group:	III

Mexico Transport Information

UN-No.	UN 2053
Proper Shipping Name	Methyl isobutyl carbinol
Hazard Class	3
Packing Group	III

ICAO/IATA

UN-No.	UN 2053
Proper Shipping Name	Methyl isobutyl carbinol
Hazard Class	3

Packing group III

IMDG

UN/ID No.	UN 2053
Proper Shipping Name	Methyl isobutyl carbinol
Hazard Class	3
Packing group	III

15. Regulatory information

U.S. STATE REGULATIONS

Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):

4-Methylpentan-2-ol 108-11-2

Pennsylvania	Listed
New Jersey	Listed
Illinois	Listed
Massachusetts	Listed

U.S. FEDERAL REGULATIONS

TSCA Inventory:

We certify that all components are either on the TSCA inventory or qualify for an exemption.

Environmental Regulations:

SARA 311:

Acute health:	Yes
Chronic health:	No
Fire:	Yes
Sudden release of pressure:	No
Reactive:	No

INTERNATIONAL REGULATIONS

International Chemical Inventory

Listed on the chemical inventories of the following countries or qualifies for an exemption:
AUSTRALIA,CHINA,CANADA,EUROPE,KOREA,PHILIPPINES, JAPAN

16. Other information

16. Other information

Prepared By
Product Stewardship Department
Celanese

NFPA:	Health: 2	Flammability: 2	Instability: 0
HMIS:	Health: 2	Flammability: 2	Physical hazard: 0

For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com)

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable. The absence of data elements required by ANSI or 1907/2006 indicates, that no data meeting these requirements is available.

Other Information:
Observe national and local legal requirements

Changes against the previous version are marked by ***

This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality.

Safety data sheet

BASF Safety data sheet according to 91/155/EEC
Date / Revised: 26.09.2005 Version: 2.0
Product: **Plurafac* LF 120**

(30044042/SDS_GEN_GB/EN)
Date of print 28.03.2008

1. Substance/preparation and company identification

Plurafac* LF 120

Use: Raw material for the chemical-technical industry

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Contact address:
BASF PLC
PO Box 4, Earl Road
Cheadle Hulme, Cheshire
GREAT BRITAIN
SK8 6QG
Telephone: +44 161 485-6222
Telefax number: +44 161 4274
E-mail address: product-safety-north@basf.com

Emergency information:
Telephone: +49 180 2273-112
Telefax number: +49 621 60-92664

2. Composition/information on ingredients

Chemical nature

fatty alcohol alkoxylate, Polymer, Starting materials listed in EINECS

3. Hazard identification

Irritating to skin.

4. First-aid measures

General advice:
Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:
Rinse mouth immediately and then drink plenty of water, seek medical attention.

Note to physician:
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-fighting measures

Suitable extinguishing media:
water, dry extinguishing media, foam, carbon dioxide

Specific hazards:
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions:
Use personal protective clothing.

Environmental precautions:
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:
For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and storage

Handling

Protect against moisture. Shut containers immediately after taking product because product takes up the humidity of air.

Protection against fire and explosion:
Take precautionary measures against static discharges.

Storage

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

8. Exposure controls and personal protection

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release.

Hand protection:
Chemical resistant protective gloves (EN 374)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):
nitrile rubber (NBR) - 0.4 mm coating thickness
Supplementary note: The specifications are based on own tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to DIN-EN 465).

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and chemical properties

Form:	liquid	
Colour:	colourless to yellowish	
Odour:	product specific	
pH value:	approx. 7 (50 g/l, 23 °C)	(DIN/EN 1262)
solidification temperature:	approx. 5 °C	(DIN/ISO 2207)
Flash point:	> 100 °C	(DIN 51758)
Ignition temperature:	> 200 °C	(DIN 51794)
Density:	approx. 0.99 g/cm3 (23 °C)	(DIN 51757)
Solubility in water:	soluble	
Solubility (qualitative) solvent(s):	polar solvents soluble	
Viscosity, dynamic:	approx. 45 mPa.s (23 °C)	

10. Stability and reactivity

Conditions to avoid:
Avoid humidity.

Hazardous reactions:
No hazardous reactions when stored and handled according to instructions.

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological information

LD50/oral/rat: > 2,000 mg/kg

by inhalation/rat: / 8 h(IRT)
No mortality within the stated exposition time as shown in animal studies.

Primary skin irritation/rabbit: Irritant. (BASF-Test)

Primary irritations of the mucous membrane/rabbit: non-irritant (BASF-Test)

12. Ecological information

Ecotoxicity

Toxicity to fish:
Leuciscus idus/LC50 (96 h): 1 - 10 mg/l

Microorganisms/Effect on activated sludge:
DEV-L2
activated sludge/EC10: > 1,000 mg/l

Persistence and degradability

Elimination information

Test method:	mod. OECD 301E
Method of analysis:	Bismuth-active substance
Degree of elimination:	> 90 %

Test method:	OECD 301B; ISO 9439; 92/69/EEC, C.4-C
Method of analysis:	CO2 formation relative to the theoretical value
Degree of elimination:	> 60 % (28 d)
Evaluation:	Readily biodegradable.

Other adverse effects

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Additional information

Other ecotoxicological advice:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

13. Disposal considerations

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport information

Not classified as hazardous under transport regulations (ADR RID ADNR IMDG/GGVSee ICAO/IATA)

15. Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

Hazard symbol(s)
Xi Irritant.

R-phrase(s)
R38 Irritating to skin.

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request or at the request of a detergent manufacturer.

Other regulations

This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).
The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

16. Other information

Vertical lines in the left hand margin indicate an amendment from the previous version.

If you have any queries relating to this MSDS, it's contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

FICHE SIGNALÉTIQUE

Date d'émission: 17/10, 2006

NOM/IDENTIFICATION **WW – 82 4252**

Section I

NOM DU FABRICANT
ADM/Ogilvie

NO. DE TÉLÉPHONE EN CAS D'URGENCE
450-659-1911

ADRESSE
995 rue Mill
Montréal (Québec) Canada
H3C 1Y5

NO. DE TÉLÉPHONE POUR INFORMATION
514-846-8516

Section II - Ingrédients dangereux / Identification

Ingrédients dangereux (Dénomination chimique/nom usuel **OSHA PEL ACGIH TLV**

AMIDON DE BLÉ, HYDRATE DE CARBONE, AMIDON *No. CAS:* ***9004-53-9***

Produit non-contrôlé

Section III - Caractéristiques physiques du produit

APPARENCE ET ODEUR
Poudre crème sans odeur

DENSITÉ (EAU-1)
1.5

SOLUBILITÉ DANS L'EAU
85.0 $\pm$ 10.0%

pH (1:10)
4.0 $\pm$ 1.0

% VOLUME VOLATILE
Aucun

Section IV - Risques d'incendie et d'explosion

POINT D'ÉCLAIR
430^{0}C

LIMITES D'INFLAMMABILITÉ
0.04g/l

MOYENS D'EXTINCTION
Eau, gaz carbonique, produits chimiques secs

MESURES SPÉCIALES À SUIVRE EN CAS D'INCENDIE
Aucune

RISQUES PARTICULIERS D'INCENDIE OU D'EXPLOSION
Possibilité d'explosion sous conditions poussiéreuses

