HEALTHY MINING COMMUNITIES:
THE INTERDEPENDENCY OF COMPANIES AND COMMUNITIES

by

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B.E.S., The University of Waterloo, 2000

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF APPLIED SCIENCE

in

THE FACULTY OF GRADUATE STUDIES

(Department of Mining and Mineral Process Engineering)

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

April 2002

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ABSTRACT

The mineral industry and its communities are linked in their mutual interdependence. The industry needs the community's cooperation in order to avoid costly delays and perhaps, poor publicity and working relationships. The community needs to work with the mine to ensure that their concerns are heard and that the social and environmental effects of mining are minimized. This thesis explores consensus based (roundtable) approaches as a framework for cooperation. The characteristics of a healthy community based upon the "healthy communities" model are explored for their use as a visionary tool and the presence of a mediator at these meetings is evaluated.

The community of Kimberley, British Columbia and the Sullivan Mine with the formation of the Sullivan Public Liaison Committee (SPLC) offers one example of a mine-community consultation process. The committee has met over twenty times since its creation in 1991. This thesis explores the lessons learned from this particular process as well as others with the goal of strengthening mine-community relationships. A detailed literature review and personal interviews with both committee members and the general public were completed with the objective of evaluating the performance of this form of communication and consultation within a Canadian mining community.

Findings show that the SPLC is an effective process but could be improved in a few areas. Areas of weakness include lack of committee input into the design phase of the process, a lack of vision by the committee, parties leaving the process, and the absence of a trained mediator. Lastly, it offers an approach for future community relations within the mineral industry that would work towards building consensus for all parties involved.

Further research is suggested, in particular detailed research of other committees within the mineral industry, the economic analysis of the costs involved with running a community relations program, and the implementation of a new community relations program within the industry based upon the framework recommended by this research.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AMD	Acid Mine Drainage
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CRS	Centre for Resource Studies
DFO	Department of Fisheries and Oceans
EMCBC	Environmental Mining Council of British Columbia
ENGO	Environmental Non-Governmental Organization
IFC	International Finance Corporation
KKTC	Ktunaxa/Kinbasket Tribal Council
MABC	Mining Association of British Columbia
MEI	Ministry of Employment and Investment (now MEM)
MELP	Ministry of Environment, Lands and Parks (now MWLAP)
MEM	Ministry of Energy and Mines
MEMPR	Ministry of Energy Mines and Petroleum Resources (now MEM)
MOE	Ministry of Environment
MOH	Ministry of Health
MWLAP	Ministry of Water, Land and Air Protection
NGO	Non-Governmental Organization
NRCan	Natural Resources Canada
NRTEE	National Round Table on the Environment and the Economy
OHCC	Ontario Healthy Communities Coalition
PDAC	Prospectors and Developers Association of Canada
SPLC	Sullivan Public Liaison Committee
WHO	World Health Organization
WMI	Whitehorse Mining Initiative

ACKNOWLEDGMENTS

The smartest thing I ever said was, "Help Me!" –Anon., 1993

A masters degree is not only an academic goal but also a life adventure. I gratefully acknowledge the many people who have helped me along the way:

My advisors Mary Louise McAllister and Malcolm Scoble.
Mary Louise you give tirelessly of yourself and always seem to have more to offer. You have taught me a great deal and helped me to open up many wonderful possibilities in my life. Malcolm, thank-you for making me feel welcome in an environment that was completely foreign to me and for all of the opportunities and adventures that you helped to create.

My extended committee Scott Dunbar and Kim Bittman.
Scott, thank-you for never being too busy to send an encouraging (and often very funny) e-mail. Kim your input and support was invaluable to me and gave me the confidence to approach an industry that I knew very little about.

I would like to thank Teck Cominco, more specifically Steven Dean, Michel Filion and Kim Bittman, for financial support throughout my research. This enabled me to travel to workshops and conferences where I was able to make many valuable contacts. The financial support also made site visits to Kimberley possible, which advanced my research far beyond my expectations.

A warm thank-you goes out to the fantastic citizens of Kimberley, including members of the Sullivan Public Liaison Committee, for their enthusiasm towards my work and hospitality during my visits. I would like to specifically acknowledge Bruce Dawson of the Sullivan Mine and Andrew Whale and Rieva Rosentreter of the Ministry of Energy and Mines for their participation in extra interviews and phone and e-mail conversations.

Steven Orr made it possible for me to attend and participate in a Homestake Ltd. community meeting in Smithers, British Columbia. This opportunity significantly shaped the focus of my research.

My family and friends never tired of me canceling plans and living with my face pressed to the computer screen. They constantly helped with ideas and when everything seemed confusing and muddled they calmly helped me to clear away the haze.

CHAPTER ONE: INTRODUCTION

1.1 PURPOSE AND HYPOTHESIS

This research project aims to develop a methodology for developing and maintaining effective community relations within the mineral industry. It considers the potential for stakeholders to work together to ensure the health of their community.

The hypothesis is that an effective community relations program will contribute towards improving community health by drawing stakeholders together in effective communication. An open and equitable relationship between all parties will help to prevent many potential problems. Consensus building criteria will be used as a method of evaluating current community relations programs and to provide a template for creating new programs. A 'healthy communities' approach can then be used to formulate the goals of this future relationship.

1.2 RATIONALE

The mineral industry and Canadian mining communities are facing a shared challenge. In contemporary society, community members now insist on meaningful consultative processes on matters that most affect them. Local governments and mining companies also recognize that, for political and economic reasons, effective participation is an important aspect of local governance and business. There is, therefore, a need for research on how public participation can improve the health of Canadian mining communities. To date, however, this area of research is not a topic that has traditionally preoccupied the mineral industry. Nevertheless, it is important to the industry's own long-term future as a reputable, and socially desirable corporate enterprise.

1.3 METHODOLOGY

This research has adopted a methodological approach outlined by Palys (1997) in his book *Research decisions: quantitative and qualitative perspectives.* There are two main approaches applied here: secondary research that includes a literature review, and primary research that involves a case study approach. The case study was undertaken with an interactive methodology that included personal interviews.

The case study considers the Sullivan Mine and the community of Kimberley, British Columbia. It focuses in particular on documenting the nature and characteristics of the Sullivan Public Liaison Committee, formed by the Ministry of Energy and Mines and Teck Cominco in 1991. Interviews with the Committee as well as community leaders are used to assist in an evaluation of the effectiveness of the Committee and the community relations initiative in general.

1.4 STUDY OBJECTIVES

Short term research objectives were established to:

- define and characterize a mining community
- outline the need for consensus building within the mineral industry and the barriers that work against its implementation
- evaluate the applicability of consensus-based approaches to mining communities within Canada
- evaluate the applicability of the Healthy Community model as a visioning tool in the community relations process
- consider the importance of mediation skills and tools within a community relations program
- consider the consensus-based criteria in the context of a mining community case study and evaluate the case study's process

- consider the healthy community criteria in the context of a mining community case study and evaluate the case study's goals and vision
- make recommendations for the mineral industry as well as specific recommendations for the main case study (Kimberley, B.C. and the Sullivan Mine)

The long-term objective of this research has been to develop a framework for community relations within Canadian mining communities that would help to ensure the long-term health and vitality of both the community and the mineral industry within Canada.

1.5 ACADEMIC AND INDUSTRY CONTRIBUTION

Academic literature on mining communities has changed focus over the last few decades and has also evolved in nature. One stream of literature has focused on defining and identifying resource communities and their distinct characteristics and problems (e.g. Randall & Ironside, 1996; Lucas, 1971,1990; Robinson, 1984; Bancroft, 1975). A small amount of literature has focused specifically on the prospects of northern mining communities (e.g. McAllister, 1995; Glass & Lazarovich, 1983). The Centre for Resource Studies (1983) has also published some work related to mining communities from a number of different perspectives including government and residents. A few researchers have considered public controversy within the industry and constructive citizen participation (such as O'Connor, 1997; Dunn, 2000). Other literature not as relevant to this study may include historical examinations of northern towns or mining communities in other countries. This research will attempt to contribute to the development of the Canadian academic literature by bringing together some concepts generally applied to local governments (urban and rural) in order to consider the long-term prospects and concerns of Canadian mining communities.

This thesis research will assist the industry in the development of a process that will engage community participation. The mineral industry is attempting to identify methods through which it can adequately address issues that arise within mining communities. The documentation of the Sullivan Mine Public Liaison Committee in Kimberley, British Columbia, should contribute to the further development of methods for community interaction and consultation.

1.6 THESIS OVERVIEW

The interdependency of the Canadian mineral industry and its communities is an underlying theme of this work. In Chapter 2 these problems are explored by looking at the challenges that are facing the contemporary mineral industry. The profile of Canadian mining communities considers the current state of these communities. The need for traditional mining processes will demonstrate the necessity of adequate public cooperation and consensus. The chapter concludes with the challenges that are currently facing Canadian mining communities.

Chapter 3 examines consensus building in relation to the mineral industry. Processes for achieving consensus and various means that are available to run community relations programs are outlined. A history of public participation by the industry is given in order to outline progress made to date. The healthy communities movement is then introduced and its history, principles and characteristics are discussed. The chapter concludes by discussing the importance of mediation skills in community relations programs and the various tasks that a mediator would perform.

Chapter 4 discusses the two-step methodological approach of the thesis, which includes a literature review and case study. The literature review will identify principles of an effective

consensus-based approach. Also, the healthy communities characteristics will be outlined as possible visioning tools for mining committees. The strengths and weaknesses of each methodological approach will be considered.

Chapter 5 examines the case study of, Kimberley, B.C., the Sullivan Mine and the Sullivan Public Liaison Committee (SPLC). This case study was chosen because the community of Kimberley exhibits many traits of a typical Canadian mining community and has had a liaison committee in effect for over ten years. The history of the town of Kimberley, the Sullivan Mine and the SPLC will be documented.

Chapter 6 evaluates the SPLC based upon the consensus-building principles outlined in Chapter 4. The healthy communities characteristics are also evaluated in order to determine their association with mining communities and possible use as a visioning tool. Specific recommendations for the SPLC process effectiveness will be made.

Chapter 7 concludes the thesis by highlighting the main points that the research has uncovered. It will offer a recommended framework for future public participation within the mineral industry when dealing with Canadian communities. The chapter concludes with suggestions for future research.

CHAPTER 2: CHALLENGES FACING THE CONTEMPORARY MINERAL INDUSTRY

2.1 INTRODUCTION

After agriculture, the mineral industry is the world's second oldest industry. The industry is an important part of Canada's economy. In the year 2000, the mineral industry in Canada contributed 3.6% of the national Gross Domestic Product (NRCan, 2001b). In British Columbia mining generates over four billion dollars in revenue and over one billion dollars in government taxes per year (MABC, 2002).

In the year 2000, Canada experienced 6 mine openings and 12 closures (Jen, 2000). Of the 6 openings, 4 mines were re-opened and 2 mines were newly opened. Of the 12 closures, 7 represented production suspensions. Two of the 12 closures happened in British Columbia. The Quintette coal mine in Tumbler Ridge permanently closed and the Cassiar asbestos operation suspended production as a result of fire (Jen, 2000). Mine closures can be the result of such factors as ore depletion or worsening market demand. Other factors include technological change and restructuring (Bradbury, 1984). Social factors, such as strikes, war, health epidemics, community unrest or political events can also be significant. When mine closures outnumber openings, as was the case in Canada in the year 2000, the mineral industry is responding to hard times by, "closing down high-cost mines, consolidating operations by integrating mines, cutting back on production and work force, imposing or extending vacation shut-downs, revamping mining methods, expanding production capacity, or postponing mine openings and developments" (Jen, 2000).

The health of the mineral industry is related to demand for its products and the cost associated with mining the metals and minerals from the ground. The boom and bust cycles for the mineral

6

industry relate to its sensitivity to demand and supply fluctuations in the marketplace (Norcliffe, 1993). New technologies can be costly to implement and may often be difficult to justify. A result of this economic sensitivity is that alternatives are often decided by cost rather than social and environmental gain. In order to run the industry in compliance with public expectations the cost would most likely be too high and the mine would not be feasible.

Public concerns about mining became clear only in the last twenty years and have tended to center around its impact on the environment. There has been less attention given to social concerns until more recently. This has lead to a classic struggle within and around the mineral industry as both the public and many non-governmental organizations have begun to scrutinize mining practices and procedures and have placed many expectations on the industry. Society demands the minerals and metals but also requires them to be mined in a way that is environmentally, socially and economically sustainable in the short and long term.

Alan Young of the Environmental Mining Council of British Columbia (1998) remarks that public concern and involvement within the industry can also be attributed to the reduction of "government and regulatory capacity for environmental monitoring and enforcement". As a result of this reduction, members of the interested public feel that they must become the "watchdog" for the mine and this role is usually without any financial compensation.

Not only is the role of local citizens and non-governmental organizations important but also the urban perceptions of mining in the more heavily populated and politically important centers that are far from any mining activity. The urbanized society that dominates Canada and British Columbia has forgotten where minerals and metals come from and if they do remember their importance it often takes back seat to other societal preoccupations. It is in these urban areas that

major policy decisions are made and that public perception of the resource based industries is stimulated. It is important, therefore, that when the public does hear about the industry, that those perceptions are positive rather than negative.

Many influential environmental nongovernmental organizations (ENGOS) are closely watching the activities of the industry and the affects on local communities. Mining companies and governments, therefore, must pay close attention to ensuring that Canada's mining communities are left in good shape after closure. Before beginning to work with a mining community, it is necessary to understand the current situation of these communities within Canada.

2.2 PROFILE OF MINING COMMUNITIES IN CANADA

A 1983 Task Force on Mining Communities defined a mining community as (Haugh, 1983: 2), "...one in which mining activities play a predominant role in the economic base, and are the principal raison d'etre for its establishment and continued existence." Mining is the main source of employment in well over 100 communities across Canada. These communities are often found in rural or remote areas and contain a total of approximately 600,000 Canadians (NRCan, 2001a).

In 2000, mining directly employed over 400,000 Canadians or 1 out of every 37 Canadians worked in the minerals and metals industry (MAC, 2000). This represents 53,000 employees who work directly in the mining industry and 350,000 who work in the minerals side of the industry (NRCan, 2001a). These employees average weekly wages were $1,069.49, which makes mining the highest paying industry in Canada.

There are many different types of mining communities. Mines are either introduced into existing communities or the community develops around the evolving mine. The latter is often termed a resource community, single-industry community, company town or instant town (Bancroft, 1975). The two groups of communities can be further divided into many subgroups depending on circumstances.

The aboriginal communities that are located around a mine represent another type of community that is sometimes overlooked. These communities offer new challenges and require a distinct approach to community relations. NRCan (2001) estimates that approximately 1200 aboriginal communities are located within 200 kilometers of mining activities. These communities could be impacted in ways that will change their way of living forever.

As the cost associated with mining communities has increased, governments are now claiming to be committed to ensuring that no single industry communities will be created in the future. Fly-in/fly-out mining will likely be put into practice when remote mining is required. Shrimpton & Storey (1992:189) remark that, "while fly-in operations constitute only a minority of Canadian mines, the rate of increase in the use of this system has been rapid." Unfortunately, this in itself creates its own set of problems for local communities that are now experiencing the "fly-over" phenomenon where employment, supplies and services bypass local northern communities and often draw from the south (Shrimpton & Storey, 1992; Shrimpton & Storey (eds.), 1991).

Mining communities play a very important role in the social, political and economic fabric of Canada. "Mining developments have the potential to completely transform economic, social and cultural aspects of life in nearby communities" (EMCBC, 1998:13). This creates a variety of challenges that are unique to mining communities.

2.3 THE CHALLENGES FACING CANADIAN MINING COMMUNITIES

Each mining community is distinctive, possessing different characteristics and problems (Randall & Ironside, 1996). Common distinguishing characteristics are: isolation, small population, low economic diversity, specific labour force and cyclical employment (Randall & Ironside, 1996: Bradbury, 1984: Neil & Tykkylainen, 1992).

Isolation. The location of a mining community is determined largely by the "location of the resource, the electric power necessary for the process, or the technical requirements imposed by the transportation system that moves the products" (Lucas, 1990:111). This leaves little room for alternative locations for community establishment.

Not only is there a geographical and linear distance from other communities but also it is the lack of relationships between these communities that further isolates the mining town. The isolation that is created in a single-industry mining community may contribute to such problems as low economic diversity and low population due to an inability to attract other industries or professionals to the area.

Population Size. In Canada, mining communities range in size from less than 200 to over tens of thousands (NRCan, 2001a). In 1996, 49 out of a total of 113 mining communities identified had a population of between 1000 and 4999 and 38 had a population of less than 1000 (White & Watson, 1996) (see Figure 2.1).

The study completed by White & Watson (1996) considers communities greater than 250 people in size. There is a chance that many northern communities dependent on mining, particularly

aboriginal communities are not considered in these numbers, indicating that the number of mining dependent communities could be much higher than initially thought.