Section V - Données sur la réactivité

STABILITÉ CHIMIQUE
Stable

CONDITIONS À ÉVITER
Aucune connue

INCOMPATIBILITÉ AVEC AUTRES SUBSTANCES
Aucune

PRODUITS DE DÉCOMPOSITION OU SOUS-PRODUITS DANGEREUX
Aucun

POLYMÉRISATION DANGEREUSE	*RISQUE*	*AUCUN RISQUE*	*CONDITIONS À ÉVITER*
		X	Aucune connue

Section VI - Propriétés toxicologiques du produit

VOIES D'EXPOSITION	*INGESTION*	*INHALALATION*	*CONTACT AVEC LA PEAU*
	X	X	X

DANGERS POUR LA SANTÉ (AIGUS ET CHRONIQUES)

CANCÉROGÉNICITÉ	*NTP*	*MONOGRAPHE IARC*	*CONTRÔLÉ PAR OSHA*
Non	Non	Non	Non

SIGNES ET SYMPTÔMES D'EXPOSITION AU PRODUIT
CONDITION MÉDICALE AGGRAVÉE PAR L'EXPOSITION AU PRODUIT
PREMIERS SOINS

Section VII - Mesures préventives et sécuritaires

MESURES EN CAS DE FUITE OU DE DÉVERSEMENT
Eviter les étincelles, flammes, électricité statique, cigarettes etc.. en présence de poussière

ELIMINATION DES RÉSIDUS
Se conformer aux règlements municipaux, provinciaux et fédéraux

EXIGENCES EN MATIÈRE D'ENTREPOSAGE
Entreposer dans un endroit frais et sec

AUTRES PRÉCAUTIONS
Eviter les conditions qui causent de la poussière

Section VIII - Equipement de protection

PROTECTION RESPIRATOIRE
N'est pas requise

VENTILATION	*VENTILATION LOCALE*	*MÉCANIQUE*	*SPÉCIALE*
	X		

GANTS DE PROTECTION
Pas nécessaire

PROTECTION OCULAIRE
Pas nécessaire

AUTRES ÉQUIPEMENTS OU VÊTEMENTS DE PROTECTION
Aucun requis

Section IX - Préparation

PRÉPARÉ PAR: ADM/Ogilvie
NO. DE TÉLÉPHONE: (450) 659-1911 - (514) 846-8516
DATE DE RÉVISION: Le 13 janvier 2006

GRAYMONT

MATERIAL SAFETY DATA SHEET

SECTION I - CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: **HIGH CALCIUM QUICKLIME**	**WHMIS – CLASSIFICATION: D2A / D2B: MATERIALS CAUSING OTHER TOXIC EFFECTS E: CORROSIVE MATERIAL**

MANUFACTURER'S AND SUPPLIER'S NAME:

GRAYMONT (NB) INC	4634, Route 880, Havelock, New Brunswick, E4Z 5K8.
GRAYMONT (QC) INC.	25, rue De Lauzon, Boucherville (Québec), J4B 1E7.
GRAYMONT (PA) INC.	965, East College avenue, Pleasant Gap, PA 16823
GRAYMONT (WESTERN CANADA) INC.	190 – 3025, 12 Street N.E., Calgary, Alberta, T2E 7J2
GRAYMONT (WESTERN US) INC.	3950 South, 700 East, Suite 301, Salt Lake City, Utah 84107

EMERGENCY TEL. No.: (613) 996 – 6666 CANUTEC (Canada) (800) 424 – 9300 CHEMTREC (US)

Chemical Name	Chemical Family	Chemical Formula
Calcium oxide	**Alkaline earth oxide**	**Complex mixture - mostly CaO**
Molecular Weight	Trade Name and Synonyms	Material Use
CaO = 56.08	**High Calcium Quicklime, Lime, Quicklime, Calcium Oxide, Burnt Lime, Fluxing Lime.**	**Neutralization, Flocculation, Flux (met.), Caustic agent, absorption**

SECTION II - COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients	Approximate Concentration	C.A.S. Number	Exposure limits (mg/m^3)					
			OSHA PEL	ACGIH TLV	RSST VEMP	MSHA PEL (Note2)	NIOSH REL	NIOSH IDLH
(Complex Mixture)	(% by weight)		(TWA) 8/40h	(TWA) 8/40h	(TWA) 8/40h	(TWA) 8/40h	(TWA) 10/40h	
Calcium Oxide	**90 to 100**	**1305-78-8**	**5**	**2**	**2**	**5**	**2**	**25**
Crystalline Silica, Quartz	**0.1 to 1**	**14808-60-7**	**10/(%SiO_2)+2 respirable silica dust**	**0.025 respirable silica dust**	**0.1 respirable silica dust**	**10/(%SiO_2)+2 respirable silica dust**	**0.05 respirable free silica**	**50**
Crystalline Silica, Quartz	**0 to 0.1 (Note 1)**	**14808-60-7**	**10/(%SiO2)+2 respirable silica dust**	**0.025 respirable silica dust**	**0.1 respirable silica dust**	**10/(%SiO2)+2 respirable silica dust**	**0.05 respirable free silica**	**50**

(**Note 1**) : Concentration of crystalline silica in a series of lime products will vary from source to source. It was not detected on some samples (< 0.1% w/w). Therefore two ranges are being disclosed. **(Note 2)** : ACGIH TLV Version 1973 has been adopted by the Mine Safety Health Administration (MSHA) as the regulatory Exposure Standard.

SECTION III - PHYSICAL AND CHEMICAL DATA

Physical State	Odor and Appearance		Odor Threshold (p.p.m.)	Specific Gravity
Gas ☐ Liquid ☐ Solid ☑	**Slight earthy odor - White crystalline substance**		**Not applicable**	**3.2 - 3.4**
Vapor Pressure (mm)	Vapor Density (Air = 1)	Evaporation Rate	Boiling Point (°C)	Melting Point (°C)
Not applicable	**Not applicable**	**Not applicable**	**2850**	**2580**
Solubility in Water (20°C)	Volatiles (% by volume)	pH (25 °C)	Bulk Density (kg/m^3)	Coefficient of water/oil distribution
0.125g/100g Sat.soln	**Not applicable**	**Sat. soln CaO 12.45**	**720 - 1130**	**Not applicable**

SECTION IV - FIRE OR EXPLOSION HAZARD DATA

Flammability

Yes ☐ No ☑ If yes, under which conditions?

Extinguishing Media

Quicklime does not burn. Use extinguisher appropriate for material burning.

Special Fire Fighting Procedures

Avoid using water unless necessary for other materials, in which case, flood to absorb heat generated. (Contact with water will evolve heat and could cause ignition of paper, cardboard, etc.). Wear self-contained breathing equipment approved by NIOSH.

Flash point (° C) and Method	Upper flammable limit (% by volume)	Lower flammable limit (% by volume)
Not applicable	**Not applicable**	**Not applicable**
Auto Ignition Temperature (°C)	TDG Flammability Classification	Hazardous Combustion Products
Not applicable	**Non-flammable**	**None**

Dangerous Combustion Products **None**

EXPLOSION DATA

Sensitivity to Chemical Impact	Rate of Burning	Explosive Power	Sensitivity to Static Discharge
Not applicable	**Not applicable**	**Not applicable**	**Not applicable**

SECTION V - REACTIVITY DATA

Chemical Stability Yes ☐ No ☑	If no, under which conditions?	**Absorbs moisture and carbon dioxide in the air to form calcium hydroxide and calcium carbonate.**
Incompatibility to other substances Yes ☑ No ☐	If so, which ones?	**Boron tri-fluoride, chlorine tri-fluoride, ethanol, fluorine, hydrogen fluoride, phosphorus pentoxide; water and acids (violent reaction with generating heat and possible explosion in confined area).**
Reactivity Yes ☑ No ☐	If so, under which conditions?	**Reacts violently with strong acids. Reacts with water to form calcium hydroxide. The heat generated when mixed with water or moist air is sufficient enough to ignite surrounding materials such as paper, wood or cloth.**
Hazardous Decomposition Products		**None.**
Hazardous Polymerization Products		**Will not occur.**

SECTION VI - TOXICOLOGICAL PROPERTIES

Route of Entry

☑ Skin Contact ☐ Skin Absorption ☑ Eye Contact ☑ Acute Inhalation ☐ Chronic Inhalation ☑ Ingestion

Effects of Acute Exposure to Product

Skin	**Severe irritation or burning of mucous and skin. Dehydration of tissues.**
Eyes	**Severe eye irritation and burning, intense watering of the eyes, possible lesions, possible blindness when exposed for prolonged period. (Draize >80).**
Inhalation	**If inhaled in form of dust: nose and throat irritation, cough, sneezing, inflammation of breathing passages, ulceration and perforation of nasal septum, bronchitis, possible pneumonia.**
Ingestion	**If ingested, burning and edema of digestive tracts, abundant salivation, difficulties in swallowing and breathing, vomiting blood, drop in blood pressure (indicates perforation of esophagus or stomach).**

Effects of Chronic Exposure to Product:

Contact dermatitis. Following repeated or prolonged contact, this product can cause redness, desquamation and fissures. This product may contain trace amounts of crystalline silica. Excessive inhalation of respirable crystalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis and pulmonary fibrosis.

LD_{50} of Product (Specify Species and Route) **Unavailable**	Irritancy of Product **Severe to moist tissues**	Exposure limits of Product **Unavailable**
LC_{50} of Product (Specify Species) **Unavailable**	Sensitization to Product **None**	Synergistic materials **None reported**

SECTION VI - TOXICOLOGICAL PROPERTIES (Cont'd)

☑ Carcinogenicity ☐ Reproductive effects ☐ Tératogenicity ☐ Mutagenicity

Quicklime is not listed as a carcinogen by ACGIH, MSHA, OSHA, NTP or IARC. It may, however, contain trace amounts of Crystalline Silica listed carcinogens by these organizations.

Crystalline Silica, which inhaled in the form of quartz or crystobalite from occupational sources, is classified by IARC as (Group 1) carcinogenic to humans.

Silica, crystalline (Airborne particles of respirable size) is regulated under California's Safe Drinking Water and Toxic Enforcement Act of 1986. (Proposition 65).

NIOSH considers crystalline silica to be potential occupational carcinogen as defined by the OSHA carcinogen policy [29 CFR 1990].

NTP lists respirable Crystalline Silica as known to be human carcinogens based on sufficient evidence of carcinogenicity in humans.

ACGIH lists respirable Crystalline Silica (quartz) as suspected human carcinogen (A-2).

RSST lists respirable Crystalline Silica (quartz) as suspected human carcinogen.

SECTION VII - PREVENTIVE MEASURES

Personal Protective Equipment (PPE)	**Wear clean, dry gloves, full length pants over boots, long sleeved shirt buttoned at the neck, head protection and approved eye protection selected for the working conditions.**

Gloves (Specify)	Respiratory (Specify)	Eyes (Specify)	Footwear (Specify)
Gauntlets Cuff style	**NIOSH approved (N/R/P95) dust respirator**	**ANSI, CSA or ASTM approved safety glasses with side shields. Tight fitting dust goggles should be worn when excessive (visible) dust conditions are present. Do not wear contact lenses without tight fitting goggles when handling this chemical.**	**Resistant to caustics**

Clothing (Specify)	Other (Specify)
Fully covering skin	**Evaluate degree of exposure and use PPE if necessary. After handling lime, employees must shower. If exposed daily, use oil, Vaseline, silicone base creme etc. to protect exposed skin, particularly neck, face and wrists.**

Engineering Controls (e.g. ventilation, enclosed process, specify)

Enclose dust sources; use exhaust ventilation (dust collector) at handling points, keep levels below Max. Concentration Permitted.

SECTION VII - PREVENTIVE MEASURES (Cont'd)

Leak and Spill Procedure

Limit access to trained personnel. Use industrial vacuums for large spills. Ventilate area.

Waste Disposal

Transport to disposal area or bury. Review Federal, Provincial and local Environmental regulations.

Handling Procedures and Equipment

Avoid skin and eye contact. Minimize dust generation. Wear protective goggles and in cases of insufficient ventilation, use anti-dust mask. An eye wash station and safety shower should be readily available where this material or its water dispersions are used. Contact lenses should not be worn when working with this chemical.

Storage Requirements

Keep tightly closed containers in a cool, dry and well ventilated area, away from acids. Keep out of reach of children.

Special Shipment Information

Quicklime is neither regulated by the Transportation of Dangerous Goods (TDG) Regulations (Canada) nor by the Hazardous Materials Regulations (USA) unless this material is offered or intended for transportation by aircraft.

SECTION VIII - FIRST AID MEASURES

Skin

Carefully and gently brush the contaminated body surfaces in order to remove all traces of lime. Use a brush, cloth or gloves. Remove all lime-contaminated clothing. Rinse contaminated area with lukewarm water for 15 to 20 minutes. Consult a physician if exposed area is large or if irritation persists.

Eyes

Immediately rinse contaminated eye(s) with gently running lukewarm water (saline solution is preferred) for 15 to 20 minutes. In the case of an embedded particle in the eye, or chemical burn, as assessed by first aid trained personnel, contact a physician.

Inhalation

Move source of dust or move victim to fresh air. Obtain medical attention immediately. If victim does not breathe, give artificial respiration.