Figure 2.1 Mining and mineral reliant communities by size

Mining and Mineral Reliant Communities by Size (1996)

26

38

49

☐ less than 1000
■ 1000-4999
☐ greater than 4999
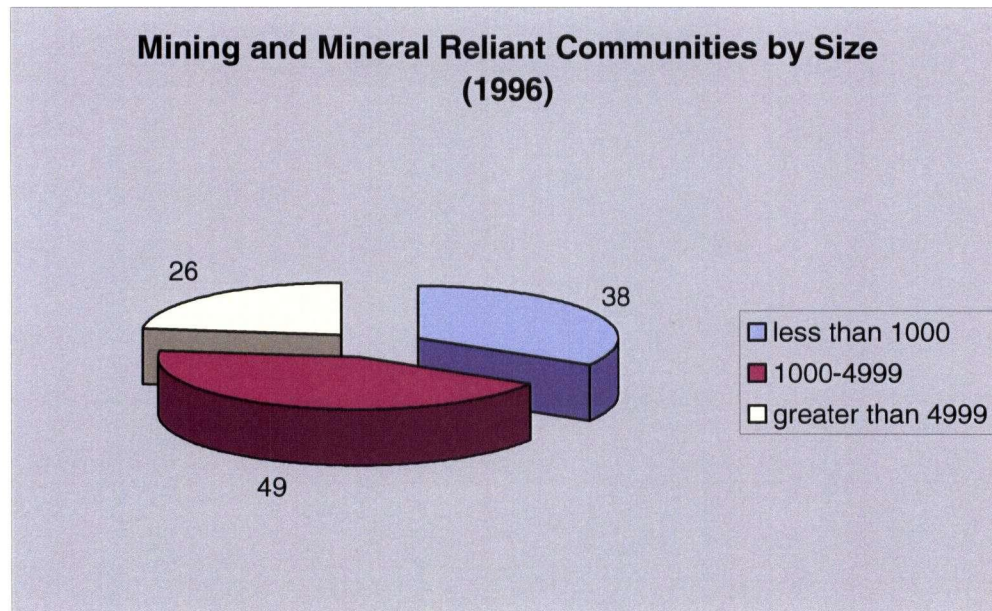
When dealing with Canadian mining communities, it is important to realize that with 77% of the communities having a population of less than 5000 people, case studies that include larger cities, such as Sudbury, Ontario, may not apply. If the community is small and far from a metropolitan area diversification may not even be possible. In these extreme circumstances the creation of a ghost town, after the mine has closed, is inevitable.

It is interesting to observe the history of the community of Cassiar in northern British Columbia. In 1992 the company town was bulldozed and emptied when the mine closed. All residents had no option but to leave. A virtual community has been created and community members share stories, pictures and memories on the Internet (Bramham, 2001 & Skelton, 2000). This example also highlights the importance of community to its citizens. The historic practice of offering to

retool or relocate employees and offer them jobs elsewhere does not sufficiently recognize the importance of community connections.

Economic Diversity. Resource-based communities have been described as micro-specialized and macro-diversified (Bollman & Biggs, 1992). This refers to the fact that most individual communities are specialized with one economic base but the broader regional communities are often diversified. These regional communities generally specialize in different resource areas (Randall & Ironside, 1996). The low economic diversity associated with single-industry mining towns poses a problem when the industry is approaching closure. This leaves few alternatives for the residents of the town.

Norcliffe (1983:9) remarks that it is not necessarily the presence of the single-industry that poses the problems but it is the presence of an industry that is, "highly responsive to demand fluctuations in the business cycle." As a result, diversification in these communities would help reduce the cyclical nature of many of these resource towns since there would be a secondary economy to fall back on when the mineral industry is on a downswing (Norcliffe, 1983). It is important to recognize that a possible flight of capital can be created around a secondary resource industry. Technology-based industries, for example, can be quick to move in and out of an area, as they have no resource dependence.

The flight of capital or change in economy of the town can lead to another problem. The families that live in mining communities are most likely accustomed to earning a high wage and the communities have established themselves as such. This is particularly important when considering what other secondary economies can be introduced to the area since many of these secondary economies, such as tourism offer more of a retail wage.

Elliot Lake, Ontario, is an example of a community that began a proactive approach at community development before its mines closed. Success was partially due to the formation of various partnerships and committees during this process. The formation of an Economic Development Committee and mayor's action committee encouraged dialogue and open communication between community, government and corporations (Farkouh, 1992). Community involvement was seen as necessary to give the community members a feeling of control over their own futures. The focus of the diversification strategy included many areas such as retirement living, tourism and research. Elliot Lake demonstrates that the mineral industry must be involved with partnerships and community development. The industry was represented in the mayor's action committee and even if the main push for diversification is from the community itself, the mining company can show its support and involvement (Heard, 2000).

Workforce Characteristics. Randall & Ironside (1996) report that the workforce of resource-based communities is largely male dominated. Studies have shown that women are a minority in the labour forces of most mining sectors. In 1998, 836 women were directly employed in the non-fuel mining and milling sectors, representing less than 2% of the total sector employment. Of the 836 women, 115 worked in underground mines, 256 in surface mines and 481 in mills (MAC, 2000).

Where mining becomes marginal some flexibility on the part of miners is necessary, as temporary or seasonal shutdowns may be imposed to remain competitive. A core workforce of fulltime employees may develop at the mine. These workers will be long-term employees and will remain during the ups and downs of the mining operations and only at the time of severe layoffs are the core populations eroded (Bradbury, 1984).

Cyclical Employment. The historical "boom and bust" cycle of a mining town, is often regarded as the norm (Bradbury, 1984). This is largely due to the combination of both a finite orebody and fluctuating market pressures. Market prices can rise and fall a number of times and often have no warning. For example, the year 2000 observed copper prices that fell 3.74%, zinc prices that fell 7.74% and platinum prices that rose 23.46% (MAC, 2000). Sudden decrease in price can lead to abrupt and unexpected closures of the mine as it is no longer economical to continue mining.

The adverse impacts of such cycles are often worsened if the economy of the community is not diverse and/or it is severely isolated. Small-scale employment cycles such as short-term shut downs can range from a few days to a few weeks. Shutdowns or closures in northern mining towns instill a strong sense of helplessness in the working class and can cause anxiety amongst the population (Bradbury, 1984).

Rumors are often mechanisms for passing information within communities. This can be more apparent in smaller communities where word of mouth can reach more of an audience. It is reported that workers generally learn of upcoming shutdowns before the mine announces them. The absence of local participation in decision-making can make the residents feel some form of neglect and lack of control over their futures (Bradbury & St-Martin, 1983).
The cyclical nature of work in mining communities can also bring residents together as they cope with hard times. Clemenson (1992) suggests that this can develop a strength and kinship that is often not apparent in more urban-based communities.

The characteristics of isolation, small population, low economic diversity, specific labour force and cyclical employment can also be viewed as barriers that impede the sustainability of the

14

mining community. There are two kinds of barriers, which can be referred to as soft and hard barriers. Soft barriers are those that can be, or have the chance of being, changed. These include economic diversity of the community and the specific labour force that is employed at the mine. Hard barriers are those that cannot be changed such as the location of the mining community and the cyclical nature of the industry. The identification of barriers is the first step towards addressing them. Working to overcome the soft barriers will introduce stability into the community, which will also work towards introducing stability to the mineral industry.

2.4 INTRODUCING STABILITY TO THE MINERAL INDUSTRY

The mineral industry is faced with many factors that are potential causes of risk to stability within the industry. These factors mainly relate to the industry's dependence upon market prices for its mineral and metal products. Another source of potential uncertainty within the industry is of a social nature.

Mass communications, the Internet, the rise of non-governmental organizations and other factors have contributed to the increasingly intense global focus on community well-being. As concerns have risen over the effects of mining on the social and biophysical environment, then so too have communities and their citizens become better informed of key areas of concern. Community residents demand a certain amount of involvement with decisions that have the potential to affect their lives and the health of their community. Companies have seen that not involving the local communities in decisions can lead to costly delays and possible project failures.

Public cooperation in the mineral industry is imperative to ensure that the industry experiences stability. Community relations are a mechanism for achieving public cooperation through the

15

development of effective communication between parties. Community relations are not to be confused with public participation or empowerment. The industry uses each term interchangeably but for the purpose of this research it should be clear that no matter what term is used, the main goal of the exercise should be the development of a consensus process. The National Round Table on Environment and the Economy (NRTEE) (Cormick et al., 1996:4) agree on a working definition of a consensus process as,

> "one in which all those who have a stake in the outcome aim to reach agreement on actions and outcomes that resolve or advance issues related to environmental, social and economic sustainability.
>
> In a consensus process, participants work together to design a process that maximizes their ability to resolve their differences. Although they may not agree with all aspects of the agreement, consensus is reached if all participants are willing to live with the total package.
>
> .... A consensus process provides an opportunity for participants to work together as equals to realize acceptable actions or outcomes without imposing the views or authority of one group over another."

Consensus, or general agreement, within or around the industry is not often achieved. Increasingly, members of the public and various governments are seeing mining companies as not only principal stewards of the mine and its environment, but also of the community during and after mine operation. Mines have often undertaken this responsibility in situations where it is the primary employer in the community.

Good community relations represent a competitive advantage for industry. It is often stated that the bottom line in mining is the dollar. Large international companies that have superior social and environmental reputations will be less likely to encounter barriers from government,

communities, or groups that block mine development. Financial institutions, such as the International Finance Corporation (IFC), are more willing to underwrite a socially stable operation (Pollett, 2001). On the other hand, these companies have very high profile. Those who do not practice responsible mining will be the subjects of unfavorable attention. This represents stability on more of a corporate level, rather than at an individual mine level.

Effective community relations in the industry can not only bring a competitive advantage but also improve the public image of the industry. There are a number of barriers that stand in the way of the implementation of such relations.

2.5 BARRIERS TO ACHIEVING PUBLIC PARTICIPATION

Barriers include traditional education, corporate structure and training for employees. The first barrier is mine management and workforce attitudes promoted by **traditional education**. There has been very little education in mining engineering that has addressed the social effects of mining on the surrounding community. This can be seen when looking at curriculum development and change within the Mining and Mineral Process Engineering Department at the University of British Columbia. The Department is now incorporating topics such as "Mining and the Environment" and "Mining and Society" into courses, offered at both undergraduate and graduate levels, that were not available a decade ago (Scoble, 2002). The next generation of mining engineers will have a better understanding of how mining impacts society but a fundamental shift in culture will not be seen until the new generation of mining engineers represent a larger proportion of the work force.

Another barrier to achieving public participation is that the current **corporate structure** within the mineral industry does not exhibit the necessary commitment to change the corporate culture with respect to community relations. This is mostly due to the fact that senior mining companies are very large and implementation of new programs and shifts in beliefs take a considerable amount of time. Not only are the companies large but there is also a considerable amount of diversity within the industry itself. This diversity can be seen in the nature of the company and also in each company's impacts, limitations and constraints (Clausen & McAllister, 2000). Forrest & Mays (1997) point out that the commitment to run a community relations program often comes from the top levels of an organization. Middle managers, who are located at the mine site, would most likely not voluntarily begin a community relations program that has the potential to bring additional controversy to their mine, added work for their employees or additional costs to their budget. However, top-level decisions have been made by most major companies to support social and environmental sustainability. This can be seen in reports from companies such as Placer Dome, Rio Tinto and Teck Cominco. Also, large companies have begun to contribute towards furthering research in these areas by supporting initiatives such as the Global Mining Initiative and Towards Sustainable Mining. This research is international and national level collaboration that addresses the social impacts of mining and need for adequate community relations within the industry. Top down approaches will need to funnel down to lower levels of management and eventually to the workers, which will take time as these initiatives are fairly new.

The industry, in general, does not provide or facilitate **training for employees** who run community relations programs and outside facilitators are rarely hired for this purpose. Of course there are companies that do commit to training employees who will engage with the public but this is not found in every situation (Betts, 2002). An employee or department of the

mining company who already holds a fulltime job often runs the community relations programs. This can lead to a dangerous situation in which the program is seen as taking away from the various responsibilities that the employee already has, thus making their job more difficult and stressful. This lack of training can be a problem when developing a community relations program, as the fundamental principles of such a consensus-building program are not known. Without the knowledge of these principles and the recommended processes involved, more problems may occur that may hinder the community relations program. This can stall the program and affect its effectiveness.

These barriers can be worked through by capacity building within the company. A recent change of mining engineering curriculum coupled with a continued shift in corporate culture and training for mining employees can create the type of environment that would facilitate an effective community relations program. By addressing and dealing with these traditional barriers the mineral industry takes another step towards creating consensus within and around their industry.

CHAPTER 3: CONSENSUS BUILDING WITHIN THE MINERAL INDUSTRY

3.1 THE CONSENSUS BUILDING PROCESS

A number of different methods for achieving consensus can be used by the industry to improve community relations. Achieving consensus can be seen as an ultimate goal of any of the processes that will be described here. According to the National Round Table on the Environment and the Economy (NRTEE) (1996), for consensus to be achieved, all parties involved must be empowered in the process, involved in ongoing decision-making and satisfied with the outcomes.

Consensus based processes are not intended to allow any one individual to exercise a veto. Making sure that the company has adequately consulted and been informed of diverse concerns within the community and that the community feels that its interests have been sufficiently communicated. Unanimity is not always possible because inevitably there will be parts of any agreement that will not satisfy everybody. The goal of these exercises is to move on a more sustainable path and allowing any individual to have a veto undermines that goal whereas a fair and inclusive communications process does not.

Involvement in decision-making requires an interaction between all parties involved. There are various levels of interaction that will each have their own outcomes, advantages and disadvantages. Figure 3.1 is adapted from Forrest & Mays (1997) and shows the various levels of communication that can be achieved in a community relations program within the mineral industry. Each level that is attained has the benefit of building greater consensus between stakeholders but has the disadvantage of increased money, time and commitment for all who are involved with the process.
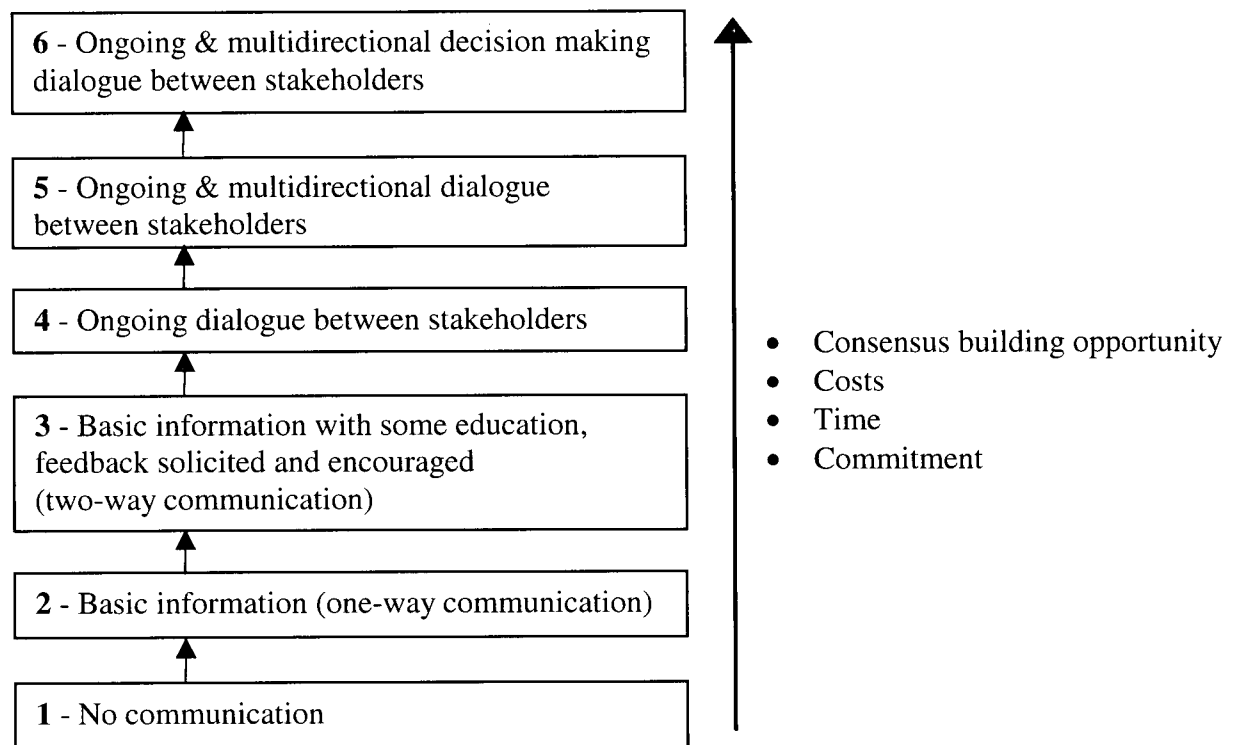
Figure 3.1 Communication hierarchy within the mineral industry
(adapted from Forrest & Mays, 1997)

A variety of techniques for community participation are used within the mineral industry such as open houses, workshops, site visits and committees. These activities can be placed within the communication hierarchy shown in Figure 3.1. Site visits, workshops and open houses are activities that involve information sharing and education. The format is usually open to questions and there are usually mine employees present to answer questions. These activities can be placed in box number three in Figure 3.1. The activities are beneficial for educating the concerned public about mining activities, but future communication from these events is not necessarily ongoing. Committees that are set up by the mineral industry can be placed in box four, as they create ongoing dialogue between stakeholders often in and outside of the meetings. The level of consensus can be raised to box 5 if the dialogue is multidirectional and communication pathways open up between all stakeholders. Lastly, committees can also reach

box 6, which is the highest level of consensus on the communication hierarchy. This is only achievable if all stakeholders that are involved with the committee have decision-making power.

There has been some attempt at public participation by the B.C. mineral industry. The earliest committee dates back to the early 1980s. The programs have both responded to public pressures and been voluntary initiatives depending on the circumstances.

3.2 COMMUNITY PARTICIPATION IN THE B.C. MINERAL INDUSTRY

Ongoing community participation within the mineral industry can often be seen from the formation of committees, often environmental committees, in the mining community. There have been a number of committees set up in British Columbia with the earliest one dating back to the Equity Silver Public Surveillance Committee, which began in 1981. These committees were initiated for a variety of reasons, and have run for either a few years or a few decades. They are often built upon past models to improve their effectiveness. Table 3.1 outlines the history of mining committees within British Columbia.

Table 3.1 History of mining committees within British Columbia

Committee	Date Started	Date Ended	Purpose	Initiated by
Equity Silver Public Surveillance Committee	1981	Present	Act as a forum for information exchange and public involvement in remediation work	Ministry of Environment
Trail Community Lead Task Force	1990	Present	Goal of program was to reduce blood lead levels in children	
Brenda Mine Technical Working Committee	1990	1995	Comprised of regulatory officials. Review and comment on reclamation options for the mine.	
Brenda Mine Public Surveillance Committee	1990	1997	In co-operation with technical committee, review and comment on reclamation options for the mine	
Sullivan Public Liaison Committee	1991	Present	Review and comment on draft reclamation plan	Ministry of Energy and Mines
North Island Round Table	1993	1994	Examine the use of the site as a regional landfill.	

The formation of committees throughout the last two decades and the survival of many committees for over ten years demonstrate that there are obvious benefits to this type of roundtable interaction for all stakeholders involved.

3.3 ROUNDTABLES

The benefit of a roundtable process can be invaluable when run properly. The mere physical idea of a sitting at roundtable instills a feeling of involvement and equality for participants. The roundtable format is also an important way of empowering all participants, as there is a degree of importance associated with everyone at the table. This only happens if the structure of the meetings is one that allows for these benefits to occur.

Steiner (1972:9) offers this equation:

$$\text{Actual (group) productivity} = \text{potential (group) productivity} - \text{losses due to faulty processes.}$$

This equation demonstrates that the quality of the process involved is one factor that can negatively impact collective decision-making (Hirokawa et al., 1996). The mineral industry has had questionable success with round table processes in the past.

Roundtable processes within the mineral industry can be traced back to the Whitehorse Mining Initiative (WMI) in the early 1990s. The WMI was initiated by the Mining Association of Canada (MAC) in response to a suggestion from a conference of mines ministers in Whitehorse in September 1992. The multi-stakeholder approach was initiated to work towards a new strategic vision for the industry in the 21st century. This process involved five sectors of society that wished to participate including the mineral industry, senior governments, labour unions, aboriginal peoples and the environmental community. The process was to support, assist and advise the industry in a non-adversarial environment (NRCan, 2000).

Discussion began in February 1993 and an accord was signed eighteen months later. The WMI process has shown that this type of roundtable process within the industry is possible and by studying such processes the industry has an opportunity to learn and move ahead.

The very mention of roundtables can often lead to an adversarial environment as different members of society, with differing views, are brought together to attempt to find common ground. This was also the case with the WMI as many differing groups were brought to the table. Out of the diversity also comes a better understanding of others views. McAllister &

Alexander (1997: 159) remark that some participants of the WMI "found that they could respect the positions of some participants – people who were once viewed as enemies."

While the grand ambitions of many of the recommendations of the WMI Accord have yet to be realized, it did recognize the need for a new broader more inclusive approach to decision-making in the mineral industry.

The challenges and promises of such past initiatives should be studied in order to develop a template or framework for future processes. It is imperative to develop these processes well in advance of their start in order to ensure that participants possessing a wide variety of views and ideologies are able to find common ground to work together. Developing a template should also include using current literature on consensus-based approaches. The advantage of creating a community relations program based upon consensus-building criteria is that it is more likely to be effective. Increasing the effectiveness of the program will help to ensure that all participants remain committed to and involved in the process.

3.4 DEVELOPING A CONSENSUS APPROACH

Much work has been done on outlining the various components that are necessary in order to create a successful roundtable or consensus building process. An initiative in 1993 by the Canadian Round Tables identified ten guiding principles for a consensus building process:

- Purpose driven: people need a reason to participate in the process.
- Inclusive not exclusive: all parties with a significant interest in the issue should be involved in the consensus process.
- Voluntary participation: the parties who are affected or interested participate voluntarily.
- Self design: the parties design the consensus process.

- Flexibility: flexibility should be designed into the process.

- Equal opportunity: all parties must have equal access to relevant information and the opportunity to participate effectively throughout the process.

- Respect for diverse interests: acceptance of the diverse values, interest, and knowledge of the parties involved in the consensus process is essential.

- Accountability: the parties are accountable both to their constituencies, and to the process that they have agreed to establish.

- Time limits: realistic deadlines are necessary throughout the process.

- Implementation: commitment to implementation and effective monitoring are essential parts of any agreement.

These guiding principles appear to be useful for any consensus-building program. The mineral industry could use the principles when developing new community relations programs and also when evaluating current programs in order to find areas that need to be improved upon.

One factor that is particularly relevant to the process is the first guiding principle, which refers to the purpose behind the initiative. This purpose is the binding agent that brings all parties together to create a common vision to work towards. One way of creating a common vision is working towards increasing the health of the community. The mining company and local government have the opportunity to work with local stakeholders to improve their community. The healthy communities movement offers a holistic approach to this common vision or goal that addresses both biophysical and socio-economic concerns.

3.5 VISIONING THE HEALTHY COMMUNITIES MODEL

The healthy communities movement began in Canada in 1984 as a result of the Healthy Toronto 2000: Beyond Care symposium. The movement was inspired by Len Duhl and Trevor Hancock (Norris & Pittman, 2000). The movement was first launched in Europe in 1986 by the World

Health Organization (WHO) and since then has since swept throughout many countries. There are over one thousand healthy communities recognized worldwide by a global network and over one quarter of those communities are found within Canada (Lawrence, 1996 & Hancock, 2002).

Health Canada funded a Canadian secretariat to promote the development of a network in Canada from 1988 to 1991. From 1991 to 1995 the Canadian Institute of Planners provided a minimum level of follow-up (ulaval, 2001). The Connecting the Americas symposium in Quebec City in 1996 launched the Quebec World Health Organization Collaborating Centre for the Development of Healthy Cities and Towns.

3.51 PRINCIPLES

The approach that Healthy Communities takes is based on the fundamental goal of making a community a better place in which to live. This is achieved by the application of a number of different values, objectives and goals. The approach offers (Lawrence, 1996), "a practical way to help people develop a common vision with all the players in a community, to address issues that affect their health and quality of life and the sustainability of their community."

The Ontario Healthy Communities Coalition (OHCC, 1998) identifies that the healthy communities model allows the community to determine its own issues and needs while building actions plans that will accomplish the goals set out. The initiative promotes a holistic concept of community health that includes (Nozick, 1998) "social, economic, psychological and environmental well-being, and to develop community-based actions, programs and policies for communities to implement in support of this goal."

The four core principles of the healthy communities movement are:

- **Wide community participation.** Wolff (date unknown) stresses that the healthy communities model is based on the concept of collaborative problem solving. Collaborative problem solving takes a step past sharing information to building alliances with the goal of enhancing each group's capacity.

- **Broad multi-sectoral involvement.** In order to reach all members of a community it is sometimes necessary to think outside of the usual "community box". Such groups as government, industry and service organizations must be included as well as neighborhood organizations and informal city leaders.

- **Local government commitment.** OHCC (1998) remarks that it is also important for the local government to adopt the same vision of a healthy community. It is also vital that local government support any actions that would work towards bettering the community.

- **Healthy public policy.** Public policies may need to be changed in order to promote initiatives that are identified through public meetings. A mining company may also need to change policies in the same way in order to demonstrate a commitment to increasing the health of the community.

3.52 TOOLS

The healthy communities movement offers various tools that can be used to determine such things as community health. These tools can be useful to community relations programs as well as individual groups.

A tool that was developed by Cooperative Extension Service (1996) that is particularly useful is a 32-question checklist that evaluates community health. The questionnaire is divided into four sections; community attitude, community leadership, community vision and community action

(Darling & Randel, 1996). This tool is useful to initiate community relations programs so that a community can identify areas deemed important to its citizenry.

3.53 HEALTHY COMMUNITIES

According to the OHCC (1998) the characteristics of a healthy community are:

- provides a clean, safe physical environment
- meets the basic needs of all its residents
- has residents that respect and support each other
- involves the community in local government
- promotes and celebrates its historical and cultural heritage
- provides easily accessible health services
- has a diverse, innovative economy
- rests on a sustainable ecosystem

The list above can be grouped into four areas: environment, society, government and economic. Each of these components are an integral part of mining communities health both within Canada and within British Columbia.

The healthy communities characteristics offer a vision of an ideal healthy community. Figure 3.2 depicts the visioning cycle that could happen within a community. The separate community, government and company visions, at the beginning of the cycle, signify that all stakeholders involved will enter the process with their own vision. Developing a group vision will open up lines of communication between groups and ensure that different groups views and opinions are made known to all of the committee. This future community could have the characteristics, outlined above, of a healthy community. After a common vision has been agreed upon it will be

necessary to determine areas of weakness or concern in how the current community compares
with this ideal healthy community and make the appropriate action plans to improve upon the
situation. In the case of a mining community committee any plans that are made will most likely
be those that have to do with the impacts of mining on the community. The next step involves
changing policies both at the mine and the local government in order to ensure that objectives are
met. The whole visioning cycle should begin again with an evaluation of the success of the
process and the outcomes. It is in this stage that a new vision will form as projects are completed
to everyone's satisfaction and new projects can form from a new vision.

Figure 3.2 Cycle of visioning within a committee

COMMUNITY
VISION

GOVERNMENT
VISION

COMPANY
VISION

CREATE OPEN
LINES OF
COMMUNICATION

VISION OF
THE FUTURE
COMMUNITY

ACTION PLANS
TO ACHIEVE
VISION

EVALUATE SUCCESS
OF PROCESS &
OUTCOMES

CREATE HEALTHY
PUBLIC & COMPANY
POLICIES
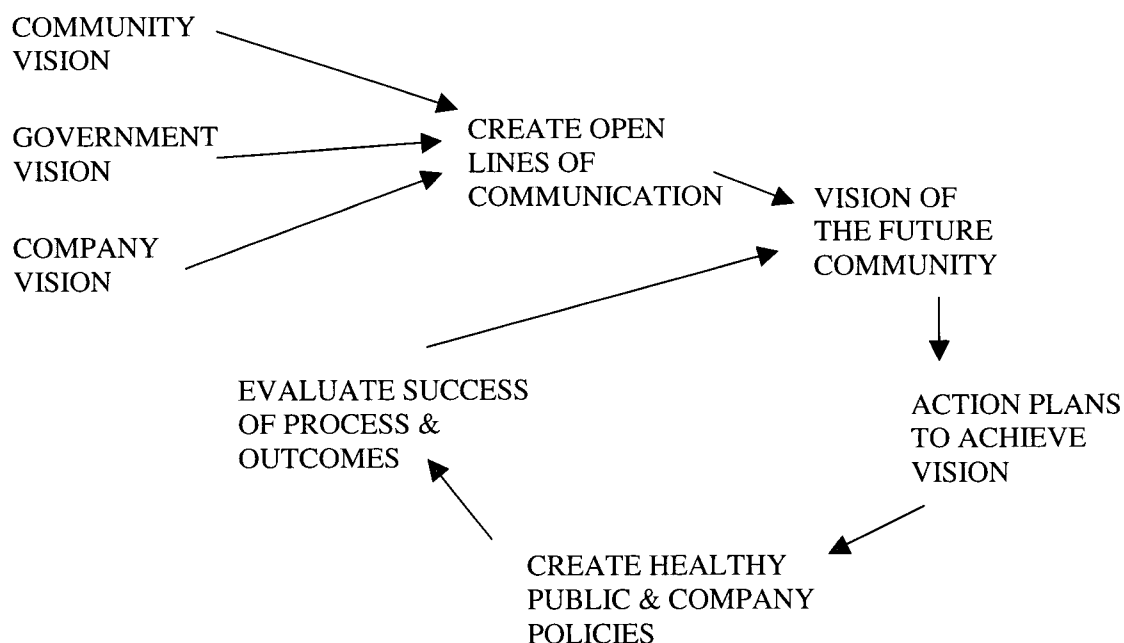
Using the healthy communities characteristics combined with an effective consensus-building
community relations program can help to create more healthy mining communities within
Canada. In order to effectively implement a program some type of leadership will be necessary.
The National Roundtable on the Environment and the Economy (1996) recognizes that
consensus-building activities bring together a very diverse range of people with various

30

experiences (Cormick et al., 1996). The presence of a mediator during community relation's activities is beneficial to the process.

3.6 IMPORTANCE OF MEDIATION

Mining community relations often center on environmental disputes. This relates to the environmental degradation that can be caused by mining activities as well as community fear of the possible impact that these activities could have on their lives. There are specific characteristics of environmental disputes that make them unique from other types of disputes. Glavovic et al. (1997) have characterized environmental disputes based upon discussion held during the training of environmental mediators at the University of Virginia in 1995. These characteristics can be correlated to the situations in which mediation is most effective (Beer & Stief, 1997). In turn, these situations are commonly found in Canadian mining community relations. This relationship is outlined in Table 3.2.

Table 3.2 Characterization of mining community relations to environmental disputes that are most effectively addressed by mediation

ENVIRONMENTAL DISPUTES	ISSUES THAT MAKE MEDIATION RELEVANT	CANADIAN MINING COMMUNITY RELATIONS
Impinge on the public good	Many people are involved or indirectly affected.	All members of the local community are somehow affected by mining activities. There is also a larger group that can be indirectly affected such as secondary industries and neighboring communities.
Many parties with divergent views, experiences, and resources are involved or affected	The issues are complicated by a strong emotional element. Many people are involved or indirectly affected. Centering on the relationship between nature and human systems; they exhibit high levels of complexity and uncertainty	Disputes around mining communities bring together very different groups and talk is often centered on environmental concerns. The company feels that decisions are based on best available technology whereas the community perspective is one preoccupied with an understanding of the needs of the community. These two visions would not appear to be compatible.

The mediator will need to facilitate the groups that are brought together in the community relations program. The mediator will be involved in all stages of the process from information gathering to agenda setting. Glavovic et al. (1997:290) remark that a mediator as facilitator is responsible for, "managing a structured process that increased the productivity of the group, ensuring a common understanding of the goals of the meetings, and encouraging the group to work toward the highest degree of consensus when appropriate." Skills that are taught to mediators will be required and utilized throughout this process.

3.61 MEDIATOR SKILLS

A variety of mediation skills are key to a successful community relations program. The most essential skills are the ability to listen, acknowledge and reframe.

The **ability to listen** has many levels from non-listening to visual listening to directive listening. One of the difficult aspects of listening is passive listening, which is described as hearing the words and not the message (Bentley, 1994). For example, a situation might seem very technical to one party and they may be fixated on explaining it in a technical sense while the other party has understood the technical side but is not pleased with the lack of emotion. The mediator's skills in listening can help identify the issues and interests that often underlie a situation and bring these to the table for discussion.

Acknowledging is letting the party know that they have been heard. Either another party or the mediator can do this. The act of acknowledging implies that the person who is acknowledging understands what the other person is saying. Acknowledgment may come in the form of acknowledging stories, feelings or even interests (Beer & Stief, 1997).

One type of acknowledgement is an apology. An apology has to do with issues underlying the topics being discussed. If a party feels that it was somehow wronged, the topic may not be able to move forward until the apology repairs the damage done to the issue. Often a feeling of being wronged is accompanied by a loss of trust. In order to build towards consensus, trust is a crucial component that must be maintained. The mediator may be able to help parties apologize to each other when without the mediator; an apology would not have been possible (Schneider, 2000).

The process of **reframing** a situation or a comment changes how that situation has been defined or conceptualized. This skill can help a party to see another's perspective. A reframing statement will have neutral language and will translate the concerns into a mutual problem for all to work towards resolving (Beer & Stief, 1997). The mediator will draw the positive or useful content out of the message with the reframing statement. This can emphasize positive goals and common ground for all involved. Reframing can also identify any underlying issues and help to eliminate accusations or blaming. Lastly, reframing a statement can both expand it to the fuller meaning of the message and shift positional statements to issue or interest statements (Picard, 1998).

3.62 MEDIATOR TASKS

The Society of Professionals in Dispute Resolution (SPIDR) identifies that the mediator will be responsible for a number of tasks during complex public disputes (from Cormick et al., 1996). These tasks are divided into the three time frames: prior to bringing parties together, during the committee process and after the program has finished and an agreement is reached.

Prior to bringing parties together the mediator will have to work with the company and community to analyze the conflict, design a process and prepare a post. Analysing the conflict will require the knowledge of background material that relates to the reason of the community relations program. As mentioned previously, this is often centered on environmental disputes. The mediator will need to review technical documents in order to familiarize themselves with the problems. Analyzing the conflict will also require community visits and interviews to determine who is representative of the various groups. The interviews will identify issues that are important to all involved. The mediator will then need to decide what the best method of

meeting would be. Often, at the beginning of a community relations program there is a great deal of education needed and programs that include mine tours and open houses are very beneficial. The mediator will also need to prepare a post that would familiarize members with the consensus building process.

During the community relations program the mediator will have a variety of roles from designing and running sessions, monitoring communication and overseeing any requests made. The mediator will have to work with all parties to design a process that is acceptable to everyone. Specifics need to be identified at this point such as agenda topics, meeting location and time. After the process has been designed to everyone's satisfaction the mediator will need to work with the parties to encourage and facilitate communication both at and outside of the meetings. The skills mentioned in the previous section are particularly helpful at this stage as often parties are coming from very different backgrounds. It will be necessary to develop visions and goals of the process to encourage these diverse groups to work together. The mediator will also be responsible for collecting and distributing any necessary information. The complexity of mining issues often requires that consultants complete independent studies on either specific projects or problem areas. By including the hiring of consultants in the tasks of the mediator any seeming bias on the study is greatly reduced.

When the committee comes to any agreements it will be necessary to monitor their implementation. The mediator will be responsible for the hiring of any agencies or companies to oversee monitoring. Also, it may sometimes be necessary to revisit old agreements to evaluate their progress or effectiveness. This creates a cyclical movement of re-evaluation, which continually improves the effectiveness of the committee.

The establishment of a consensus-building framework, visionary goals and leadership is the beginning of an effective community relations program. Of course every situation is unique and will need to be addressed individually. The methods outlined above are to act as a guide for establishing these types of committees and can be taken and applied to specific scenarios. They will be useful when developing new committees, training employees and evaluating the effectiveness of current committees.