Ingestion

If victim is conscious, give 300 ml (10 oz) of water, followed by diluted vinegar (1 part vinegar, 2 parts water) or fruit juice to neutralize the alkali. Do not induce vomiting. Contact a physician immediately.

General Advise

Consult a physician for all exposures except minor instances of inhalation.

SECTION IX - REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 (**SARA Title III**). / The Emergency Planning and "Community Right-to-Know" Act (**EPCRA**). / Comprehensive Environmental Response, Compensation and Liability Act (**CERCLA**). / Resource Conservation and Recovery Act (**RCRA**).

Component Calcium Oxide has been reviewed against the following regulatory listings:

- **SARA Section 302 – Emergency Planning Notification. Extremely Hazardous Substances (EHS) List and Threshold Planning Quantity (TPQ). (40 CFR, Part 355, Section 30): Not listed.**
- **SARA Section 304 – Emergency Release Notification. Extremely Hazardous Substances (EHS) and Reportable Quantity (RQ) List. (40 CFR, Part 355, Section 40): Not listed.**
- **SARA Section 311/312 – Hazard Categories (40 CFR, Part 370): This product is regulated under CFR 1910.1200 (OSHA Hazard Communication) as Immediate (Acute) Health Hazards – Irritant.**
- **SARA Section 313 – Toxics Release Inventory (TRI). Toxic Chemical List (40 CFR, Part 372). Not listed.**
- **CERCLA – Hazardous Substance (40 CFR, Part 302): Not listed in Table 302.4.**
- **RCRA – Hazardous Waste Number (40 CFR, Part 261, Subpart D): Not listed.**
- **RCRA – Hazardous Waste Classification (40 CFR, Part 261, Subpart C): Not classified.**

CWA 311. - Clean Water Act List of Hazardous Substances.

Calcium Oxide has been withdrawn from the Clean Water Act (CWA) list of hazardous substances. (11/13/79) (44FR65400)

California Proposition 65.

Component Calcium Oxide does not appear on the above regulatory listing. This product may contain small amounts of crystalline silica. Silica, crystalline (Airborne particles of respirable size) is regulated under California's Safe Drinking Water and Toxic Enforcement Act of 1986. (Proposition 65)

Transportation - Hazardous Materials Regulations (USA) & Transportation of Dangerous Goods (TDG) Regulations (Can).

Calcium Oxide is listed in both table 172.101 of Title 49 CFR 172 and in schedule 18 D.G. List (Chapter 34 TDG ACT, SOR/DORS 93-525). Application of requirements is restricted to material offered or intended for transportation by aircraft. - Calcium oxide. By aircraft only. Class 8 - Corrosives. PIN UN1910. Packing group III. Maximum net quantity per package - passenger vehicles, 25kg.

Toxic Substances Control Act (TSCA).

All naturally occurring components of this product are automatically included in the USEPA TSCA Inventory List per 40 CFR 710.4 (b). All other components are one the USEPA TSCA Inventory List. Calcium Oxide is exempt from reporting under the inventory update rule.

Canadian Environmental Protection Act 1999 (CEPA) – Substances Lists (DSL/NDSL).

Calcium Oxide appears on the Domestic Substances List (DSL).

ANSI/NSF 60 - Drinking Water Treatment Additives.

Quicklime has been investigated with respect to elements identified by EPA as toxic and it has been classified for use in direct contact with drinking water. (In accordance with Standard ANSI/NSF 60). For a list of classified products, refer to Underwriters Laboratories Inc.'s Online Certifications Directory.

FDA - U.S. Food and Drug Administration, Department of Health and Human Services.

Calcium Oxide has been determined as "Generally Recognized As Safe" (GRAS) by FDA. See 21CFR184.1210. (CFR Title 21 Part 184 - - Direct food substances affirmed as generally recognized as safe).

SECTION X - OTHER INFORMATION

Hazardous Materials Identification System (U.S.)

National Fire Protection Association (U.S.)

WHMIS – Classification:	WHMIS – Classification:
"E" Corrosive Material.	**"D2A and D2B": Materials causing other toxic effects.**
Symbol: 	Symbol: 

Additional Information/Comments:

The technical data contained herein is given as information only and is believed to be reliable. GRAYMONT makes no guarantee of results and assumes no obligation or liability in connection therewith.

Sources Used:

NFPA, NLA, TDG, CSST, RSST, (LSRO-FASEB), Hazardous Products Act, Environment Canada, Enviroguide, OSHA, ACGIH, IARC, NIOSH, CFR, NTP, HSDB, EPA SRS, Chemistry and Technology of Lime and Limestone (John Wiley and Sons, Inc.), Lime and Limestone (WILEY-VCH).

SECTION XI - PREPARATION INFORMATION

Prepared by:	Telephone number:	Date :
GRAYMONT (QC) INC. **Technical Services**	**(450) 449-2262**	**September 2006**

An electronic version of this MSDS is available at: www.graymont.com under the PRODUCTS section.

RST
DUST · EARTH · WATER
SOLUTIONS

www.rsth2o.com.au

PRODUCT INFORMATION SHEET

TOTAL GROUND CONTROL

LONG TERM SOIL BINDER AND CRUSTING AGENT

BENEFITS

- Long lasting
- Saves water
- Areas easily identified by adding marking dye
- Strength can be increased by increasing the dosage
- Will not damage vegetation
- Non hazardous
- Can be re-applied as required

UNBOUND MATERIAL

Most soil, sand and mineral particles have very low cohesion properties. When the moisture levels drop in the material the particles become loose and are easily blown or washed away creating dust and erosion.

SOLUTION

TGC – is a unique blend of water dispersive co-polymers developed by RST for:

- Erosion Control
- Dust Control
- Improved Water Runoff
- Sand/Soil Binding
- Stockpile Stabilisation

HOW IT WORKS

When applied to the ground surface, TGC crusts and binds the fine particles together creating a matrix that will suppress the movement of fines by both water and wind action.

Levels of control are simply adjusted by increasing dosage levels. By increasing the percentage of TGC diluted into water the thickness of membrane and longevity of the application are increased to allow for different results required for specific applications.

Once the product is diluted, watered in place and dries it is unable to wash away.

PERFORMANCE

TGC offers the following performance criteria.

It is semi-permeable allowing moisture to pass through it although applications at increased dosage rates allow for permeability rates to be greatly reduced.

It is UV and Biologically stable. We expect 8 – 18 months membrane life depending on the application's conditions.

It does not harm plants or seeds. TGC has been developed to enhance the growth of plants and seed by applying a thin protective film of polymer over the plant or seed.

APPLICATION

TGC is diluted with water at a base dilution rate of 2% and sprayed directly over the treatment zone at 2 litres of solution per m^2.

TGC can also be ripped into the ground and compacted resulting in a stabilised material that resists unravelling and increases water runoff.