CHAPTER 4: RESEARCH METHODOLOGY

This research is informed by a variety of methodological tools including primary and secondary methods. A literature review was completed in order to explore the background issues of the research, to create problem definitions and to establish the state of the literature in the field. The literature review also outlined principles that would be included in a successful consensus-building activity, the use of the healthy communities characteristics as a visioning tool and the importance of mediation skills during facilitation. A case study approach was employed in order to evaluate a community relation's situation within the mineral industry using the principles of a consensus-building activity. The case study approach involved various interactive methods of data collection. The methodology for this research was largely based on Palys (1997) *Research Decisions: Quantitative and Qualitative Perspectives.*

4.1 LITERATURE REVIEW/PRINCIPLES

The literature review is presented in two sections. The first part is directed at drawing upon past research to develop background to the thesis research and the second is for the development of the background to the case study.

Chapter 2 discussed challenges to the contemporary mineral industry. Statistics on the industry as well as the current state of mining communities in Canada were mainly drawn from Natural Resources Canada, the Mining Association of Canada and the Mining Association of British Columbia. The profile of mining communities in Canada has been drawn from a variety of research that has been done in this area. This is detailed in Section 1.6. The work of the Canadian Round Tables (1993) and the National Round Table on Environment and the Economy (1996) provided the foundation for an understanding of consensus-based processes. Barriers to

achieving public participation in the mineral sector were drawn from a variety of perspectives including interviews and secondary research extracted from the mineral sector, academia, environmental groups and communities.

Chapter 3 looked at consensus building within the mineral industry. The National Round Table on Environment and the Economy (1996) and Forrest & Mays (1997) are used to discuss consensus-building processes. The history of community participation within the mineral industry is outlined by drawing upon previous work done by Young (1997) and Britton (1998) as well as information obtained directly from the Placer Dome website. Hirokawa et al. (1996) and Steiner (1972) were utilized when considering the utility of roundtable approaches. Information on the Whitehorse Mining Initiative was obtained from Natural Resources Canada and McAllister & Alexander (1997). Information from the Healthy Communities Movement was drawn from the University of Laval, Hancock (2002), Norris & Pittman (2000) and the Ontario Healthy Communities Coalition. The importance of a mediator in community relations was researched by investigating the journal Mediation Quarterly as well as various authors who write about the art of mediation and facilitation including Glavovic et al. (1997), Beer & Stief (1997), Bentley (1994) and Picard (1998).

Chapter 5 included the second part of the literature review, which relates to the case study of the research. Background information on Kimberley and the Sullivan Mine was obtained from Teck Cominco documents, Kimberley websites, the Environmental Mining Council of British Columbia and a lecture given by van Dieren & Newcombe (Teck Cominco employees) in 2001. Throughout Chapter 5 James Britton's masters thesis work provided information on the Sullivan Mine and the Sullivan Public Liaison Committee (SPLC). Detailed information on the SPLC

was obtained by interviewing Andrew Whale (committee chair) and Bruce Dawson (Teck Cominco employee) as well as reviewing old minutes and agendas from SPLC meetings.

One goal of the literature review was to compile the criteria that would help to define an effective consensus building process. These criteria would be used to evaluate the effectiveness of the SPLC process in Kimberley.

4.11 CONSENSUS BUILDING CRITERIA

Consensus building criteria for this thesis were developed based upon the guidebook published by the Canadian Round Tables (1993) entitled *Building Consensus for a Sustainable Future*. Other literature was drawn upon, such as Forrest & Mays 1997 book *The Practical Guide to Environmental Community Relations* and the work of the National Round Table on the Environment and the Economy (Cormick et al., 1996). These criteria are outlined in Table 4.1 along with the associated question that will be posed in the evaluation of the SPLC process.

Table 4.1 Consensus building criteria and associated questions

CRITERIA	QUESTION
Purpose driven	Do people see a need to participate in the process?
Inclusive not exclusive	Are all of the parties with a significant interest in the issue involved?
Voluntary participation	Do all affected or interested parties participate voluntarily?
Self design	Did all parties design the consensus process?
Flexibility	Was flexibility designed into the process?
Equal opportunity	Do all parties have equal access to relevant information and the opportunity to effectively participate?
Respect for diverse interests	Do all parties accept diverse values, interests and knowledge of others involved?
Accountability	Are parties accountable to their constituencies and to the process?
Time limits	Are there realistic deadlines set throughout the process?
Implementation	Is there commitment to implementation and effective monitoring?

The answers to these questions will be drawn from the literature review and SPLC interview questions.

4.12 VISIONING: HEALTHY COMMUNITIES CRITERIA

A main goal of community relations is to ensure that all participants share a common vision that is practical and within reach. In order to work towards a healthy community, it is necessary to define what is meant by the term. The OHCC (1998) suggest that a healthy community:

- provides a clean, safe physical environment
- meets the basic needs of all its residents
- has residents that respect and support each other
- involves the community in local government
- promotes and celebrates its historical and cultural heritage
- provides easily accessible health services
- has a diverse, innovative economy
- rests on a sustainable ecosystem

These criteria will be used to assess what characteristics are relevant to a Canadian mining community. Answers will be drawn from interview responses from both the SPLC and community interviews. Important characteristics can be used in future community relations projects in order to develop a common goal or vision of the committee.

Both sets of criteria will be useful when modeling an ideal community relation situation or examining an existing project in order to assess the process against those criteria. No numerical value was assigned to the various criteria. Furthermore, no particular criterion was given a level of importance. This is largely due to the fact that each individual community will have to determine its own set of priorities in order to identify what is best for the community. This decision will have to be made with all actor groups as active participants.

4.2 INTERACTIVE METHODS/APPLICATIONS

A variety of interactive methods were used to develop a deeper understanding of the case study: the Sullivan Mine in Kimberley, British Columbia. Interviews were completed with members of the Sullivan Public Liaison Committee as well as community leaders.

Personal interviews were chosen as a preferred method of data collection due to the fact that there is a higher rate of response with face-to-face interviews rather than with other methods of research. Face-to-face interviews offer a variety of advantages; for example, the interviewer can:

- ensure that the appropriate person completes the interview,
- immediately clarify any confusion about particular questions,
- and encourage verbally stingy respondents to embellish further.(Palys, 1997:54)

Before the interview, interviewees were asked to sign either a letter of introduction or a letter of consent, depending if they had been previously contacted or not (see Appendix I for a sample letter of consent). A separate letter of consent was prepared for focus group interviews. During the interviews, questions were read out loud and the interviewer wrote down the answers that were given.

When face-to-face interviews were not possible interviews were performed by telephone.

Specific groups within the process were gathered in *focus group interviews* for practical purposes (to save time). Other benefits included being able to observe if opinions and ideas were shared amongst members of the group and having a more in-depth discussion of the topics at hand. Specific groups included the East Kootenay Environmental Society, Ministry of Water, Land and Air Protection and some members of Teck Cominco.

4.21 INTERVIEW QUESTIONS

Two different sets of interview questions were developed. One set of questions was to be used for interviewing members of the SPLC and another for interviewing community leaders. The questions were developed separately in order to shift focus to areas of interest both within the committee and how the public perceives the committee. A detailed list of questions can be found in Appendix II.

The two sets of questions were distinguished from each other by a slightly different focus. Both sets of interview questions begin with general personal/group information. The community questions then lead into how the interviewees hear about community events in their area and

their knowledge of the Sullivan Mine and SPLC. The SPLC questions lead into committee effectiveness and an evaluation of the process. The last two questions of both sets are the same. Healthy Communities questions are asked to all interviewees in order to gain an understanding of what components of a healthy community are important to them.

A mapping exercise is the last question of both surveys. The SPLC members are to map the committee and the community members are to draw the community. Wates (2000:76) describes mapping as, "an effective non-verbal way of find out how people view their area". Interviewees were to map out what they saw as the major groups within their community or committee (depending on who was being interviewed). Lines of communication were to be drawn between groups with solid lines representing strong communication, dashed line being weak communication and no line meaning no communication. Figure 4.1 depicts a hypothetical mapping exercise. Examination of the exercise shows that group A has a strong communication link to groups B and D, while B and D have a weak communication link between each other. Group C is not connected to any other group.

Figure 4.1 Example of a hypothetical mapping exercise
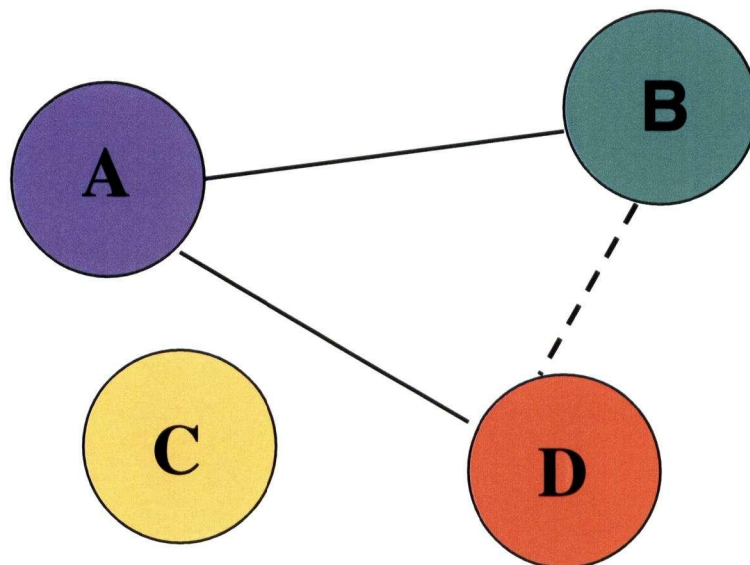
The questions included a mix of open-ended and closed questions. Open-ended questions, "leave a lot up to the respondent; they really are open to a wide range of responses, depending on the respondent's own concerns" (Palys, 1997:164). Closed questions are a contrast to open-ended questions in that they initiate only a small range of responses. Open-ended questions are useful when completing exploratory research. The answers to these questions can create need for future research in a variety of areas depending on the responses. By allowing respondents to include more of their opinion in responses, answers vary and analysis of these responses can be quite cumbersome. Closed questions are more beneficial when analyzing and comparing answers by various respondents (Palys, 1997). Interview questions generally began with closed questions and then funneled down into open-ended questions. The individual interviews took between 20-45 minutes to complete and focus groups took between 45-75 minutes.

City leaders were chosen on the basis of their involvement with local community activities. Leaders or those involved with pressure groups were sought out. Pross (1975:2) defines a pressure group as an organization, "whose members act together to influence public policy in order to promote their common interest." For the purpose of this research a community leader is seen as a link that binds one group to a larger decision-making group. Community leaders that were chosen for an interview portrayed the characteristics of the pressure group in that they were members of city council, leaders, or involved in the community in some way such as the Arts Committee or Kimberley Bavarian Chamber of Commerce.

4.22 INTERVIEW COMPLETION

Interviews were conducted in Kimberley, British Columbia, from Wednesday February 6th to Friday February 8th, 2002.

The Sullivan Public Liaison Committee Member groups that were interviewed were Teck Cominco, Ministry of Energy and Mines, City of Kimberley, Community Development Society, Sullivan Mine Interpretive Centre Society, East Kootenay Environmental Society, Ktunaxa/Kinbasket Tribal Council, Ministry of Water, Lands and Air Protection, Kimberley Bavarian Chamber of Commerce and the interested public. The interviews that were conducted covered every main group except the Ministry of Health and Department of Fisheries and Oceans.

Community leaders that were interviewed included members of the city council, editor of the daily newspaper, chief administrative officer for the city, manager of the Kimberley Bavarian Chamber of Commerce, curator of the Kimberley Heritage Museum, president of Kimberley Arts Council Centre 64 and a member of the public who was the ex-president of the Steelworkers Union, ex-city councilor and past president of the Community Health Council. A complete listing of interviewees can be found in Appendix III.

4.3 STRENGTHS / WEAKNESSES

The development of a case study approach is beneficial to this type of research as it provides an opportunity to test the applicability of any principles drawn from relevant literature in the same area. The combination of literature review and case study allow for in-depth research as well as specific recommendations. The case study approach also has its limitation in that no one case study will be applicable to all scenarios. This is, in part, compensated by the choice of using qualitative research in that it can easily be adapted to fit other situations. There is no rating system and the particular community will ascribe any order of importance.

Interviews offered the most detailed information for the research while face-to-face interviews guaranteed a high level of participation. Interviews not only offer the most detailed information but they are also costly in time and expense. As a result of this time and cost commitment, not as many interviews could be completed as was hoped. Also, some participants may not feel comfortable answering questions, being concerned about their anonymity. The consent forms included a choice for the interviewee to have their answers remain anonymous (see Appendix I). This may have helped to alleviate any anxiety that the respondents would have regarding their anonymity.

Other constraints might be introduced by the choice of interviewing. Even though interview questions were developed to minimize bias, there is always a possibility that bias could be read into the question by the interviewee, which would affect their answer. Each question was read exactly as it was prepared and the interviewer made every attempt not to lead the interviewee response. It is also possible that participants may answer questions depending on what they think that the interviewer wants to hear. Interviewing from an academic background reduces this problem as an obvious association with a particular group is absent although this still posses a problem and should be recognized.

CHAPTER 5: THE CASE OF KIMBERLEY AND THE SULLIVAN MINE

The community of Kimberley, British Columbia and Teck Comincos' Sullivan Mine have been chosen as a case study. Kimberley was developed as a mining community almost a century ago and has grown along with the mine. The community itself is characteristic of a typical Canadian mining community and has many of the challenges ahead that were outlined in Chapter 2. When the mine closed in 2001 numerous employees were fourth generation employees at the Sullivan mine (Teck Cominco, 2001). The history of Kimberley and the Sullivan Mine can be generalized to mirror many other mining communities such as Flin Flon, Thompson, Noranda, Val d'Or, Manitouwadge, Schefferville, and Bathurst.

5.1 KIMBERLEY, BRITISH COLUMBIA

Kimberley was established in 1896 and from 1909 to 1968 it was operated as a company town by Consolidated Mining and Smelting Company. It achieved a measure of independence from the company when it was incorporated in 1968 (Kimberley BC, 2000). Kimberley is located in the Southeast corner of British Columbia, 28 kilometres Northwest of Cranbrook (travelbc, 2000) (see Figure 5.1). Its present population is approximately 7,000 people (van Dieren & Newcombe, 2001).

Figure 5.1 Location map of Kimberley, British Columbia
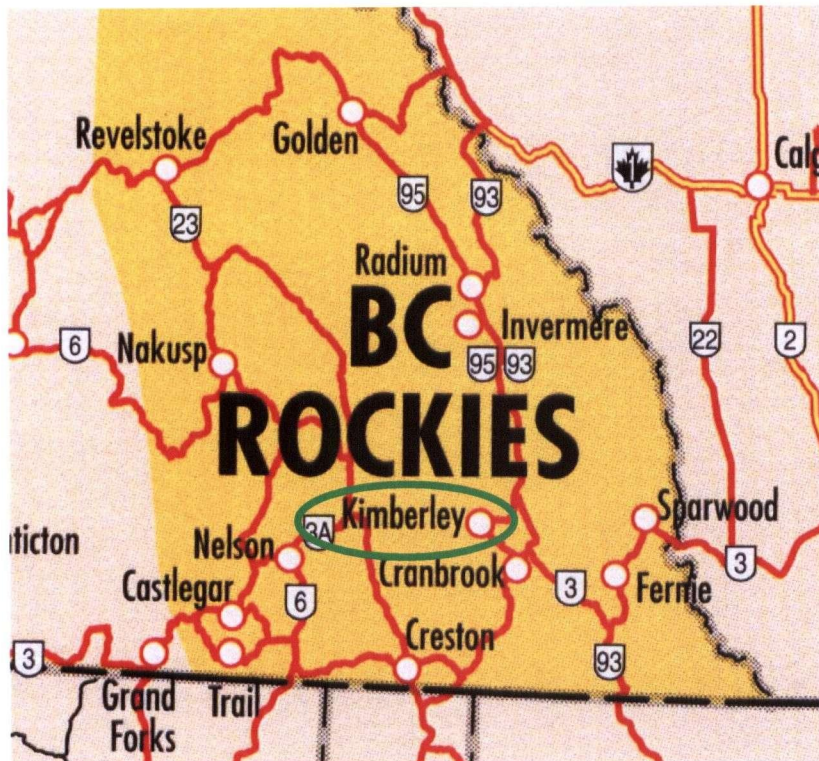
The imminent closure of the Sullivan Mine, which was traditionally Kimberley's main industry, has brought about a shift in focus in economic development from that of producing mineral commodities to tourism. This process began in 1973 with the Bavarianization Project that was developed in response to declining business activity in the town (Geocities, 2000). Since then, the town has successfully promoted itself as a recreational destination for all seasons, particularly golfing and skiing.

5.2 SULLIVAN MINE

The Sullivan Mine, run by Teck Cominco Ltd. (previously Cominco Ltd.) was, in its lifetime, the world's largest lead/zinc mine and operated in Kimberley from 1917 to December 21, 2001 (Teck Cominco, 2002). The mine has produced ores of lead, zinc, silver, iron, tin as well as a secondary process that produced chemical fertilizer (Anderton, 1999).

The mine is an underground mine, with a small open pit. The ore is found within a complex system, made up primarily of zinc sulphide, lead sulphide and iron sulphides. The deposit was discovered in 1892 and acquired in 1909 by Cominco Ltd., formerly the Consolidated Mining and Smelting Company of Canada, now Teck Cominco Ltd. (Teck Cominco, 2002).

The mine's success can be attributed to an advance in mineral processing technology. In 1916 the company bought technology that would allow it to separate the lead and zinc that was being mined from Sullivan (Horswill, 2001). These processes were further developed by Teck Cominco and are now used worldwide (Teck Cominco, 2001).

Over the years of mining operations, employment averages have exceeded 1000 people. In 1951, 89% of the total labour force in Kimberley was employed at the mine. In 1996, that percentage had dropped to only 14% (Horswill, 2001). Over the life of the mine, salary and benefits were estimated to average $68,000 per employee. The total contribution from the mine to employees has been over $5 billion (Teck Cominco, 2001). The orebody itself has produced 17 million tonnes of zinc and lead metal concentrate and 285 million ounces of silver. The mine has contributed over 20 billion dollars to the BC economy at today's metal prices (van Dieren & Newcombe, 2001 & Teck Cominco, 2002). When the mine closed, a significant source of income for workers, community development funds to the community and revenues for the provincial government came to an end. The community of Kimberley would need to find significant sources of alternative revenue to avoid sliding into inevitable decline.

In addition to these challenges, environmental concerns associated with the shutdown of the mine are also a priority. Acid mine drainage (AMD) and heavy metal contamination can be seen in waste dumps, tailings ponds and the mine workings themselves (Anderton, 1999). The mine

has completed many reclamation activities since the 1970s including the installation of a drainage water treatment system and rehabilitation of Mark Creek. The Environmental Mining Council of British Columbia (EMCBC, 2001) recognizes that air and water quality has been improved by the work of Teck Cominco but also warns that because of the longevity of acid mine drainage that a lot more work will need to be done. This work will need to center around the long term containment and/or collection of acid drainage from waste dumps and tailings ponds, containment and storage of sludge that will be produced from the water treatment plant and also concerns about possible groundwater contamination.

5.3 PLANNING FOR CLOSURE

On January 1, 1990 Cominco announced the imminent closure of the mine as a result of a labour dispute, high fixed costs and low metal prices. In November 1990 the closure date was set for December 31, 2001. The announcement generated concern about the future of the community (Anderton, 1999).

The mine closure would have an impact on the community both economically and socially, as many jobs were to be lost. With the focus of tourism as a new economic base the community would see high paying jobs being replaced by retail jobs that would pay close to minimum wage. This would have a dramatic impact on the community and its businesses. Not only would Kimberley residents lose their largest employer but the City of Kimberley would lose part of the 54% municipal tax revenue that was paid by the mine (Anderton, 1999). The closure announcement also sparked concern about the mine's impact on land, water and air quality (Britton, 1998).

A mining company must comply with a number of acts and regulations when closing a mine. Traditionally, these have dealt more with the closure of the actual mine site but the environmental movement brought with it changes that would include reclaiming more than the site itself. An example of this compensatory reclamation may be the creation of wildlife habitat off of the mine site to replace lost habitat within the mine site. More recently, mining companies, such as Teck Cominco, are realizing that they must not only satisfy the provincial and federal regulations but also the requirements of the affected community. Community agreement will ensure that the company receives approval for its mine closure plan. The mine will have a greater chance of being permitted to proceed with plans for shutdown.

The Ministry of Energy and Mines (MEM), previously Ministry of Energy, Mines and Petroleum Resources (MEMPR), requested that Teck Cominco prepare a final reclamation plan in the spring of 1990. The first draft of the decommissioning and closure plan was submitted to MEMPR in April of 1991 (Britton, 1998). An approved mine closure plan must address Section 10.5 and 10.6 of the *Health, Safety and Reclamation Code for Mines in British Columbia* which deal with mine closure and reclamation standards (van Dieren & Newcombe, 2001). In 1990, MEMPR (now MEM) went beyond requirements to form the Sullivan Public Liaison Committee. This committee was formed to review the mines' reclamation plan.

5.4 HISTORY OF THE SULLIVAN PUBLIC LIAISON COMMITTEE (SPLC)

The SPLC has met 21 times, spanning from January 1, 1990 to October 16, 2001 with future meetings planned. The average number of people attending the SPLC meetings who sign the register is 28. The meeting attendance has remained fairly constant over the span of the process with the lowest attendance being 20 and the highest 60 (see Figure 5.2).

Figure 5.2 Attendance history of the Sullivan Public Liaison Committee

Attendance History of the SPLC
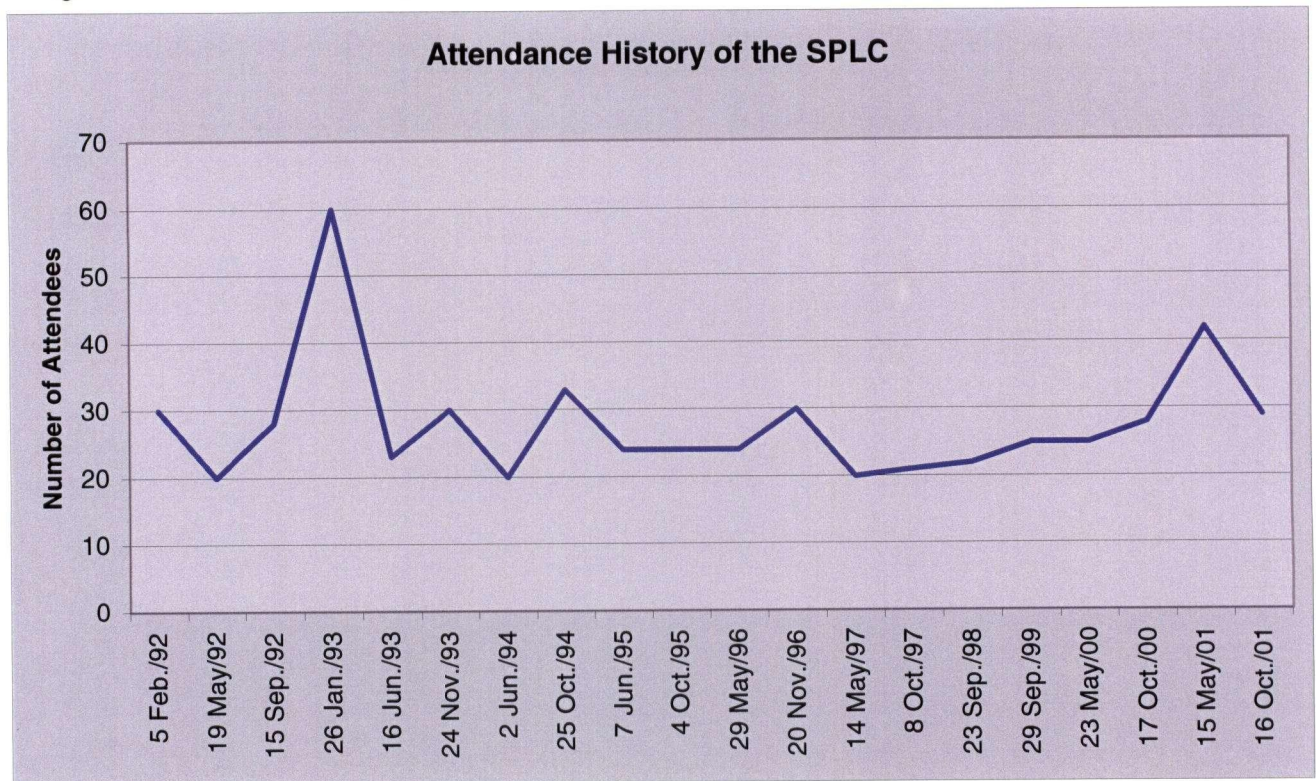
Britton (1998) studied the SPLC process in comparison to the Brenda and Island Copper Mines, specifically looking at public involvement in reclamation and planning decisions. Information was compiled on the chronology of the Sullivan mine from 1990 to 1998 specifically relating to public involvement. This information included SPLC meeting dates with added notes of such things as number of attendees. This information has been drawn upon to form an updated table to include 1998 to 2002 events. Also, updates have been made to the table where information has become available. This table can be found in Appendix IV.

5.5 THE SPLC PROCESS

SPLC meetings were held at the Steelworkers Union Hall in downtown Kimberley. This location was chosen because of its neutrality and accessibility (Anderton, 1999). Andrew Whale, Regional Manager, Ministry of Energy and Mines chaired the meetings. Meeting times and

agendas were advertised in the local paper, the Daily Bulletin, and were open to the public. Meetings were held on mid-week evenings in order to accommodate those who worked during the day. On average, the meetings were 4-6 hours long (Dawson, 2001). Minutes were taken at the meetings and distributed to those who wished to be a part of the SPLC mailing list along with copies of any presentations or papers that were discussed at the meeting.

The committee meetings were held in a room that housed tables laid out in a U-shape. Those who did not wish to participate directly could sit in chairs behind those who sat at the U-shaped table. This was in order to encourage people to attend and feel no pressure to participate. An attendance sheet was passed around the table with no requirement to sign. This was done also with the hopes of encouraging attendance.

The method of exchanging information between parties to prepare for meetings was as follows:

- Questions were forwarded to Teck Cominco prior to the meeting to allow them enough time to prepare an adequate answer.
- Answers to questions were forwarded to parties prior to meetings.
- Answers to questions were reviewed at meetings and points clarified when needed. (Dawson, 2001).

5.6 MEMBERS OF THE SULLIVAN PUBLIC LIAISON COMMITTEE

Attendance registers of the SPLC meetings show that there have been a total of 29 different groups identified at the meetings. A complete list of all groups who have attended meetings can be found in Appendix V. Of these groups, only 13 have attended five meetings or more out of the 20 SPLC meetings that were included in the statistics (there is no attendance register available for the first meeting of the SPLC). Figure 5.3 shows the distribution of attendance of these 13 groups. Groups such as Teck Cominco, MEM and MWLAP have various different locations and departments attending meetings. Each location and department was combined into one entity. For example, Teck Cominco had representatives from both Trail and Kimberley. The two were combined to represent Teck Cominco in its entirety. After combining subgroups, 10 main groups emerge.

Figure 5.3 Distributions of main attendees of the Sullivan Public Liaison Committee meetings
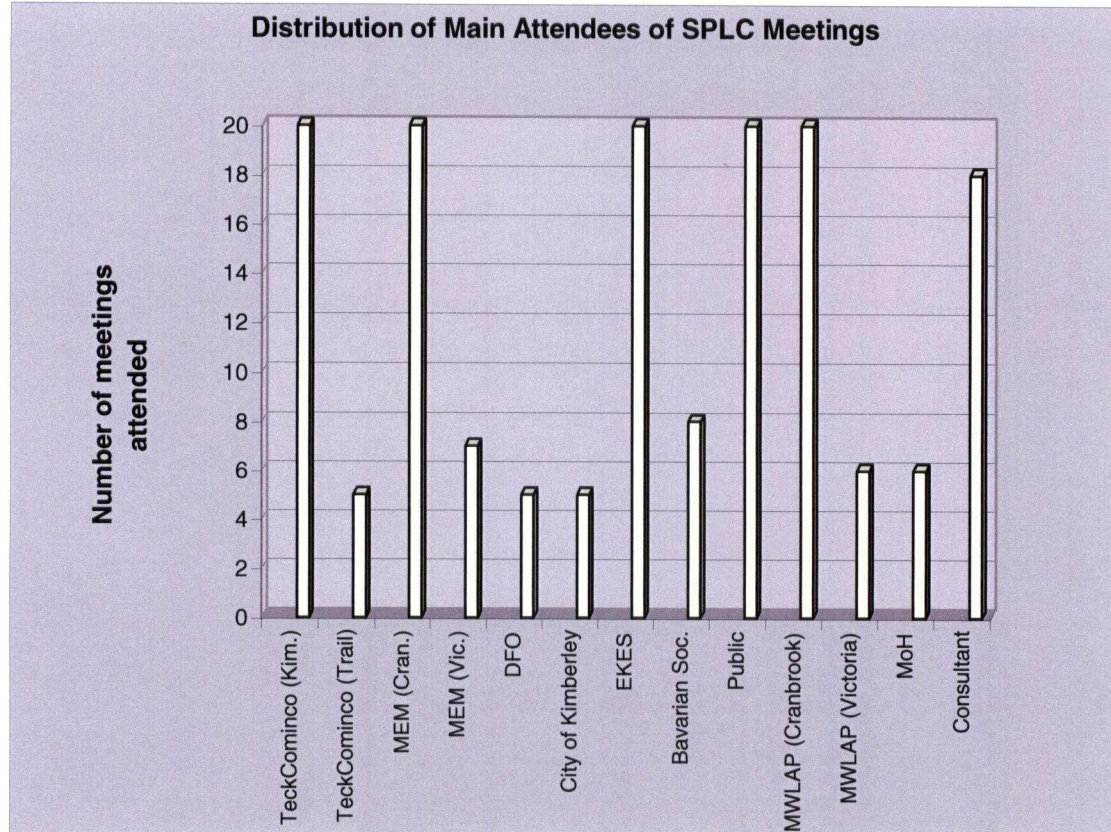
Often, the number of participants present will depend on the agenda being discussed. For example, when community well water testing results were being discussed at the fifth meeting of the SPLC on January 26, 1993 thirty-eight members of the public signed the attendance register. This was remarkably higher than the average of 7 members of the public that normally attended meetings. Also, certain groups attended only a few meetings. This could have been for any number of reasons. A core group of the SPLC emerged of five member groups that have attended all meetings. These included Teck Cominco, the Ministry of Energy and Mines, East Kootenay Environmental Society, the Ministry of Water, Land and Air Protection and the interested public.

The number of representatives of each group who are present at the meeting is an important observation as a group that has a high number of representatives may have more of a voice than a group that just has one or two representatives at the meetings. Out of the ten groups that were present at five or more meetings the representation breakdown can be seen in figure 5.4. The public represented the most predominant group with an average of 7 attending each meeting. As mentioned before, 38 members of the public attended the fifth meeting of the SPLC. If this anomaly is factored out of the equation then the average number of public that attended each meeting drops to only 5. The Teck Cominco group represented the greatest presence at the meetings with an average of 6 people attending each meeting. The groups of MOH, City of Kimberley, Bavarian Society and Department of Fisheries and Oceans showed the lowest representation at the meetings.

Figure 5.4 Representation of groups at Sullivan Public Liaison Committee meetings
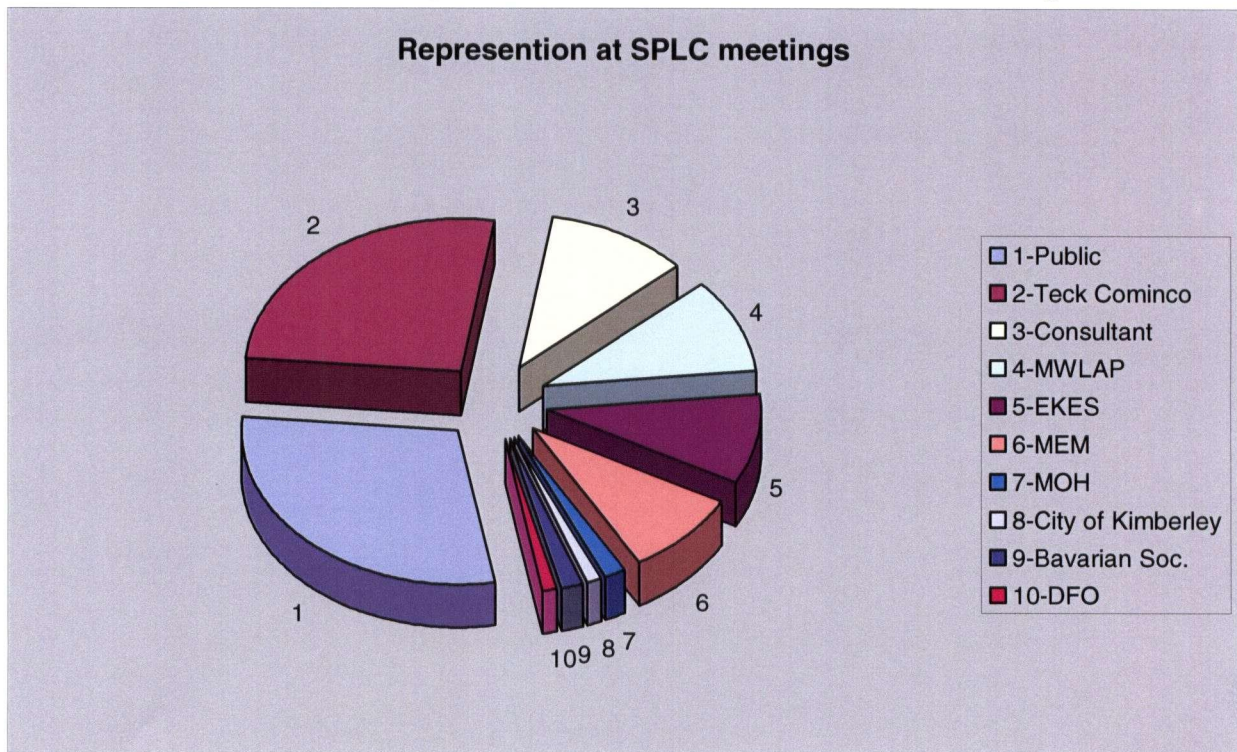
The community of Kimberley and its intimate association with the Sullivan Mine has created a mining community that shares typical characteristics and problems that are associated with this type of community within Canada. The creation of the Sullivan Public Liaison committee in 1991 offers an ideal situation against which to test the consensus-based principles that were outlined in Chapter 3.

CHAPTER 6: EVALUATION OF THE SULLIVAN PUBLIC LIAISON COMMITTEE PROCESS AND THE HEALTHY COMMUNITIES CHARACTERISTICS

The ten principles of a consensus-based approach that were discussed in Chapter 3 will be used to evaluate the process and therefore, the effectiveness of the SPLC. Each corresponding question, outlined in Table 4.1 (page 48) will be used to determine if the consensus building principles were met. Information will be drawn from interviewee responses and background literature.

The importance of using a visioning tool to draw differing parties towards a common goal has also been discussed and it has been hypothesized that the healthy communities characteristics can be used to envision an ideal healthy community. These characteristics will be evaluated based upon responses from interviewees on components that they consider to be important when thinking of a healthy community.

Lastly, recommendations will be made as to how the SPLC process can work towards improving its effectiveness.

6.1 CONSENSUS BASED PROCESS

The consensus building principles that were developed by the Canadian Round Tables (1993) were used in order to evaluate the SPLC process. Each principle is explored and examined thoroughly using the questions that were formulated in Table 4.1 (page 48).