Both these applications will reduce dust levels and improve catchment runoff for increased water utilisation.

ENVIRONMENT

Reynolds products are made in Australia under the strict guidelines and standards governing environmental regulations.

Sand Stabilisation - Port of Brisbane

WATER SAVING TECHNOLOGIES

For more information contact **RST** Tel: (07) 5522 0244 | Fax: (07) 5522 0799 | Email: **rst@rsth2o.com.au** | Web: www.rsth2o.com.au

APPENDIX 8

Closure and Reclamation Plan

A Rehabilitation and Closure Plan will be prepared as required by Newfoundland and Labrador Regulation 42/00 adopted under the authority of section 18 of the *Mining Act*.

Given that Phase 2 of the ELAIOM is expected to use most of the infrastructure put in place for Phase 1, Table A8.1 illustrates how the requirements of the *Guidelines to the Mining Act Part I Format Requirements* will be addressed.

Table A8.1: Rehabilitation and Closure Plan Implementation

Guidelines Requirement	Implementation
Rehabilitate all tailings impoundment areas.	Timmins 2 pit will continue to receive tailings during Phase 2. Once it is full (see Section 4.10.4.19), the slope between the lip and surface of the water will, where feasible, be graded such that caribou will not injure or kill themselves in falls. Thereafter, tailings will be pumped to other abandoned pits that have been demonstrated not to contain fish or fish habitat.
Rehabilitate all waste rock areas and ore stockpile areas.	All waste rock piles will be rehabilitated when mining ceases at the pit that supplies them. The ore stockpiles near Timmins 1 will remain in operation through Phase 2.
Unless authorized, remove surface and buried pipelines.	There will be no buried pipelines. Pipelines between Timmins 2 and 3N and processing complex will remain in operation. All other pipelines will be removed.
Remove all power transmission lines and associated electrical infrastructure.	All transmission lines and associated electrical infrastructure will remain in operation. Any generators, cables or other electrical equipment at Timmins 3N, 4 and 7 and at Fleming 7N will be removed.
Unless authorized, remove all buildings and structures, including foundations.	Any buildings/structures/foundations at Timmins 3N, 4 and 7 and at Fleming 7N will be removed. All other buildings/structures will remain in operation.
Backfill or cap with concrete all shafts, raises, portals or stopes open to surface.	n/a
Rehabilitate all open pits or quarries.	It is expected that abandoned pits will largely fill with groundwater. Other rehabilitation required for ecological or public-safety reasons will be carried out, including grading, where feasible, the slope between the lip and the surface of the water so that caribou will not injure or kill themselves in falls.
Assess all surface and underground workings to determine long-term stability.	Will be done.
Stockpile all overburden, till and topsoil for	Will be done.

Guidelines Requirement	Implementation
progressive or final rehabilitation.	
Reclaim all roadways, airstrips and other civil engineering works.	Roads relating to Timmins 3N, 4 and 7 and to Fleming 7N pits will be reclaimed.
Unless approved, remove all machinery, equipment and storage tanks.	Will be done at Timmins 3N, 4 and 7 and at Fleming 7N.
Rehabilitate all landfill sites and other waste management areas.	Landfill site near Timmins 1 will remain in operation.
Complete any other work necessary.	Will be done.

Progressive rehabilitation will be practised in accordance with a schedule and budget that will be developed. It will respect the principles and practices set out in the above-cited *Guidelines*:

- revegetation of disturbed areas during operations;
- removal or disposal of structures and materials as they become obsolete;
- application of methods to reduce or eliminate soil erosion and to facilitate revegetation and reclamation;
- disposal of waste rock in open-pits, or covering with till or topsoil and revegetation.

APPENDIX 9

Methodologies – Description of the Biophysical Environment

A **WATER QUALITY AND WATER BALANCE**

B **BEDROCK AND SURFICIAL GEOLOGY**

C **SOIL AND SEDIMENT QUALITY**

D **TERRESTRIAL ECOSYSTEMS**

E **FAUNA**

The present appendix describes the methodologies that were employed to collect the data that are presented in Section 5.1.

A WATER QUALITY AND WATER BALANCE

1 Ambient Surface Water Quality

The surface water sampling and *in situ* physical analysis of water quality in DSO2 and DSO3 took place during the stream surveys conducted on July 17-19, 2008, by AMEC and Groupe Hémisphères. The collection of water samples, including physical analysis, was also carried out by AMEC concurrently with the fish habitat surveys conducted on September 10-12, 2008. Each stream site was accessed by vehicle and/or on foot and surveyed using standard stream measurement techniques as described in Sooley *et al.* (1998) and Scruton *et al.* (1992) as well as AMEC's Standard Operating Procedures.

Depth profiles of water quality parameters were recorded *in situ* at each sampling location. A Hydrolab Mini-Sonde probe was used to gather a profile of water temperature, pH, conductivity and dissolved oxygen at one-meter intervals (or at half-meter intervals if the pond was shallow) between the surface and the bottom. Water quality parameters included also turbidity, measured with a La Motte Model 2020e turbidity meter.

Water clarity, measured at the deepest location of the ponds and lakes, was determined using a Secchi disc during the July site visit. The disc was lowered into the water column on the shaded side of the boat using a calibrated line. The depth when the disc disappeared from sight as it descended was recorded, as well as the depth at which it reappeared as it ascended. The average of the two was calculated and recorded as the littoral depth (depth of water which is penetrated by light).

All samples were analyzed by a CAEAL-certified laboratory. Samples were analyzed for general chemistry and metals, plus hydrides, in compliance with the MMER. Standard field duplicates of 10% of all samples were collected and sent to the laboratory for QC/QA. Laboratory results were analyzed to determine whether they exceeded the standards of the Canadian Council of Ministers for the CWQG. The laboratory results also identify all in-laboratory QC/QA measures (blanks and calibrations) as part of standard reporting. The detailed methodology for ambient surface water quality and the detailed results are available in Appendix A.

2 Hydrogeology – Calculation of Aquifer Recharge

As a general rule, an aquifer that is being pumped recharges in three ways:

- by infiltration through the beds of watercourses and lakes (Q1), which is negligible in the case of Timmins 1 and 2;
- by infiltration through recharge areas and the areas influenced by the pumping (Q2);
- by underground water trapped in the cone of depression (Q3).

The Q2 and Q3 values were obtained respectively by applying the following formulae:

Q2 = recharge area x infiltration from precipitation

Q3 = KiA

Where: K = Hydraulic conductivity of the aquifer (value obtained at Ferriman 4)

i = hydraulic gradient

A = vertical area of recharge

3 Hydrology

The water budget for Timmins 1 was calculated using the mass balance theory over a year as described by Watt (1990). The in- and out-flows are average flow rates using monthly periods.

The calculation of the inflows to Timmins 1 used the specific-flow method. As part of that calculation, the drainage basin of Timmins 1 was defined using the elevation data of Sheet 023J14 at the scale of 1:50,000 from the NTDB and field observations collected during the survey of fish habitats (AMEC January 2009).