6.11 PURPOSE DRIVEN

Question: <u>Do people see a need to participate in the process?</u>

The SPLC process was formed to review the Closure and Decommissioning plan of the Sullivan mine. The participants of the SPLC were asked their reasons for attending SPLC meetings. The variety of answers can be found in Figure 6.1. The objective of the question was to determine if there was a perceived need for the individual or group to be there. The majority of those who attend do so because of a job requirement. The only interactive response that would require input has to do with the response of monitoring. The rest of the respondents were looking more for one-way communication and did not express that they felt a need to participate, rather only to collect information.

Figure 6.1 Members purposes for attending Sullivan Public Liaison Committee meetings
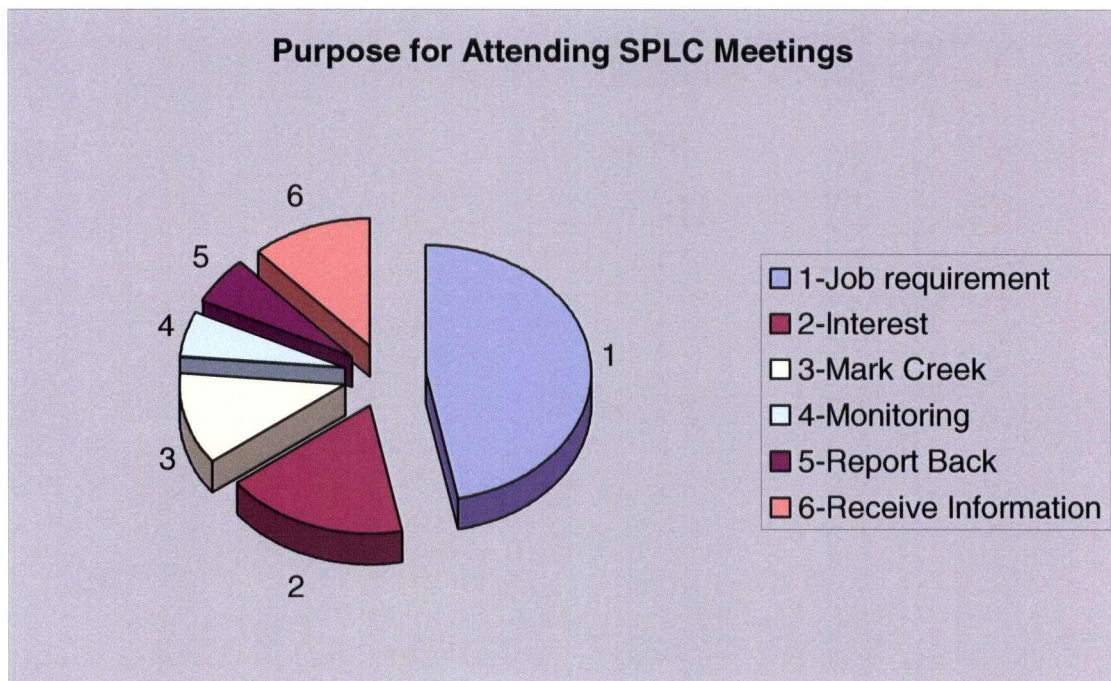
Another interview question that identifies need asked whether the member or group felt that their presence had an influence on decisions that were made by the mine.

One of the most interesting findings of this question was the response by the two members of the public that were interviewed. They felt that they had no influence on the decisions made by the mine but did not expect to influence these decisions and were not attending the meetings with this objective.

These findings point to a lack of common vision within the SPLC that would ensure that participants felt a need to attend and participate. This will be discussed in further detail in Section 6.2.

6.12 INCLUSIVE NOT EXCLUSIVE

Question: <u>Are all of the parties with a significant interest in the issue involved?</u>

The initial formation of the SPLC involved a number of different groups and a few groups have come and gone throughout the process. It is not possible to identify if all groups have been included within the process without being fully immersed in all issues and the history of the community of Kimberley. Only those with such an intimate knowledge would be able to comment. The more obvious lack of participation of the KKTC is an example of a group that has left the process. The City of Kimberley has attended only 5 out of 20 meetings. One reason for members no longer attending meetings is that the committee facilitated the creation of effective communication between parties outside of the meetings. The necessity of attending meetings may have decreased for the parties as their needs were being met in other ways.

One interview question asked if the committee represented the community of Kimberley in order to explore whether SPLC members felt that there were any groups that were not represented at the meetings. Fifty three percent of respondents felt that the committee did not represent the

community of Kimberley, 40% felt that it did and 7% felt that it did a moderate job. A number of respondents said that the committee did not represent the community but it did indeed represent the interest groups. Having the right interest groups present at the meetings may be the goal of insuring that all parties with a significant interest are at the table.

This principle also brings about the question of recruiting interested parties. If enough information is available to the interested public about the meetings there is no way to force them to be there to attend. The SPLC meetings were advertised in the local paper. Community interviews identified that this was one of the most common ways for community members to hear about local events. This demonstrates that the committee was effective in their choice of media to advertise meetings and agendas.

6.13 VOLUNTARY PARTICIPATION

<u>Do all affected or interested parties participate voluntarily?</u>

All groups participated voluntarily except those that also had to participate as a requirement of their job. Out of 17 interviewees, 8 expressed that they attended as a job requirement.

Having to attend as a requirement of a job is clearly not voluntary participation. Although, a few participants interviewed expressed that they had attended a few meetings outside of their job duties and that they would be interested in attending even if it were not a requirement of their job.

6.14 SELF DESIGN

Question: <u>Did all parties design the consensus process?</u>

Andrew Whale of the Ministry of Energy and Mines (MEM) initially created the design. Small issues were re-designed throughout the process with input from the rest of the committee (Whale, 2002).

6.15 FLEXIBILITY

Question: <u>Was flexibility designed into the process?</u>

There was no formal method of evaluation within the SPLC process but feedback was encouraged and a response given (Whale, 2002). Flexibility of the SPLC process could be seen by the many logistical changes throughout the years of meetings. For example, the committee eventually developed the best method of preparing for meetings and exchanging information by working through different methods that worked and did not work. Feedback on the process was encouraged and a method of communication that was satisfactory for everyone was eventually developed.

6.16 EQUAL OPPORTUNITY

Question: <u>Do all parties have equal access to relevant information and the opportunity to effectively participate?</u>

Relevant information was available from all parties if requested. The timing of the response was not always satisfactory for those involved. Some groups were financially constrained from participating as much as they would have liked to. Often non-governmental organizations would benefit from financial assistance in order to hire their own expert consultants to complete studies.

By allowing the NGOs to hire consultants any suspicion towards reports by company consultants is minimized.

6.17 RESPECT FOR DIVERSE INTERESTS

Question: <u>Do all parties accept diverse values, interests and knowledge of others involved?</u>

Recognition of differing views does not necessarily lead to acknowledgement of these values, interests and knowledge. Typical polarization of the mineral industry could be seen in the SPLC process, which often seemed to set one group against another. The industry was seen to be task oriented and the community was seen to be relationship oriented with no common middle ground. The mediation skills outlined in Section 3.61 (page 42) are particularly important for these types of differing views. Quite often the argument will be a cover for a deeper issue that is not being resolved. Trained mediators will be able to recognize this happening and draw out the issue, thus allowing the committee to continue on with other important business. Two particularly important mediation skills are reframing and acknowledging.

The outcomes of the mapping exercise are another way of visualizing how groups view each other. The National Round Table on the Environment and the Economy (1996:73) state that, "mutual sharing of information and insights about unique values and circumstances invites parties to be open to each other". The mapping exercises of the SPLC demonstrate the various strong, weak and non-existent lines of communication between parties. Non-existent communication can be a result of differing views and values impeding the communication of parties. One theme emerged with the mapping of the SPLC. A central figure was drawn and communication lines were seen to be emanating from the center. Often the communication lines

coming from the center were strong while communication lines between other groups were either weak or non-existent (see Figure 6.2).

Figure 6.2 Typical Pattern Emerging from Sullivan Public Liaison Committee mapping exercise
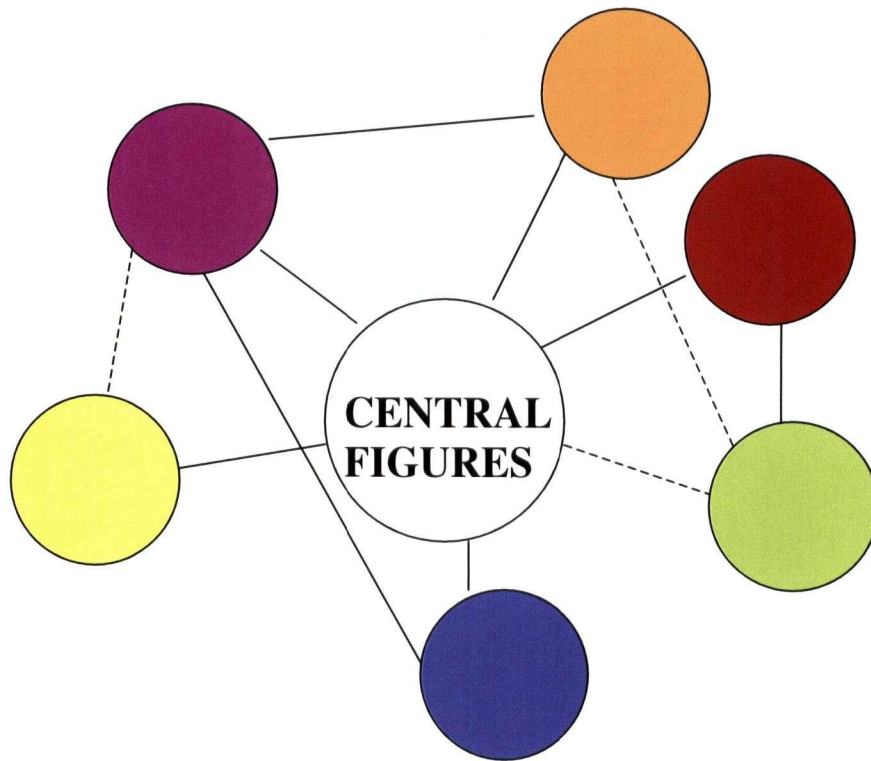
Central figures that seemed to be connected to most parties included Teck Cominco, the Ministry of Energy and Mines or the City of Kimberley. Most respondents saw one of these three as the center of a wheel. Figure 6.3 shows a respondents map that included Teck Cominco as the central figure.

Figure 6.3 Example of a mapping exercise of the Sullivan Public Liaison Committee drawn by
an interviewee

LEGEND
CoK-City of Kimberley
EKES-East Kootenay
    Environmental Society
MEM-Ministry of
    Energy and Mines
MWLAP-Ministry of
    Water, Land and Air
    Protection
EC-Environment Canada
F&D-Fisheries and
    Oceans
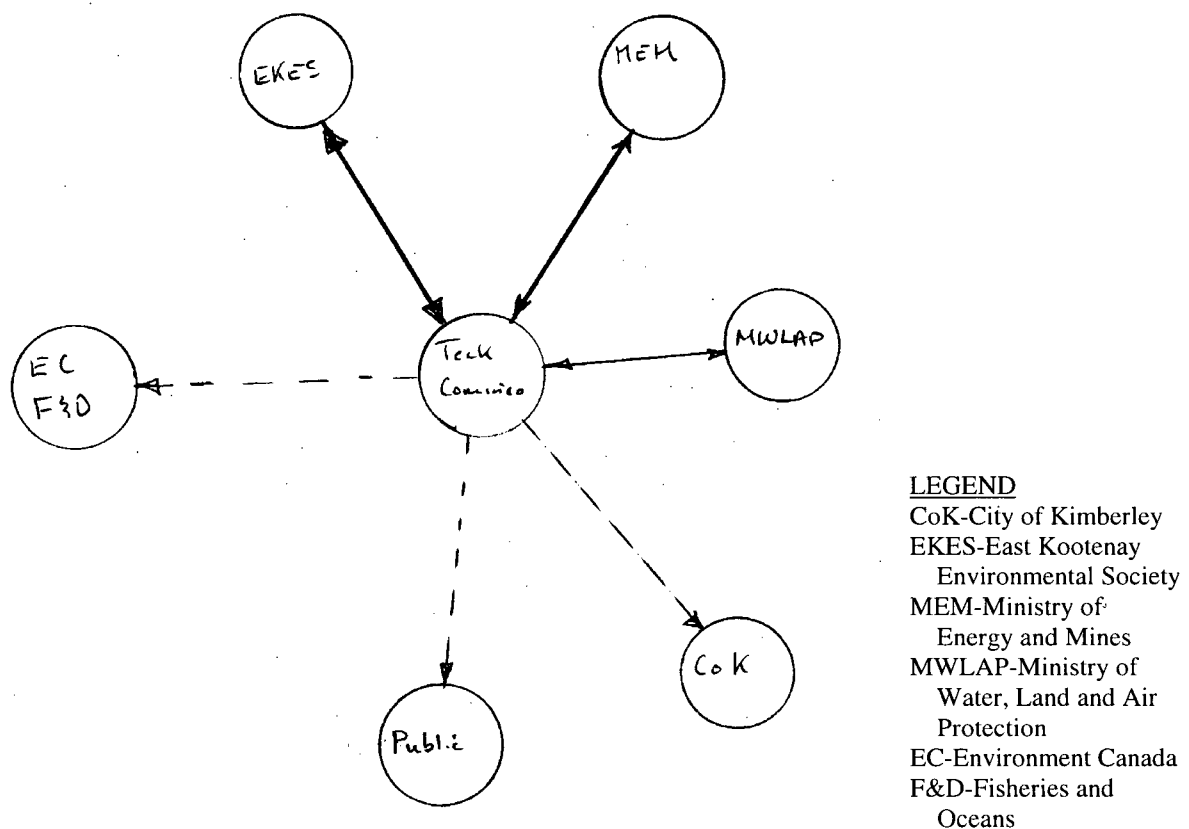
6.18 ACCOUNTABILITY

Question: <u>Are parties accountable to their constituencies and to the process?</u>

There were mechanisms set up to encourage timely feedback between meetings. The public was

informed of the meetings through the local media and encouraged to attend.

6.19 TIME LIMITS

Question: <u>Are there realistic deadlines set throughout the process?</u>

Time limits are not as crucial for this type of consensus-based approach. This is due to the fact

that most often committees such as these will discuss an issue until everyone is satisfied with the

65

outcome. The SPLC had an early focus on working through the Closure and Decommissioning plan of the mine chapter by chapter. Milestones may have been helpful in this situation because they would have provided broad objectives that the committee would work to meet.

6.20 IMPLEMENTATION

Question: <u>Is there commitment to implementation and effective monitoring?</u>

There have been no strategies to monitor implementation to date and it will be necessary for the SPLC to construct these strategies in the meetings to come. The meetings themselves can be viewed as a type of "watchdog" over mining impacts and activities. The meetings will continue on after the mine has closed to continue to address concerns about reclamation and closure activities. Meetings will be scheduled as needed and it is estimated that there will be approximately one per year (Whale, 2002).

6.2 VISIONING: HEALTHY COMMUNITY CHARACTERISTIC

Each characteristic of a healthy community will be evaluated to determine its effectiveness as a visioning tool for Canadian mining communities. The characteristics relation to addressing the challenges of current mining communities will also be discussed.

When interviewees were asked what characteristics they would consider a healthy community should have, they responded with a variety of factors (see Figure 6.4).

Figure 6.4 Hypothetical community characteristics identified by interviewees

Hypothetical Community Characteristics Identified by Interviewees
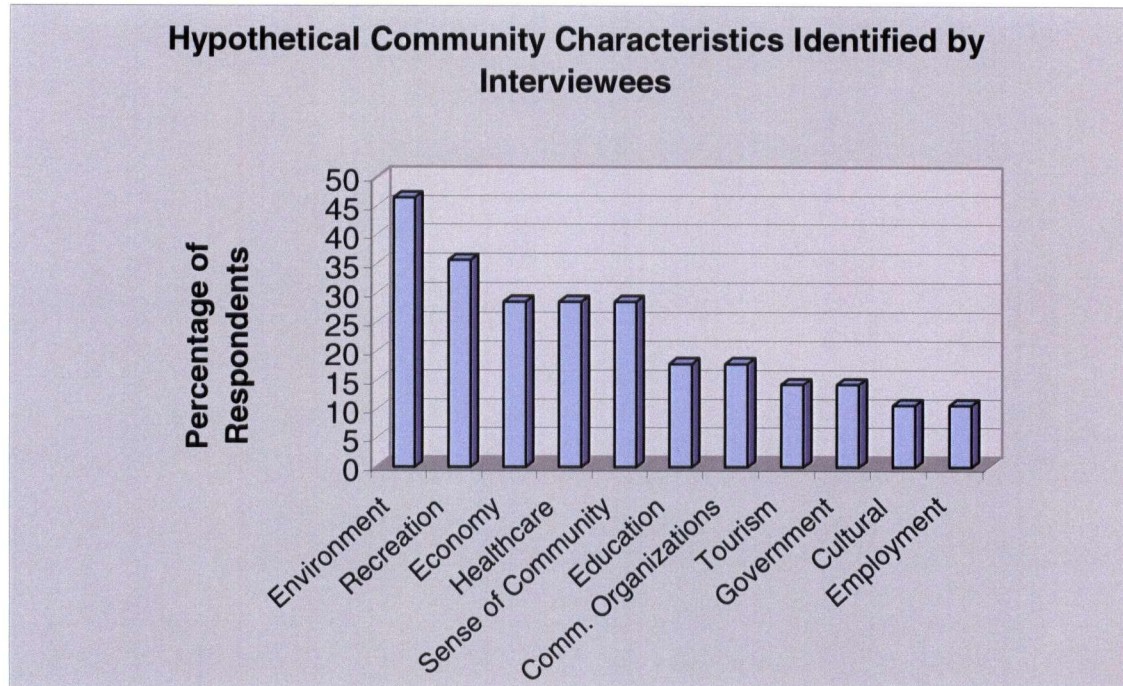
Each characteristic identified by interviewees can be placed within the context of the healthy communities characteristics. This is outlined in Table 6.1.

Table 6.1 Relationships between healthy communities characteristics and interviewee responses

HEALTHY COMMUNITIES CHARACTERISTICS	INTERVIEWEE RESPONSES
Provides a clean, safe physical environment	Environment Recreation Tourism
Meets the basic needs of all its residents	Healthcare Education Employment
Has residents that respect and support each other	Sense of Community
Involves the community in local government	Government
Promotes and celebrates its historical and cultural heritage	Sense of Community Community Organizations Cultural
Provides easily accessible health services	Healthcare
Has a diverse, innovative economy	Economy
Rests on a sustainable ecosystem	Environment Recreation Tourism

6.21 PROVIDES A CLEAN, SAFE PHYSICAL ENVIRONMENT

Environmental health is particularly important to mining communities because of the obvious environmental impact of mining on the surrounding ecosystem.

Forty six percent of those interviewed expressed that environmental protection and awareness is a component of a healthy community. The mention of environmental awareness could point towards more education of the public about the possible effects of mining on the surrounding environment. Education may help to take away some of the fear that the public would have about mining activities.

Recreational activities were also mentioned as an important part of a healthy community. This relates to having a clean, safe physical environment in order to carry out recreational activities.

6.22 MEETS THE BASIC NEEDS OF ALL ITS RESIDENTS

Mining companies have often taken more of a paternalistic role with communities in the past. Basic needs may be seen to be such things as healthcare, employment etc. In communities where the mining company has less of a role this expectation may fall upon other groups. The importance of these needs may increase within a mining community because of their isolation and small population.

Interviewees identified healthcare, education and employment in their responses. These services were identified as basic needs for the residents of Kimberley. Interviewee responses identified that basic needs were indeed important to maintaining a healthy community.

6.23 HAS RESIDENTS THAT RESPECT AND SUPPORT EACH OTHER

Having a common main employer in town and dealing with the cyclical nature of the mineral industry will often unite communities and bring residents together. This creates cohesiveness within the community that is very unique to a mining community situation.

Many responses included the need to have some "sense of community" or for some type of connection between residents. Also, there was a desire for strong and effective community organizations, which would support members of the community and guide them as to how to support each other.

6.24 INVOLVES THE COMMUNITY IN LOCAL GOVERNMENT

Responses by interviewees that mentioned the local government focused on the need for the right leaders and a strong and stable government presence. Respondents did not specifically mention involvement in local government.

Local government attendance on committees would indicate their commitment to working with the community in order to improve its health.

6.25 PROMOTES AND CELBRATES ITS HISTORICAL AND CULTURAL HERITAGE

As mining communities are often small in size and isolated it is important for them to celebrate their culture and heritage. These types of celebrations bring the community together.

Cultural diversity was identified as important but the need to celebrate it was not specifically indicated by those interviewed.

6.26 PROVIDES EASILY ACCESSIBLE HEALTH SERVICES

The importance of health services is also a result of the isolation and small population of most communities.

The availability and presence of health care and hospital services was the fourth most popular response in the interview. Kimberley residents are concerned about the availability of health care services within their community. This characteristic can be included with the previous characteristic that deals with meeting the basic needs of all residents.

6.27 HAS A DIVERSE, INNOVATIVE ECONOMY

Low economic diversity is an important characteristic of mining communities in Canada as it is ultimately their biggest threat to survival. If a mining community is not diverse and the company ceases operation it may not be possible to attract another industry to the area and maintain the community.

Current economic troubles in Kimberley may have been on the minds of those interviewed and therefore caused it to be the third most common characteristic. Economic sustainability and the presence of a strong economic base were common answers.

6.28 RESTS ON A SUSTAINABLE ECOSYSTEM

As mining companies are required to actively rehabilitate the areas that are disturbed by mining it is necessary to ensure that these new areas are sustainable for the long-term.

The term sustainable ecosystem did not occur in the characteristics that were named by the interviewees. Many interviewees who mentioned environmental concerns may have in fact been referring a need for a self-maintaining ecosystem. It will be particularly important to community members that any reclamation of the surrounding area that is completed by the mine will be self-maintaining after the mining company presence is gone from the area. This characteristic can be combined with the first characteristic, which has to do with a healthy environment.

6.3 COMMITTEE DYNAMICS

There are a certain amount of logistical issues that are involved with a committee such as the Sullivan Public Liaison Committee. Meeting location, time, frequency and length all play a role in contributing to the effectiveness of interaction that is created.

The SPLC members agreed upon such things as frequency of meetings. Location and time were chosen to best suit everybody. Meeting length could have contributed to certain topics at the end of the meetings being glossed over due to fatigue and a sense of wanting to finish the meeting. Meetings that were shorter in length and more frequent may help to alleviate this problem.

6.4 CONCLUSIONS

The consensus building criteria and the healthy communities characteristics can be used to make recommendations towards improving the effectiveness of the SPLC. The evaluation of the SPLC

based on the consensus criteria demonstrated that the committee was an effective process but could be improved in a few areas. Areas of weakness include: lack of committee input into the design phase of the process; lack of vision by the committee; parties leaving the process; and the absence of a trained mediator.

There was a **lack of SPLC committee input into the design phase** of the process. New committees are encouraged to involve the entire committee during the designing of the process. This is where all roles, rules and objectives are laid out and agreed upon by everyone. This makes all members feel a part of the process. The SPLC did not address these issues at the beginning of their process but they can be addressed at any stage of the community relations program. Roles, rules and objectives help to create vital roles for groups or individuals and ensure that everyone feels that they are a part of the process.

The SPLC exhibited a **lack of vision** or common goal. A vision statement is not to be confused with a mandate or objective of a committee. A mandate or objective can be thought of as a list of tasks to be accomplished. For example, the Advisory Council on Mining, formed in British Columbia in 1995, has both a listing of tasks or mandate and vision. The listing of tasks begins with action words such as develop, provide, prepare and attend. The vision of the same council is "of a socially, economically and environmentally sustainable, accountable, and prosperous mining industry in British Columbia, underpinned by political and community support" (McAllister & Alexander, 1997: 196). A vision statement can be seen as more of a goal statement of what the tasks of the mandate or objective are hoping to accomplish. The presence of a vision would create a perceived need for members to attend and participate throughout the process.

New committees can use the healthy communities characteristics to work towards a common vision of their community while current committees can start the process of visioning at any time. This visioning creates a cycle that is depicted in Figure 3.2 and can be started at any time. The objective of the SPLC will be changing now that the Sullivan Mine has closed and visioning would help to minimize confusion as to what the committee is set up to accomplish over the next stage in the community's development.

Parties who leave the process and are perceived to be important stakeholders should be encouraged to attend even if an outside relationship has replaced the need for the committee. By attending, the parties are showing the rest of the committee that they are committed to helping to implement decisions that are made by the committee. This commitment is essential for a successful program. The absence of key stakeholders from meetings such as the Ktunaxa/Kinbasket Tribal Council and City of Kimberley should be discussed amongst the committee members. Effort should be made to encourage attendance. If a party has left the process because they are not satisfied with how the committee is being run these issues need to be discussed within the committee. Working with distinctively different groups will mean that groups and individuals will not always agree but the presence of a trained mediator can help to remedy this situation.

The **presence of a mediator** or a facilitator who has some mediation training can address many of these issues. The mediator's skills of listening, acknowledging and reframing are particularly important to the mineral industry as environmental disputes often bring together different parties with many opposing views. The mediator will help parties to see diverse interests and work together to understand the differing views of others. They will also help to develop a common vision for all to work towards. This vision may be that of a healthy community.

The Community of Kimberley is currently in transition as it leaves its old identity as a mining community and creates a new identity as a tourism community. As the community of Kimberley changes the SPLC participants will also change and continual restructuring of the committee will be necessary. This research indicates that by utilizing the principles of an effective consensus based approach, integrating the healthy community vision and making use of mediation skills the effectiveness of the committee would be improved for all involved. This would ensure that everyone is working towards the common goal of a healthy Kimberley.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Mining communities play a very important role in the social, political and economic fabric of Canada. A mining community is defined as a community in which, "...mining activities play a predominant role in the economic base, and are the principal raison d'etre for its establishment and continued existence." (Haugh, 1983:2). There are many different types of mining communities. Mines are either introduced into existing communities or the community develops around the evolving mine. The latter is often termed a resource community, single-industry community, company town or instant town (Bancroft, 1975). The two groups of communities can be further divided into many subgroups depending on circumstances. There are communities that have long or short distance commutes to the mine site, as well as fly-in/fly-out communities and local aboriginal communities that are affected by the mine. Each mining community is distinctive, possessing different characteristics and problems (Randall & Ironside, 1996). Common distinguishing characteristics are: isolation, small population, low economic diversity, specific labour force, cyclical employment and the acceleration in mechanization and automation. (Randall & Ironside, 1996: Bradbury, 1984: Neil & Tykkylainen, 1992). The identification of the various barriers that stand in the way of community sustainability is the first step towards addressing them and working to overcome them. Overcoming these barriers will introduce stability into the community, which will also work towards introducing stability to the mineral industry.

There are many factors that are potential causes of risk to the stability of the mineral industry. Traditionally, the industry has been dependent upon market prices for its mineral and metal products. In addition to this traditional dependence there is a new risk that is more of a social

nature. Community well-being is a priority for many community members and non-governmental organizations worldwide. With this increasingly popular notion concerns over the social and environmental effects of mining have become common. The industry is faced with costly delays and possible project failures if they do not focus on achieving public cooperation. A consensus process to community relations with the industry is a method of achieving this cooperation and improving the health of the mining community. There are barriers that stand in the way of the successful implementation of such programs. These include traditional education, corporate structure and lack of training for employees. These barriers can be worked through largely by capacity building within the company. A recent change of mining engineering curriculum coupled with a continued shift in corporate culture and training for mining employees can create the type of environment that would facilitate an effective community relations program that aims to build consensus.

According to the National Round Table on the Environment and the Economy (NRTEE) (1996), for consensus to be achieved, all involved parties must be empowered in the process, involved in ongoing decision-making and satisfied with the outcomes. There are a number of ways in which the mineral industry engages the public such as site visits, open houses, workshops and committees. Consensus based processes are not intended to allow any one individual to exercise a veto. The level of consensus building often increases as time, money and commitment increase. Committees are the ultimate level of communication between all parties as they often initiate ongoing dialogue between stakeholders inside and outside of the meetings. When starting new committees or evaluating current committees there are many consensus-based processes that can be drawn upon. The 1993 initiative by the Canadian Round Tables identified ten guiding principles for a consensus building process that appear to be useful for any program. The mineral industry could use the principles when developing new community relations

programs and also when evaluating current programs in order to find areas that need to be improved upon.

Creating a common vision in committee meetings is the binding agent that brings all parties together. The healthy communities movement offers a holistic approach to this common vision or goal that addresses both the biophysical and socio-economic concerns related to community health. This is particularly applicable to mining communities that are impacted both socially and environmentally by mining activities.

Mining community relations often center on environmental disputes. This relates to the environmental degradation that can be caused by mining activities as well as the community fear of the possible impact to their lives. A mediator will need to facilitate the meeting process during the community relations program. Mediation skills that are essential to a successful community relations program are the ability to listen, acknowledge and reframe. The mediator will have specific tasks throughout the process which can be divided into the three time frames of prior to bringing parties together, during the committee process and after the program has finished and an agreement is reached.

In order to gain public approval, the mineral industry will have to change the ways in which it attempts to deal with the public. Community relations programs will need to be set up so that consensus building occurs. Current community relations programs can be evaluated and improved and new programs can be started using the framework laid out below.

7.2 RECOMMENDED FRAMEWORK FOR COMMUNITY RELATIONS PROGRAM

This research has developed a framework that could be utilized by any stakeholder when developing a consensus-based process. The process itself is more in-depth if a new community relations program is being started than if a current one is being evaluated. The steps recommended in the creation of a program are outlined in Table 7.1.

Table 7.1 Steps involved with starting or evaluating a community relations program

STAGE	ACTIVITY	TOOLS
Assessment	Talking about whether to talk	Internal communication within mining company
Getting started	Identifying participants	Community assessment
	Designing the process	Canadian Round Tables Guiding Principles & Healthy Communities visioning
Running the process	Talking	Mediation Skills
Implementing and monitoring results	Turning talk into action	Canadian Round Tables Guiding Principles & Healthy Communities visioning

When developing a new community relations program it will be essential to start at the beginning of the process.

It should be recognized that community relations programs are not always appropriate for every situation. It is important that each situation is **assessed** to determine appropriate programs. Some programs may need to be more of an educational and information sharing approach while others will need to address specific concerns. Adequate thought and preparation before beginning the program will give it more of a chance of being successful for everyone involved.

The process of **identifying participants** that should be involved with the community relations program can be compared to a community assessment. This community assessment will need to be completed before beginning a new committee and may also be useful for established

78

committees who have not completed one. A community assessment can help an established committee determine if it represents all interested stakeholders in the community. Forrest & Mays (2000:25) define a community assessment as, "a process for systematically examining social, political, and economic issues and dynamics in a community to determine how to best accomplish certain goals and objectives." Even though the managers that will run the community relations program live in the communities, they may have never looked at their community objectively. It will be important to determine how communication works and decisions are made within their community structure. A community assessment not only introduced new issues but also new stakeholders. An assessment process will determine the following (Forrest & Mays, 2000:27):

- The issues directly affecting a facility, site, or project, and the public's perceptions of them.
- Other community or environmental issues or attitudes that may also affect the facility, site, or project.
- Stakeholder groups and their perceptions and behaviors relevant to the facility, site, or project and other major community issues.
- The dynamics of decision making and power sharing in the community.
- The channels of communication that can be used to reach *all* potential stakeholder groups.

The committee members represent groups within the larger community and act as a liaison between these larger groups.

An ideal advisory committee would represent all parts of the community as well as all segments of demographics within the community. Often this is not possible as only those who are major stakeholders and larger groups will become involved. The question as to whether these major stakeholders actually represent the larger community groups that they claim to represent.

Designing the Process. Before major decisions are sought it is imperative to spend adequate time deciding how to proceed. Vital components of this stage are to establish clear objectives, structure meetings, establish roles and responsibilities, agreement on schedules, etc. The Canadian Round Tables (1993) ten guiding principles for consensus building will be useful at this stage. Each principle has an associated question that is outlined in Table 4.1 (page 48) that is asked in order to evaluate each principle. Ensuring that each principle has been accounted for and working with the committee while developing a program or evaluating a program will improve the effectiveness of the committee, which will save time and money for all who are involved in the process. When the process has been developed to everyone's satisfaction it will be necessary to develop a vision of the committee.

A vision of a Healthy Community as outlined by the Healthy Communities movement and slightly adapted to suit mining communities will be the vision or goal of the meetings. These characteristics cover all aspects of a mining community from the social to the biophysical environment.

- provides a clean, safe and self-maintaining physical environment
- meets the basic needs of all its residents
- has residents that respect and support each other
- involves the community in local government
- promotes and celebrates its historical and cultural heritage
- provides easily accessible health services
- has a diverse, innovative economy (adapted from OHCC, 1998)

The visioning cycle depicted in Figure 3.2 will be used to turn a visioning exercise into one that constantly re-evaluates itself, improves and changes.

During the actual **running of the committee**, stakeholders should focus on discussing the issues at hand and try to keep away from discussing things such as personalities or differing views. This part of the process is key to developing trust and appreciation for each other. Parties should show genuine interest in others views and demonstrate patient listening skills. Reaching agreements is the definitive goal of this phase and agreements should be put down in writing as they are reached. A mediator who is trained in the various skills such as acknowledging and reframing would run benefit this interaction by introducing skills such as listening, acknowledgement and reframing to the process. The mediator would have a variety of tasks throughout the process as outlined in Chapter 3.

The **implementation and monitoring** of any agreement will be necessary to ensure that committee decisions are being met. Important decisions at this stage are such things as who will be responsible for what, when will actions be taken, who will fund these actions and who will monitor the process and outcome. Both the Canadian Round Tables (1993) ten guiding principles for consensus building and the Healthy Communities visioning offer methods for evaluating and establishing monitoring through re-evaluation and re-visiting of project outcomes.

7.3 SUGGESTIONS FOR FUTURE RESEARCH

It is unclear why the citizens of Kimberley did not attend SPLC meetings. Was it because they felt that everything was under control? Did they know about the meetings? Did they just not care? It is important to know this for our research purposes because it demonstrates the level of public recruitment that is needed for mining committees within Canada, as well as the preferred method of contact.

Detailed research of other communities within the mineral industry will help to refine the understanding of effective processes and the successes and weaknesses of each approach.

Economic analysis of the costs involved with running a community relations program weighted and assessed against anticipated benefits of such a program within the Canadian mineral industry should receive future attention. This is particularly important when determining if committees of this sort are an economic benefit to the mineral industry as well as society.

The implementation of a new community relations program within the industry, based upon the framework recommended by this research, should evaluate the effectiveness of the framework and identify any weaknesses. Continual monitoring of such a committee and evaluation of its effectiveness can contribute significantly to current and future community relation methods within the Canadian mineral industry.

GLOSSARY

Biophysical environment- the natural or ecological environment.

Community relations – "two-way communication to enhance public understanding of environmental issues and to encourage input from the pubic so that their concerns are considered in organizational decision-making processes" (Forrest & Mays, 1997:3)

Consensus - The National Round Table on Environment and the Economy (NRTEE) (Cormick et al, 1996:4) agree on a working definition of a consensus process as,
"one in which all those who have a stake in the outcome aim to reach agreement on actions and outcomes that resolve or advance issues related to environmental, social and economic sustainability.
In a consensus process, participants work together to design a process that maximizes their ability to resolve their differences. Although they may not agree with all aspects of the agreement, consensus is reached if all participants are willing to live with the total package
…. A consensus process provides an opportunity for participants to work together as equals to realize acceptable actions or outcomes without imposing the views or authority of one group over another."