Flow data from three hydrometric stations in the region stored in the HYDAT database of the National Hydrometric Program were used to estimate the average monthly inflows. The stations in question were: McPhadyen River, the federal identification number of which is 03OA003, which was operational from 1972 to 1982 and is situated 97 km from Timmins 1; Swampy Bay, the federal identification number of which is 03LD004, which was in operation from 1972 to 1993 and is situated 216 km from Timmins 1; and aux Pékans, the federal identification number of which is 02UC003, which was in operation from 1965 to 1982 and is situated 309 km from Timmins 1. Although the stations selected have drainage basins that are very much larger than the one under study, they have the advantage of having been monitored for relatively long periods, resulting in statistically valid data sets.

The first step in the calculation uses the monthly weighted average drainage coefficients of the three stations referred to above. Selected flow measurements carried out in winter 2005 in the context of the LIOP were used to validate the calculations.

Evaporation pans are usually used to measure evaporation for lakes and reservoirs. Churchill Falls A is the closest weather station that records such data. Appendix 10 shows the monthly normals for this station.

The volume of water to be used by NML was converted from m^3/h to m^3/s.

Finally, the calculations of the variation in the water level in Timmins 1 take into account a bathymetric survey conducted in September 2008 by AMEC Earth & Environmental (AMEC January 2009). Simpson's Equation is used to evaluate volume as a function of depth. Given the nature of the outflow channel from Timmins 1, the use of the relationship between water level and flow to calculate changes in level is not possible, because the outflow channel is composed of coarse material that allows a portion of the surface flow to exfiltrate.

Groundwater recharge is seasonal and is influenced by the average temperature. Unconfined aquifers usually receive recharge water directly from the surface, which can therefore be estimated using meteorological records.

B BEDROCK AND SURFICIAL GEOLOGY

1 Bedrock Geology

All the information included in this section comes from a comprehensive literature review. The sources reviewed included government and academic publications and reports as well as regional- and local-scale mapping of bedrock geology. The BRSA bedrock geology is well known, as it lies within an active mining area.

2 Landforms, Glacial History, Surficial Deposits and Soils

The project began with the collection and comprehensive review of existing background information pertinent to TEM in Labrador and Québec. The information collected included government and academic publications and reports, regional-scale mapping of surficial geology, wetland and soil data as well as manuals describing different methods for characterizing terrestrial ecosystems. All relevant documents were reviewed to better understand the regional biophysical environment, identify important terrestrial ecosystem issues and collect information to assist with the identification of mitigating measures.

Field reconnaissance in support of the terrain mapping and descriptions was completed between August 13 and 18, 2008 by an experienced team of one geomorphologist and one ecologist. In addition to prioritizing site visits according to the representativity of polygons, they selected terrain types for field investigation according to uncertainty of aerial photograph interpretations of terrain characteristics caused by such factors as forest canopy or indistinct surface expression. The sensitivity to impacts of particular terrain features was also considered. The sedimentological characteristics of natural or excavated exposures of surficial materials were examined in detail. Evidence in soil pits and on the ground surface of cryoturbation, a likely sign of modern or relic permafrost, was recorded.

Aerial photograph interpretation of terrestrial ecosystem boundaries and characteristics was then completed using PurView™, a software that allows three-dimensional visioning of the available 1:10 000 and 1:15 000 aerial photographs. This second step involved delineation of polygons according to landform, material type, local relief and surface expression and surface drainage conditions. Maps were produced based on fieldwork records and photointerpreted aerial photographs. A technical report was produced to support the maps. The methodology is described in full in Appendix H.

C SOIL AND SEDIMENT QUALITY

1 Soil Quality

Sampling took place on October 26-27, 2008. Each site was accessed by vehicle and/or on foot and surveyed using Envir-Eau/WESA's Standard Operating Procedures.

The soil samples were collected in accordance with the standard methodology used in the environmental sector of soil remediation, to avoid contamination between successive samples. The samples were collected on the surface of the study site with all the necessary precautions, and were then placed in appropriate containers, depending on the parameters to be analyzed. Precautions were taken during the transportation and storage of samples to keep them at a temperature of about 4°C. Within hours of being collected, the samples

were sent to Maxxam's Montréal Laboratory for analysis. Samples were then analyzed in compliance with the MMER procedures and guidelines for general chemistry, metals and hydrides. The detailed laboratory results can be found in Appendix H.

2 Sediment Quality

Sediment samples were collected in the BLSA from four open waterbodies and three stream locations with a Petite Ponar grab (Model 1725-F10). The Petite Ponar was equipped with 500µm top screens, which assisted in reducing the loss of sediment on the surface substrates prior to recovery of the grab. The grab was brought to the surface, and the appropriate amount extracted from the sampler using stainless steel instruments.

Sampling took place September 10-13, 2008. Each stream site was accessed by vehicle and/or on foot and surveyed using standard stream measurement techniques as described in Sooley *et al*. (1998) and Scruton *et al.* (1992) as well as AMEC's Standard Operating Procedures (AMEC July 2008).

The sediment samples were collected in accordance with the procedures used in the environmental field to avoid contamination between successive samples. The samples were collected on the surface of the study site with all the necessary precautions, and were then placed in appropriate containers, depending on the parameters to be analyzed. Precautions were taken during the transportation and storage of samples to keep them at a temperature of about 4°C. Within hours of being collected, the samples were sent to AMEC's Mississauga Laboratory for analysis. Samples were then analyzed in compliance with the MMER specifications for general chemistry, metals and most hydrides. The laboratory results can be found in Appendix A.

D TERRESTRIAL ECOSYSTEMS – ECOSYSTEM MAPPING

At the preliminary mapping phase, PurView™ software, which permits the three-dimensional visualization of aerial photographs, was used to map the surface deposits and terrestrial ecosystems. This software, operated in conjunction with ArcGIS™ 9.2, made possible three-dimensional viewing and the computerized digitization of the surface deposit and terrestrial ecosystem polygons. Mapping was done in and even beyond the BLSA, which includes all the potential development sites of the ELAIOM.

Field verification, or ground truthing, is an essential part of TEM. In addition to permitting the verification of the preliminary interpretation of the aerial photos, the field visits also made it possible to collect detailed information that could not be inferred from the aerial photographs (types of soil, microtopography, plant species, disturbances). To ensure the reliability of the product resulting from the TEM, 19% of the polygons were verified by means of field visits.

Field visits were planned so as to prioritize sectors where the ecosystems have the highest sensitivity to disturbances, where effects might be most intense and for which the aerial photographs could not provide all the data required to identify correctly the ecosystem present.

The field data were then compiled and the maps were modified accordingly. A complete report describing in detail the components of each terrestrial ecosystem (flora, surface deposits, soils, drainage, disturbance, *etc*.) was then produced.

The complete methodology is presented in the technical report (Groupe Hémisphères Mars 2009) reproduced in Appendix H.

E FAUNA

1 Caribou

A thorough literature review was carried out to assess the potential occurrence of sedentary and migratory caribou within the BLSA and the BRSA. In all, over 100 articles discussing the distribution, behaviour and habitat of these two caribou ecotypes were carefully reviewed.

In addition, the terrestrial ecosystem mapping included a detailed description of caribou habitats within the BLSA.

A caribou survey was carried out in May 2009 in collaboration with LIM and the GNL. The survey methodology is briefly described below. First, a radius of 50 km centred on each proposed development (*i.e.* NML and LIM) was approved by GNL Wildlife to represent the study area. The necessary provincial approvals, scientific permits and a federal Animal Care Certificate were obtained before the start of the survey.

The survey was completed between 4-8 May 2009, in an Astar 350BA helicopter at an altitude of approximately 100 m (AGL) and an average speed of 160 to 200 km/hr depending on conditions and habitats. Flight lines were spaced every 4 km with transects oriented in a NW/SE direction consistent with the landscape topography. A total of 31.1 hrs was flown, including ferry from Wabush, Labrador. Locations where tracks had been observed or suspected previously were further investigated during the final day of the survey. Particular attention was devoted to areas of higher elevation, where the depth of snow was less, and conditions were more suitable for caribou. If caribou were encountered, the helicopter flew low to estimate age and confirm the sex of each animal. When an adult female caribou was observed, the Study Team attempted to capture the animal with a net gun (Coda 308 with a 17' net). An Argos GPS collar and numbered ear tag were placed on the animal, with the following morphological measurements recorded: body length, heart girth and hind foot length. The animal's age was estimated on the basis of tooth wear. Moreover, a sample of ear dermis was taken with a punch and frozen for genetic analysis and comparison to genetic reference samples. The complete caribou survey methodology is presented in D'Astous and Trimper (June 2009, *in preparation*).

Finally, two studies on the First Nations' traditional knowledge were carried out. One of them (Weiler January 2009) addressed the traditional knowledge of the Naskapis, while the other (Clément Mai 2009) addressed that of the Innu of Matimekush-Lac John. The behaviour, habitat and distribution of caribou in and around the LSEA were discussed extensively in both studies. The methodologies used to collect traditional knowledge on caribou are presented in Appendix D and Appendix K.

2 Other Large Mammals

A thorough review of the literature was carried out to assess the potential occurrence of other large mammals within the BLSA and the BRSA. The distribution, behaviour and habitat of those species were carefully noted.

In addition, during the mapping of the terrestrial ecosystems, the habitats of these species within the BLSA were described, and the available plant species, the vegetation cover and structure, as well as the presence of dead trees and water were recorded.

Large mammals were also surveyed during the joint NML and LIM survey done in May 2009. The position of all large mammals observed during the helicopter flight was recorded using a GPS. The complete May 2009 survey methodology is presented in D'Astous and Trimper (June 2009, *in preparation*).

Finally, two studies on the First Nations' traditional knowledge were carried out. One of them (Weiler January 2009) addressed the traditional knowledge of the Naskapis, while the other (Clément Mai 2009) addressed that of the Innu. The behaviour, habitat preferences and distribution of large mammals were discussed at length in both of those studies. The methodologies used to collect traditional knowledge data on large mammals are presented in Appendix D and Appendix K.

3 Furbearers and Small Mammals

A thorough review of the literature was carried out to assess the potential occurrence of furbearers and other small mammals within the BLSA and the BRSA. The distribution, behaviour and habitat of these species were carefully noted. Wolverine surveys were carried out in various parts of the BLSA by Brunet *et al.* (2008).

In addition, during the mapping of the terrestrial ecosystems, the habitats of these species within the BLSA were described, and the available plant species, the vegetation cover and structure, as well as the presence of dead trees and water were recorded.

Finally, two studies on the First Nations' traditional knowledge were carried out. One of them (Weiler January 2009) addressed the traditional knowledge of the Naskapis, while the other (Clément Mai 2009) addressed that of the Innu. The behaviour, habitat and distribution of furbearers and other small mammals were discussed at length in both of those studies. The detailed methodologies used to collect traditional knowledge data on furbearers and small mammals are presented in Appendix D and Appendix K.

4 Micromammals

A literature review was carried out to assess the potential occurrence of micromammals within the BLSA and the BRSA. The distribution, behaviour and habitat of those species were carefully noted. Thorough surveys of micromammals were also carried out in the vicinity of the BLSA by Brunet *et al.* (2008).

In addition, during the mapping of terrestrial ecosystems, the habitats of these species within the BLSA were identified on the basis of the available plant species and the vegetation cover and structure. The presence of dead trees and water were also recorded.

Finally, two studies on the First Nations' traditional knowledge were carried out. One of them (Weiler January 2009) addressed the traditional knowledge of the Naskapis, while the other (Clément Mai 2009) addressed that of the Innu of Matimekush-Lac John. The behaviour, habitat and distribution of certain micromammals were addressed in both of those studies. The detailed methodologies used to collect traditional knowledge data on micromammals are presented in Appendix D and Appendix K.

5 Chiroptera

A literature review and various field studies were conducted for the LIOP by Brunet and Duhamel (Juillet 2005). The species at risk databases such as COSEWIC (2008, Internet site), Wild Species Canada (2005, Internet site) and the Wildlife at Risk website of the GNL (NLDEC 2009a, Internet site) were also consulted.

In 2005 and 2006, Brunet and Duhamel (Décembre 2005) and Brunet *et al*. (Janvier 2008; Juin 2008) undertook numerous surveys based on sound recordings and identifying possible roosting and hibernacula sites throughout the study area of the LIOP as well as in the DSO sector (Brunet et Duhamel Décembre 2005). Furthermore, a survey based on sound recordings of responses to broadcasts of bat vocalizations was conducted at two stations in the Howells River valley between August and October 2006 (Envirotel 3000 inc. Février 2008).

6 Herpetofauna

No herpetofauna surveys were undertaken directly for the ELAIOM. A literature review which summarizes the exhaustive past studies was found to be adequate, as there are no species at risk and this area is at the northern end of the range of most amphibians and reptiles, as a result of which species diversity is low. A literature review and various field studies were conducted for the LIOP by Brunet and Duhamel (Juillet 2005; Décembre 2005) and Brunet *et al*. (Janvier 2008; Juin 2008). These reports record the species of herpetofauna most likely to be found in the Howells River valley and in the surrounding area. The species at risk databases such as COSEWIC (2008, Internet site), Wild Species Canada (2005, Internet site) and the Wildlife at Risk website of the GNL (NLDEC 2009b, Internet site) were also consulted.

The methodology used by Brunet and Duhamel (Juillet 2005) and Brunet *et al.* (Juin 2008) consisted in: listening stations for anurans; systematic searches for salamanders; and using natural attractants for snakes.