Empowerment – Development of confidence and skills in individuals or communities leading to their being able to make more control over their own destinies. (Wates, 2000:188)

Environment - Sadar (1996:1) defines environment as including:
- land, water and air, including all layers of the atmosphere;
- all organic and inorganic matter and living organisms and species, including humans;
- the interacting natural systems that include these components;
- the social, economic and cultural conditions that influence the lives of people and communities; any structure or thing made by people

Environmental Non-Governmental Organization (ENGO) – see Non-governmental organization definition

Healthy Community - a healthy community includes the following characteristics:
- a high degree of public participation
- a clean, safe, high quality physical environment
- a stable and sustainable ecosystem
- the meeting of basic needs for everyone in the city/community
- access to a wide variety of experiences and resources
- a diverse, vital and innovative city/community economy
- a strong mutually-supportive and non-exploitive city/community
- an optimum level of appropriate public health and accessible sick care services
- a respect for me past (cultural and biological heritage)
- a city/community form that is compatible with and enhances the above characteristics and behaviors (Lawrence, 1996)

Healthy Communities Movement - The movement is a worldwide effort that is promoted by the World Health Organization (WHO). The goals are to, "promote a holistic concept of health

83

that includes social, economic, psychological and environmental well-being, and to develop community-based actions, programs and policies for communities to implement in support of this goal" (Nozick, 1998:1).

Impact Assessment (IA) - Impact assessment originated in 1969 when the National Environmental Policy Act in the United States created a process called environmental impact assessment (EIA). This process further evolved to create social impact assessments (SIA). Both processes are now adopted in many countries worldwide and often jointly referred to as impact assessments (IA). The completion of an IA requires the consideration and prediction of the environmental and social implications of proposed developments (Mitchell, 1997).

Mapping - "an effective non-verbal way of find out how people view their area" Wates (2000:76)

Mining community- The report on the Task Force on Mining Communities defines a mining community as being (Haugh, 1983:2), "... one in which mining activities play a predominant role in the economy's economic base, and are the principal raison d'etre for it's establishment and continued existence." This describes only a single industry mining community. This research will encompass all communities that are possibly affected by mining activities when referring to mining communities.

Non-governmental organization (NGO) – Voluntary and non-profit distributing organization. (Wates, 2000) An Environmental Non-government organization would focus on environmental issues and awareness.

Pressure group - an organization, "whose members act together to influence public policy in order to promote their common interest" (Pross, 1975)

Sustainable Development - the Brundtland Commission (1987:43) defines sustainable development as, "...meets the needs of the present without compromising the ability of future generations to meet their own needs."

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APPENDIX I SAMPLE LETTER OF CONSENT

UBC

LETTER OF CONSENT   (Version 21/01/02)

My name is Rowena Anderson, and I'm a graduate student in the department of Mining and Mineral Process Engineering at the University of British Columbia. This interview is part of my Master's thesis, entitled *Healthy Mining Communities: The Interdependency of Companies and Communities.* The research explores the concept of Healthy Canadian mining communities and mine/community relations in the hopes of creating healthier Canadian mining communities. This research is being conducted in partnership with the Department of Environmental and Resource Studies at the University of Waterloo.

This interview will include a number of questions about your expectations of mine/community relations, experiences in the past and what you would envision as a healthy community. The whole interview should take no longer than approximately 30 minutes to complete. If you feel uncomfortable answering a question please feel free to pass and I will go onto the next one. If you need clarification about the question or procedure of the interview please ask.

By signing this consent form you are allowing me to use the information that I gather in the interview for my research. Please note that your responses can be completely anonymous at your request.

If you would like to receive a brief summary of the results of the study after it is complete I would be happy to send you a copy at the address that you have given below. If you have any further questions please feel free to contact myself at 604-809-8657 or rowena_rae@yahoo.ca.

If you would like to contact either of my thesis advisors they can be reached at: Professor Malcolm Scoble (University of British Columbia) at 604-922-8897 or malcolms@interchange.ubc.ca, Professor Mary Louise McAllister (University of Waterloo) at 519-888-4567 ext. 5614 or mlmcalli@fes.uwaterloo.ca. Also, if you have any concerns about your rights or treatment as a research subject you may contact the Director of the Office of Research Services and Administration at UBC, at 604-822-8598.

Thank-you very much for agreeing to participate in this study.

I _____ (print name) give my consent to

Rowena Anderson to use the information that I have provided in the study that is described above.

I have received a copy of the consent form for my own records. _____ (please initial)

I would like my answers to be completely anonymous. _____ (please initial).

I would like to receive a brief summary of the results of the study at the following address:

_____

_____

| _____ | _____ | _____ | _____ |
| (Signature of Interviewee or parent/guardian) | (date) | (Signature of Interviewer) | (date) |

APPENDIX II INTERVIEW QUESTIONS

<u>SULLIVAN PUBLIC LIAISON COMMITTEE QUESTIONS</u>

GENERAL
1.Do you live in the Kimberley community?
Yes or No
If yes, for how long?

2.What is your occupation?

3.Would you mind if I asked you to identify your age group out of this scale?
Less than 20
20-29
30-39
40-49
50-59
60-69
70-79
79+

4.What is your educational background?

5.Do you have access to the Internet?
Yes or No
If yes, do you use this on a regular basis?
If no, would you consider gaining access?

6.What position do you represent at the committee?
-mining company
-citizen
-government
        -MEM
        -MWLAP
-non-governmental organization (NGO)
-consultant
-other: please specify

7.Approximately how many meetings have you attended?

8.What are your reasons for attending the meetings?

COMMITTEE EFFECTIVENESS
9.Has the method of communication between members, to date, been effective?
Yes or No
Please elaborate

10.How well do you feel that the committee represents the community of Kimberley?
Please elaborate

11.Has the time and location of the meetings been convenient?
Yes or No
Why or why not

12.Would you recommend a third party facilitator for the meetings who is completely removed from the process?
Yes or No
Elaborate

PROCESS
13.In your opinion, what level of public involvement is appropriate when making decisions about mining projects?

14.Should they be involved with decisions and projects?
Yes or No
Why or why not

15.How much influence do you think that yourself or your group has had on the decisions that were made by the mine?

Scale of 1-5 with 1 being no influence and 5 being very influential

If yes, which decisions

16.How much influence do you think that the SPLC meetings has had on the decisions that were made by the mine?

Scale of 1-5 with 1 being no influence and 5 being very influential

17.Would you recommend that every mining community set up a committee of this sort?
Yes or No
Why or why not

18.When should the process be started?
Why

19.What are the advantages and disadvantages of the committee?

20.How would the SPLC process have been improved?

HEALTHY COMMUNITY
21.Can you describe factors you think would be included in a healthy community?

22.Looking at the previously mentioned factors do you feel that Kimberley is a healthy community?
Yes or no
If no, what needs to be improved upon

23.Mapping Exercise
Please draw the major stakeholders within the SPLC and the communication lines that lie between each. Strong communication would be a solid line and weak communication would be a dashed line. Parties who do not communicate can be placed on with no adjoining arrows.

COMMUNITY QUESTIONS

GENERAL
1.Do you live in the Kimberley community?
Yes or No
If yes, for how long?

2.What is your occupation?

3. Would you mind if I asked you to identify your age group out of this scale?
Less than 20
20-29
30-39
40-49
50-59
60-69
70-79
79+

COMMUNITY
4.How do you hear about community events? (check all that apply)
-newspaper
-Internet
-radio
-television
-friends
-coworkers
-family
In your opinion, what is the best form of communication with the public.

SULLIVAN MINE
5.When did you hear about the closure of the Sullivan Mine?

6.How did you hear about the closure of the Sullivan Mine?
-friend
-newspaper
-radio
-mine employees
-others

7.Are you views about the future of the community of Kimberley after the mine closes?

8.In your opinion, how has Teck Cominco contributed to the community of Kimberley?

9.Please rate your knowledge of the Sullivan Mine:
Scale of 1-5 with 1 being no knowledge and 5 being a lot of knowledge

10.Do you know what Acid Rock Drainage is?
Yes or No

11.What were the major metals that were mined at the Sullivan mine?

12.Are you aware of any environmental impact of the mine on the biophysical environment of Kimberley?

SULLIVAN PUBLIC LIAISON COMMITTEE
13.Are you aware of the Sullivan Public Liaison Committee?
Yes or No
If yes, what do they do? Do you think that this is important?

14.Do you know that the public liaison committee has regular meetings?
Yes or No
If yes, how do you hear about the meetings?
-friend
-newspaper
-committee members
-other

15.Have you ever attended these meetings?
Yes or No
Please explain why or why not

16.Do you feel that community interested are represented by the Non Governmental Organization (EKES) that attends the meetings?
Yes or No
Please elaborate

17.Do you participate or volunteer on in any committees in town?
Yes or No
If yes, which ones and why are you interested?

HEALTHY COMMUNITY
18.Can you describe factors you think would be included in a healthy community?

19.Do you feel that Kimberley is a healthy community?
Yes or no
If no, what needs to be improved upon
20.Mapping Exercise
Please draw the major stakeholders in the community and the communication lines that lie between each. Strong and open-ended communication would be a solid line with arrows at both ends. Weak and open-ended communication would be a dashed line with arrows at both ends. Parties who do not communicate can be placed on with no adjoining arrows.

APPENDIX III COMPLETE LISTS OF INTERVIEWEES

SULLIVAN PUBLIC LIAISON COMMITTEE
Doug Hannan – Councilor, City of Kimberley
Larry Haber – Community Development Society & Sullivan Mine Interpretive Centre
      Society
Laura Duncan – East Kootenay Environmental Society
Arlene Ridge - East Kootenay Environmental Society
Colin MacKenzie - East Kootenay Environmental Society
Bill Green – Ktunaxa/Kinbasket Tribal Council
Les McDonald – Ministry of Water, Lands and Air Protection
Jim Jensen - Ministry of Water, Lands and Air Protection
Rieva Rosentreter - Ministry of Energy and Mines
Andrew Whale - Ministry of Energy and Mines
Jack McInley – Public, interested observer
Bruce Dawson – Sullivan Mine, Teck Cominco
Zoe Ramdin - Sullivan Mine, Teck Cominco
David van Dieren - Sullivan Mine, Teck Cominco
Bob Newcombe - Sullivan Mine, Teck Cominco
Betty Aitchison – Public, interested observer
Bill Spence – Kimberley Bavarian Chamber of Commerce

COMMUNITY LEADERS
Carolyn Grant – Editor, Daily Bulletin (local newspaper)
Michael Bodd – Chief Administrative Officer, City of Kimberley
Dean Chatterson – Local President of Teachers Union, Kimberley District Teachers
      Association
Jack Ratcliffe – Councilor, acting Mayor
Albert Hoglund – Councilor, City of Kimberley
Hazel Liebscher - Manager, Kimberley Bavarian Chamber of Commerce
Ron McRee – Councilor, City of Kimberley
Marie Stang – Curator, Kimberley Heritage Museum
Lino Sacilotto – Ex-president of the Steelworks Union, sat on city council for 13 years,
      past president of Community Health Council
Melissa Schneider – President, Kimberley Arts Council Centre 64

APPENDIX IV SPLC CHRONOLOGY 1990-2002

(adapted from Britton, 1998)

DATE	EVENT	NOTES
19 October, 1991	Cominco and MEMPR co-host open house at mine site.	Guided tours of surface facilities, environmental problems and reclamation projects are offered plus displays and lectures on mine reclamation and acid rock drainage. (About 200 attend open house.)
19 October, 1991	Inaugural meeting of Sullivan Public Surveillance Committee (SPSC).	Meeting starts 4 p.m., Centennial Hall, Kimberley. Agenda: terms of reference for committee; Cominco presents overview of environmental and reclamation challenges; presentations by committee members; call for more members; date and topics for next meeting. (About 60 attend meeting.)
3 December, 1991	SPSC renamed Sullivan Public Liaison Committee (SPLC) by chairman.	Letter from chairman (sent with minutes) states reason: "to more accurately describe our role". Committee mandate unaffected.
5 February, 1992	Second meeting of Sullivan Public Liaison Committee (SPLC). Committee starts review of closure plan.	Agenda: presentation on proposed groundwater studies; review of closure plan (land reclamation, watercourse protection, and public safety sections). (31 sign attendance register.)
19 May, 1992	Third meeting of SPLC (preceded by tour of Mark Creek Diversion Project).	Agenda: presentation on Mark Creek Diversion Project; progress report on groundwater studies and proposed well survey; review of closure plan (land-use objectives and ARD abatement sections). (20 sign attendance register.)
15 September, 1992	Fourth meeting of SPLC. Committee completes review of closure plan.	Agenda: presentations on mine geology, proposed MOE sediment survey of St. Mary River, and MEMPR requirements for reclamation permit; progress report on groundwater studies; review of closure plan (mine and mill site reclamation sections). (28 sign attendance register.)
26 January, 1993	Fifth meeting of SPLC (preceded by underground tour).	Agenda: presentation on preliminary results of well survey; discussion of future meeting topics. (68 sign attendance register.)
16 June, 1993	Sixth meeting of SPLC.	Agenda: presentations on interpretation of well survey and preliminary results of MOE sediment survey. (23 sign attendance register.)
24 November, 1993	Seventh meeting of SPLC.	Agenda: presentation on final results of well survey; discussion of format and purpose of SPLC. (30 sign attendance register.)

2 June, 1994	Eighth meeting of SPLC.	Agenda: discussion of well water monitoring program; progress reports on tailings pond covers and lower mine yard reclamation; discussion of reclamation permit amendment (bonding); presentation on proposed (1994) reclamation projects. (20 sign attendance register.)
25 October, 1994	Ninth meeting of SPLC (preceded by tour of reclaimed areas: 21 attend tour).	Agenda: presentations on groundwater control, tailings dyke stabilization, alternative proposals for open pit and waste dump reclamation; progress report on reclamation projects and MOE sediment survey; discussion of reclamation permit amendment. (33 sign attendance register.)
7 June, 1995	Tenth meeting of SPLC (preceded by tour of drainage water treatment plant).	Agenda: presentations on proposed (1995) reclamation projects, revisions to closure plan, soil cover test plots, detailed groundwater study, and revegetation program; progress report on amendment to reclamation permit. (24 sign attendance register.)
4 October, 1995	Eleventh meeting of SPLC (preceded by tour of lower mine yard waste dump resloping project).	Agenda: discussion of request by local cable company to televise SPLC meeting and details of reclamation plan for gypsum pond; presentations on revised contaminated sites regulation, how reclamation security bonds are determined; progress report on 1995 reclamation projects. (24 sign attendance register.)
29 May, 1996	Twelfth meeting of SPLC.	Agenda: presentations on proposed (1996) reclamation projects, security bonding, contaminated sites regulations and proposed mine site assessment; discussion of fluoride in effluent to St. Mary River. (24 sign attendance register.)
20 November, 1996	Thirteenth meeting of SPLC.	Agenda: progress report on 1996 reclamation projects; presentations on soil cover modeling and revised groundwater study. (30 sign attendance register.)
14 May, 1997	Fourteenth meeting of SPLC (preceded by tour of lower mine yard: 8 attend tour).	Agenda: presentations on proposed (1997) reclamation projects, plan to reclaim 26 ha of iron pond; discussion of changes to closure plan (tailings impoundment); progress report on groundwater study. (20 sign attendance register.)
8 October, 1997	Fifteenth meeting of SPLC (preceded by tour of surface reclamation projects).	Agenda: progress reports on 1997 reclamation projects and groundwater study (esp. probable source of high-zinc seeps); discussions of water monitoring requirements, future amendment to *Waste Management Act* permit, and mine dewatering information requirements. SPLC agrees to meet once per year. (21 sign attendance register.)

23 September, 1998	Sixteenth meeting of SPLC.	Agenda: Unavailable (22 sign attendance register.)
29 September, 1999	Seventeenth meeting of SPLC.	Agenda: Unavailable (25 sign attendance register.)
23 May, 2000	Eighteenth meeting of SPLC.	Agenda: Unavailable (25 sign attendance register.)
17 October, 2000	Nineteenth meeting of SPLC.	Agenda: Unavailable (28 sign attendance register.)
15 May, 2001	Twentieth meeting of SPLC.	Agenda: Unavailable (42 sign attendance register.)
16 October, 2001	Twenty-first meeting of SPLC.	Agenda: update on proposed slag deposition and progress of ecological/human health risk assessment; description of mine and mill decommissioning; update on 2001 reclamation activities and on the review of the Mine Act permit security; discussion of SPLC participation in University of Toronto's EnvirREFORM study. (29 sign attendance register.)

APPENDIX V COMPLETE LISTING OF SPLC ATTENDEES

Teck Cominco (Kimberley)
Teck Cominco (Trail)
Teck Cominco (Vancouver)
MEMPR/MEI/MEM (Cranbrook)
MEMPR/MEI/MEM (Victoria)
EMPR (Nelson)
MoE
Env. Can.
DFO
City of Kimberley
EKES
KKTC
Bavarian Soc.
Public
BC Env./MELP/MWLAP (Cranbrook)
BC Env./MELP/MWLAP (Victoria)
BC Env./MELP/MWLAP (Nelson)
MoH (Nelson)
MoH (Cranbrook)
Chamber of Comm.
Consultant
USWA
Student
East Kootenay Health Unit
CP Rail
Line Creek
St. Mary's Reserve
Daily Bulletin
Chamber of Mines
Culligan Water Conditioning
Sullivan Mine Interpretive Centre Society
Kootenay Livestock Assso.
Regional District of East Kootenay
Mininistry of Employment & Investment/RDEI
R.L East Kootenay Realty
Mark Creek Rec. Project