7 Avifauna

Section 5.4.3.8 draws on a literature review to support the recorded observations of avifauna found in the BLSA. As well species at risk databases such as COSEWIC (2008, Internet site), Wild Species Canada (2005, Internet site) and the Wildlife at Risk website of the GNL (NLDEC 2009b, Internet site) were consulted.

Several studies have evaluated the diversity of avifauna in the vicinity of the ELAIOM. In 2005, several studies of breeding-bird populations were conducted for the LIOP. A survey of breeding birds by point-count surveys was carried out by Global Environment/Golder

Associates (November 2005). Some of the control points were located around the Kivivic lakes, which lie within the BLSA. Breeding *anatidae* and aquatic birds were also surveyed as part of the LIOP (Minaskuat Limited Partnership January 2008). The survey was conducted in mid May by helicopter. Finally, AECOM conducted a bird survey for the proposed Schefferville Area Iron Ore Mine Project near Schefferville (Labrador Iron Mines Ltd. 2008).

In addition to the literature review, a survey of breeding birds (Groupe Hémisphères October 2008) was conducted between July 11 and 17, 2008, at DSO2, DSO3 and DSO4. The biotopes to be surveyed were identified and located based on an analysis of available maps. The survey points were spaced more than 250 m apart and located more than 125 m away from any ecotone. A preliminary meeting was held with the ornithologists in order to standardize the methods.

The survey of breeding birds was conducted using point-count surveys. Each listening point had a duration of 10 minutes, divided into two periods of five minutes. The decision to conduct 10-minute point-count surveys is justified by the fact that the distance between the points represented more than 15 minutes of walking time (Ralph *et al*. 1995). Birds within a 50-m radius were distinguished from those situated further away. Although the survey by point-count surveys targeted predominantly passerines and woodpeckers, observations of other bird species were also noted. The counting of breeding birds by point-count surveys started at sunrise and lasted approximately four hours each day.

Some lakes, ponds and wetlands were present within the study area. They were examined to identify the species possibly breeding therein. In total, 35 wetlands were examined, seven of which were within DSO3. Visits occurred after the surveys of breeding passerines had been completed for the day, namely after 09:00. Each visit lasted between five and 10 minutes. Cliffs were examined to verify the presence of breeding raptors by ascertaining the presence of occupied or unoccupied nests.

The number of passerine observations was compiled by habitat. In the case of wetlands, the passerines were not detected by point-count surveys but on the basis of casual observations. The number of observations in the wetlands visited was compiled for each species and classified by group of species. The richness (number of bird species) of the study area for each survey period was calculated on the basis of all available data, including the data collected during movements. The detailed survey of breeding birds methodology is reproduced in Appendix F.

8 Fish

Section 5.4.3.9 was compiled in two stages. Initially, a literature review was conducted to support the recorded observations of fish species and fish habitat found at the site. The species at risk databases such as COSEWIC (2008, Internet site), Wild Species Canada (2005, Internet site) and the Wildlife at Risk website of the GNL (NLDEC 2009c, Internet site) were consulted.

Several studies have evaluated the diversity of fish in the vicinity to the ELAIOM (Curtis February 2004; McCarthy December 2005; Lee July 2006). AECOM also conducted fish surveys in 2007 and 2008 for the proposed Schefferville Area Iron Ore Mine Project near Schefferville (LIM December 19, 2008).

In 2008, Groupes Hémisphères undertook a fish reconnaissance survey along all of the streams crossings at all of the existing roads and railway tracks for the Project (PFWA December 2008). Sampling for fish presence was not included in the work scope for the reconnaissance survey.

A full survey of potential fish habitat within the BLSA was conducted by AMEC (AMEC July 2008; January 2009). Preliminary field reconnaissance of streams near and within DSO2 and DSO3 took place July 17-19, 2008 (AMEC July 2008). Each stream site was accessed by vehicle and/or on foot and surveyed using standard stream measurement techniques as described in Sooley *et al.* (1998) and Scruton *et al.* (1992) as well as AMEC Standard Operating Procedures. The preliminary reconnaissance identified areas that had potential as fish habitat.

The sites sampled in July 2008 that were determined to be potential fish habitat, were sampled for fish presence in a second survey between September 9 and 15, 2008. See Figure 5.3 for all DSO3 points sampled.

Baited minnow traps and gillnets were used to determine fish species presence in each of the ponds. Baited minnow traps were set along the littoral zone of the ponds to determine the presence of small fish. Monofilament gillnet gangs comprising a total of six panels of 12.7 mm, 25.4 mm, 38.1 mm, 76.2 mm, 101.6 mm, 127 mm mesh sizes were set in each pond. The nets and traps were set throughout the day and overnight to allow for fish movement throughout the pond and adequate time for the nets/traps to fish. Nets were generally set perpendicular to the shore. Electrofishing was conducted in one sample pond (DSO3-05) as an alternative sampling means, because the water was too shallow to permit the use of nets or traps. The crew covered the entire area of the shallow pond. The total shocking time was recorded and later calculated to determine catch-per-unit-effort. All captured fish were processed in the same way as those captured by electrofishing in streams.

In all ponds where fish were present, the number of hectares of productive lacustrine fish habitat was quantified. All fish species caught during sampling were considered to be using that habitat for part or all of their life-cycle. The approach used for the quantification of lacustrine habitat followed the Standard Methods Guide for the Classification/Quantification of Lacustrine Habitat in Newfoundland and Labrador (Bradbury *et al.* 2001). The approach involved the completion of both littoral and non-littoral habitat mapping and sampling for species presence and habitat utilization. Secchi disc depth was used to discriminate between littoral and non-littoral habitat. The crew conducted a habitat survey within the littoral zone recording the substrate composition, littoral depth and vegetation. These data were used to calculate the habitat suitability indices for individual fish species at various life stages specific to the waterbody. Once habitat suitability indices are determined, habitat equivalent units are calculated for each fish species present.

All stream reaches were sampled on the ground and were identified and delineated with a series of habitat measurements completed within each stream reach (see Scruton *et al.* 1992 and Sooley *et al.*1998). Habitat measurements included water velocity, water depth, substrate composition and quality, slope, vegetation (presence/absence), stream wetted width, channel width and general bank condition. Measurements of water depth and mean water column velocity were conducted at intervals of 1/3,1/2 and 2/3 of the stream wetted width. Water depth was recorded using a meter-stick, and mean water velocity was measured using a velocity meter (Global Flow Probe Model FP101) or equivalent field

method as outlined in Sooley *et al.* (1998). The substrate composition of each reach was also recorded as the percentage of each substrate size classification. Based on these measurements, each reach was classified into various habitat types. Two habitat classification systems were used: the Beak (Beak Consultants Ltd.1980); and a new classification system soon to be implemented by DFO (McCarthy *et al.* 2007). The fish and fish habitat survey methodology can be consulted in Appendix A.